

Fourth Edition

Media Effects

Advances in Theory and Research

Edited by Mary Beth Oliver, Arthur A. Raney,
and Jennings Bryant



Media Effects

Now in its fourth edition, *Media Effects* again features essays from some of the finest scholars in the field and serves as a comprehensive reference volume for scholars, teachers, and students.

This edition contains both new and updated content that reflects our media-saturated environments, including chapters on social media, video games, mobile communication, and virtual technologies. In recognition of the multitude of research trajectories within media effects, this edition also includes new chapters on narratives, positive media, the self and identity, media selection, and cross-cultural media effects. As scholarship in media effects continues to evolve and expand, *Media Effects* serves as a benchmark of theory and research for the current and future generations of scholars.

The book is ideal for scholars and for undergraduate and graduate courses in media effects, media psychology, media theory, psychology, sociology, political science, and related disciplines.

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Media Effects

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Edited by Mary Beth Oliver, Arthur A. Raney, and Jennings Bryant

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Arthur A. Raney

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Fourth edition published 2020
by Routledge
52 Vanderbilt Avenue, New York, NY 10017

and by Routledge
2 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN

Routledge is an imprint of the Taylor & Francis Group, an informa business

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First edition published by McGraw-Hill 2002

Third edition published by Routledge 2008

Library of Congress Cataloging-in-Publication Data

Names: Oliver, Mary Beth, editor. | Raney, Arthur A., editor. | Bryant, Jennings, editor.

Title: Media effects / edited by Mary Beth Oliver, Arthur A. Raney, and Jennings Bryant.

Description: Fourth edition. | New York, NY : Routledge, 2020. |

Series: Routledge communication series | "First edition published by McGraw-Hill 2002.

Third edition published by Routledge 2008." | Includes bibliographical references and index.

Identifiers: LCCN 2019009967 | ISBN 9781138590182 (hardback) |

ISBN 9781138590229 (paperback) | ISBN 9780429491146 (ebook)

Subjects: LCSH: Mass media--United States--Psychological aspects. | Mass media--Social aspects--United States. | Mass media--Political aspects--United States. | Mass media--United States--Influence.

Classification: LCC HN90.M3 M415 2019 | DDC 302.23--dc23

LC record available at <https://lccn.loc.gov/2019009967>

ISBN: 978-1-138-59018-2 (hbk)

ISBN: 978-1-138-59022-9 (pbk)

ISBN: 978-0-429-49114-6 (ebk)

Typeset in Minion Pro

by Swales & Willis, Exeter, Devon, UK

For John and Dad, with all my love.
—MBO

For my beloved Laura.
—AAR

**For Phyllis Dunker Bryant
Bennett Bryant Levine
Sara Elizabeth Levine**
—JB



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Contents

<i>Foreword</i>	ix
1. A History of Media Effects Research Traditions	1
<i>Peter Vorderer, David W. Park, and Sarah Lutz</i>	
2. Media Effects Theories: An Overview	16
<i>Patti M. Valkenburg and Mary Beth Oliver</i>	
3. The World of News and Politics	36
<i>Yariv Tsfati and Nathan Walter</i>	
4. News Framing Theory and Research	51
<i>David Tewksbury and Dietram A. Scheufele</i>	
5. Cultivation Theory, Media, Stories, Processes, and Reality	69
<i>Rick Busselle and Jan Van den Bulck</i>	
6. Media Priming and Accessibility	83
<i>David R. Ewoldsen and Nancy Rhodes</i>	
7. Social Cognitive Theory	100
<i>Marina Krcmar</i>	
8. Currents in the Study of Persuasion	115
<i>James Price Dillard</i>	
9. Narrative Effects	130
<i>Melanie Green, Helena Bilandzic, Kaitlin Fitzgerald, and Elaine Paravati</i>	
10. Media Choice and Selective Exposure	146
<i>Silvia Knobloch-Westerwick, Axel Westerwick, and Daniel J. Sude</i>	
11. Media and Emotion	163
<i>Robin L. Nabi</i>	

12. Media, Identity, and the Self	179
<i>Jonathan Cohen, Markus Appel, and Michael D. Slater</i>	
13. Media Psychophysiology and Neuroscience: Bringing Brain Science into Media Processes and Effects Research	195
<i>Paul D. Bolls, René Weber, Annie Lang, and Robert F. Potter</i>	
14. Media Violence and Aggression	211
<i>Jessica Taylor Piotrowski and Karin M. Fikkers</i>	
15. Media and Sexuality	227
<i>Paul J. Wright</i>	
16. Media Stereotypes: Content, Effects, and Theory	243
<i>Travis L. Dixon</i>	
17. Eudaimonia as Media Effect	258
<i>Arthur A. Raney, Mary Beth Oliver, and Anne Bartsch</i>	
18. Advertising Effects and Advertising Effectiveness	275
<i>Louisa Ha</i>	
19. Educational Media for Children	290
<i>Amy B. Jordan and Sarah E. Vaala</i>	
20. Media Effects and Health	308
<i>Jessica G. Myrick</i>	
21. Entertainment and Enjoyment as Media Effect	324
<i>Arthur A. Raney and Jennings Bryant</i>	
22. Video Games	342
<i>Christoph Klimmt and Daniel Possler</i>	
23. Psychological Effects of Interactive Media Technologies: A Human–Computer Interaction (HCI) Perspective	357
<i>S. Shyam Sundar and Jeeyun Oh</i>	
24. Social Media	373
<i>Jesse Fox and Bree McEwan</i>	
25. Effects of Mobile Communication: Revolutions in an Evolving Field	389
<i>Scott W. Campbell and Rich Ling</i>	
26. Virtual Reality in Media Effects	404
<i>Sriram Kalyanaraman and Jeremy Bailenson</i>	
27. Cross-Cultural Media Effects Research	419
<i>Jinhee Kim and Kimin Eom</i>	
Index	435

Foreword

When the third edition of *Media Effects: Advances in Theory and Research* was published in 2009, the media landscape was quite different than it is today. Then, only about 37% of U.S. adults reported using any form of social media. As of this writing, that number is 70% or more (Pew Research Center, 2018). In 2009, only 38% of teens reported sending texts on a daily basis (Lenhart, 2009); recent research now reports that teens, on average, spend approximately two hours texting each day (Twenge, Martin, & Spitzberg, 2018). Media-related words and phrases that were uncommon or even unknown at the time—fake news, chatterbots, Alexa, cyber hacking—are now part of our daily vocabulary. Over this same period, video rental stores have been shuttered, newspaper reading has plummeted, and movie attendance has been on the decline. With these changes in mind, it was obvious that the time had come for an update to *Media Effects*.

Just as the media landscape has shifted, media theories have continued to evolve in an attempt to keep pace. However, changes in media technologies do not necessarily imply that foundational theories are now irrelevant. People continue to get news, people still love stories, and people still experience strong emotions when consuming media that provide them with thrills, romance, and laughter. Alas, media also continue to perpetuate stereotypes, to glorify unsavory behaviors, and to encourage unhealthy habits. In short, media use, media effects, and the theories that explain them are relevant to human desires and gratifications—something that is likely remarkably stable over time. However, the affordances of media technologies are undoubtedly different than ten years ago, causing us to rethink, re-examine, and broaden our existing theories, while at the same time developing new ones that are unique to emerging media forms.

This new edition of *Media Effects* represents a host of changes that reflect not only shifts in the media landscape, but also changes in the wealth and number of scholars examining questions of media influence. Perhaps one of the most notable changes is in terms of editorship, with Art Raney now on board. His talents as an editor and his insights as a scholar are undoubtedly reflected throughout this volume.

We have also included a host of new chapters and authors. In response to younger scholars' and students' calls for greater historical and theoretical context, we begin the volume with chapters that provide a bird's-eye view of the discipline and of the theories that are prominent.

Given the vast array of media choices provided by streaming video and seemingly limitless internet sites, we have also included a new chapter on media selection. The importance of media in providing role models, allowing for self-presentation, and allowing for self-exploration prompted us to include a new chapter on the role of media and identity. This edition also explicitly recognizes the importance of stories in a new chapter on narratives. New to this edition are also two chapters pertinent to technological changes: one on social media specifically, and one on virtual reality. We also thought it important to recognize that, historically, the majority of research in media effects has been dominated by scholars (and participants) in the U.S. As a result, we now include an important new chapter on cross-cultural media effects, and we feature a larger proportion of non-U.S. authors from throughout the world. Finally, with an eye toward optimism about how people use and respond to media, this edition now also features a chapter on meaningful (eudaimonic) media.

Of course, with all of these changes and additions in mind, we are happy to include a wide array of new authors who represent the evolution of our field. We are also deeply grateful to the authors who readily agreed to take on the task of overviewing foundational theories and topics with a recognition of their value and importance in our shifting world of media. Together, these authors represent some of the most insightful, productive, and talented researchers in the discipline. We, therefore, now enthusiastically hand this volume over to our readers, and we thank them in advance for their role in furthering our understanding of media effects.

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A History of Media Effects Research Traditions

Peter Vorderer, David W. Park, and Sarah Lutz

Media effects research has been both praised and criticized for its role in a discipline called communication, communication studies, or even communication science. In fact, despite the rapid growth of the field and its seemingly constant differentiation, numerous influential volumes have been dedicated exclusively to media effects over the past 60 some years (e.g., Bryant & Oliver, 2009; Bryant & Zillmann, 1986; Nabi & Oliver, 2009; Perse, 2001; Schramm, 1954; Sparks, 2002). As much as the shaping of communication studies as a field was an outcome of media effects research, communication studies was of course not its only patron. Other and older disciplines like sociology, political science, or psychology also played important roles in the early theorizing and testing of hypotheses about the effects media technologies and messages may have on their users, and they still do.

In this chapter, initially we will focus on what communication originally meant across academia. Building on this, we will be able to differentiate between a few disciplinary traditions in communication studies and point to what may now be called the two official narratives of the history of media effects research. We will highlight the most important historical phases in communication research and will refer briefly to the often lamented (and sometimes also demanded) dichotomy between the social science and the humanities approach as it is manifested in our field. We will then refer to media effects in a more narrow sense, picking up on how its history has often been described and systematized along the lines of strong, weak, moderate, and negotiated effects. In order to summarize the most important theories of media effects research, we will refer to Kepplinger's (2008) distinction between what he called learning theories and cognitive theories, and, subsequently, reconstruct the history of these theories and models by deriving them from their underlying epistemology. We will close this section by pointing to more recent theoretical developments, which are characterized by an attempt to differentiate and to integrate various components of the media-effects process. The final section will then lead us to the question of whether media effects still exist in today's media-saturated world, and, if so, what sort of effects remain in a world of ubiquitous media use. This, in turn, will bring us back to the roots of the field, in which communication was conceived as something significantly broader than what today is often meant when we talk about the uses and effects of media.

Five Models of Communication (and Then Four More)

Communication studies does not belong solely to scholars who identify with the field of communication. Even in the mid- to late-1900s, numerous and disparate intellectual traditions laid some claim to the study of communication, and the study of media effects must take its place within this broad spectrum of inquiry. In his pursuit of an inclusive means by which to sort out the tangle of ideas that have been applied to questions of communication, Peters (1999) took an historical perspective. More specifically, he turned to the 1920s, where he found an abundance of perspectives on communication that remain with us today. The first of these—and one that is particularly relevant to the study of media effects—is the understanding of communication as “something like the dispersion of persuasive symbols in order to manage mass opinion” (Peters, 1999, p. 11). In this understanding, communication was put into the context of other elements of modernity, including urbanization, industrialization, and rationalization. From such figures as Walter Lippmann, Edward Bernays, and Harold Lasswell came the idea that communication could be “conceived of as the power to bind a far-flung populace together for good or ill” (Peters, 1999, p. 12). This idea itself has proven quite powerful and undergirds much of the thinking concerning media effects today.

Though it is of particular importance for an understanding of media effects, this was by no means the only way communication was understood in the early 20th century. A second school of thought took communication to be “the means to purge semantic dissonance and thereby open a path to more rational social relations” (Peters, 1999, p. 12). The idea here, shared by Charles Kay Ogden and Ivor Armstrong Richards, is that communication breakdown on the macro- and micro-scales could be avoided through a careful consideration of how language comes to carry significance, an embrace of close semantic analysis that would “provide a medium of communication for the needs of modern scientific men and women” (Peters, 1999, p. 13).

This could be contrasted with a third model from the 1920s, which took communication to be an “insurmountable barrier” (Peters, 1999, p. 14). These barrier thinkers gave us a vision of communication in which language, gesture, and images all conspire to reinforce a condition of solipsism, where the pretense of mutuality and connection merely masks a situation wherein individuals simply seal themselves off or are sealed off by a system of communication. Peters (1999) traced this model of communication to Thomas Stearns Eliot and Franz Kafka, whose evocations of individuals walled off from others by language remain a potent poetic lodestar.

There are two more models that depart from the idea of communication as a mental process, or as a way to share an accurate depiction of the world. One of these Peters (1999) traced to philosophers Martin Heidegger and John Dewey. Heidegger saw communication not as the authentic connection between people but as “the constitution of relationships, the revelation of otherness, or the breaking of the shells that encase the self” and not as “the sharing of private mental property” (pp. 16–17). John Dewey offered a different kind of end-around to the problem of communication. Peters (1999) described Dewey as having conceived of communication “as pragmatic making-do in community life,” and as “taking part in a collective world” (p. 18). Though he shared with Heidegger a turn away from conceiving of communication as authentic shared signification, Dewey gave us a more upbeat take with his focus on how communication can become a tool to solve shared problems.

A final model of communication that Peters (1999) extracted from the 1920s comes from Emmanuel Levinas. Peters (1999) described Levinas as having given us an understanding of communication “as a caress” (p. 20). From this standpoint, the failures of communication we

find in all of these models is not something to mourn. Peters (1999) gave us a Levinas who argued that the:

failure of communication ... allows precisely for the bursting open of pity, generosity, and love. Such failure invites us to find ways to discover others besides knowing. Communication breakdown is thus a salutary check on the hubris of the ego.

(p. 21)

Here communication's necessary incompleteness was treasured for how it sustains the other. To seek a pure fusion of individuals or of cultures would be to seek the end of difference itself.

If this list of varied models of communication were not enough, Peters (2008) later developed another list of ways to consider communication, focused this time on four models of communication that emerged after World War II. One of these is cybernetics, a school of thought whose origins Peters (2008) connected to a "postwar fascination with communication, information, systems, probability, noise, redundancy, entropy, interference, breakdown, feedback, homeostasis, and so on" (p. 151). A second post-World War II school of thought was found in psychiatric understandings of communication, with its emphasis on therapeutics, unhitched from the traditional psychiatric interpersonal dyad and connected more broadly to groups, organizations, and societies. A third model of communication from the mid-20th century came to us largely from the humanities, especially as literary scholars began to collaborate with anthropologists. This school of thought, which could broadly be called cultural studies, emphasized the symbolic nature of media texts and how they fit into broader cultural and societal patterns.

Alongside these three other post-World War II models—cybernetics, psychiatry, and cultural studies—Peters (2008) outlined the emergence of what he calls the "social psychology of media effects" model (p. 149). This model of communication, which is the focus of much of this volume, traced its intellectual lineage to sociology, a field that would itself largely abandon the focus on communication (Pooley & Katz, 2008). The social psychology of media effects model would find broad purchase in newly founded communication departments in the U.S. and beyond. The model's focus on how media messages and processes could in some way be connected causally to particular cognitive, attitudinal, or behavioral changes—or reinforce the status quo—became a taken-for-granted starting point of much communication research for decades to follow.

History of Communication Study

Two Short Stories about the History of Communication Studies

Why go over all of these models of communication as a prelude to a discussion of media effects? In part because it is important to remember that media effects is only one of many different ways to consider mass communication or the media. The field of communication's analysis of its own past was for a long time the stuff of textbook syntheses of the history of communication study. These assessments were often built on historiographically thin claims. Simonson and Park (2015) described "two entwined stories" (p. 4) that have turned up very frequently in the field's memory of its own past, in textbooks and beyond. The first of these, which came largely from Paul Lazarsfeld and Elihu Katz, made pre-World War II mass communication scholarship out to be caught up in the belief that the media had a "hypodermic" effect

on people, thus positioning post-World War II scholarship, with its multivariate approaches and imagery of indirect effects, relatively sophisticated and reassuring compared to its ostensibly more gullible and alarmist predecessors (Lubken, 2008). The second story Simonson and Park (2015) found at the heart of much recollection of the history of communication study is the idea of the field's "four founders." This second idea, which proposed that Paul Lazarsfeld, Harold Lasswell, Kurt Lewin, and Carl Hovland were the proper founders of the study of communication, was, like much of the "hypodermic" theory, a story that claimed a certain disciplinary legitimacy for communication study. What it lacked in accuracy, the four founders story possessed in function. Simonson and Park (2015) described both stories as "legitimizing myths" (p. 4), fitted to the field's needs but largely inaccurate. Pooley (2008) has described histories like this as being "airbrushed and Whiggish" (p. 1); these stories tell us little about what actually has transpired in the world of communication inquiry. Consider the broad swaths of communication inquiry that Peters (1999) identified at work in the 1920s and post-World War II. These two intertwined stories about the history of communication turn their attention away from almost all of these trajectories in thought about communication. A proper understanding of media effects must be connected to a better-informed and more inclusive history of communication study.

Four (or Five) Historical Phases in the Study of Communication

Although communication departments are a relatively recent phenomenon, the study of communication goes back very far indeed. The Greco-Latin tradition of communication study installed the idea of speech as a distinct arena of inquiry to be called "rhetoric." Rhetorical scholars still invigorate this tradition today. In the last two centuries, interest in communication per se has intensified, and even rhetoric has been brought under the rubric of communication study, at least in the United States.

In the late 19th through the early 20th centuries, communication widely came to be conceived in social thought in the U.S. and Europe as the means by which societies come into being. Much of the scholarly interest in communication at this time was connected to a fascination with the role played by the newspaper. American journalism education, with its practical orientation, bumped into the broader social meaning of the newspaper. The German *Zeitungswissenschaft*—"newspaper science"—took the study of newspapers and their world to be scientific in nature. This interest in how communication operated across societies was reinvigorated by technological and other changes in the early 20th century. Movies and radio stirred the scholarly imagination of the time, as did the newly invented worlds of public relations and advertising. The development of survey methods in the early 20th century provided a tool that seemed quite promising for developing a scientific measure of entire societies (Simonson & Park, 2015).

During and after World War II, the widespread use of propaganda and other means of influence via the mass media sparked tremendous interest in communication. In the United States, enterprising scholars founded communication programs, institutes, and departments. Many of these new communication programs carried pre-existing speech or journalism programs along with them, often using names like "speech communication" or "journalism and mass communication" to signal a hybridized approach. The academic study of communication moved quickly, if fitfully, and with distinct regional differences, across the world. UNESCO (the United Nations Educational, Scientific, and Cultural Organization) was closely involved in research projects involving mass communication around the world. A distinct school of communication study emerged in Canada, where political

economist Harold Innis established a framework for understanding the societal meaning of media of communication. His better-known colleague in the Explorations Group, Marshall McLuhan, adopted some of Innis's ideas for his own jazzy take on how media can shape individuals and societies. The decades immediately after World War II found communication study spreading globally, refracted through different nations' cultural traditions and political orders. The result was a field of study that could be fit to a dizzying array of pragmatic applications, critical questions, historical perspectives, and political interests (Simonson & Park, 2015).

Opposition to a number of mainstream ideas in the field of communication arose in the late 1960s and 1970s. New ideas invigorated communication study, while also calling into question some of communication study's most treasured and unspoken precepts. Feminist approaches to communication, Marxist theory, and postcolonialism informed scholars who elaborated upon how the social scientific tradition in communication missed out on some of the definitive conflicts at work in the world. Much of this was of course fueled by the political awakenings of 1968 and their aftermaths. In 1983, the *Journal of Communication's* special issue titled "Ferment in the Field" registered the interest of a panoply of scholars who hoped to see communication move beyond the administrative work of determining when communication was and was not effective (Simonson & Park, 2015).

Since the end of the Cold War, internet-enabled media have adjusted both the domain of communication study as well as how communication study has come to be organized. This is to say that the usual suspects—newspaper, television, radio, and movies—have all found themselves transformed anew in the digital age. At the same time, the means by which scholars approach communication has changed as well. Communication study has grown markedly more international in scope, while undergraduate and graduate programs continue to grow in size. New subfields of communication study have come into being, including social media, big data, and artificial intelligence. It remains difficult to determine whether communication is, as some would have it, a social science, or whether it is an agglomeration of multidisciplinary approaches (Simonson & Park, 2015). It would appear that growth and internationalization have not settled questions concerning the field's disciplinary or methodological identity.

The Dichotomy between the Social Sciences and the Humanities Approaches

No doubt the second half of the 20th century was communication studies' time to develop and establish itself as an academic discipline among others. Although several sources of intellectual inquiry had been blossoming in various corners of academia, the dichotomization between the humanities and the social sciences helped to fit communication studies to the multifarious questions that pertain to communication.

Whereas the humanities started in early 19th-century Europe to deal "with historically oriented studies of texts and artifacts," an alternative approach emerged only "a century later with experimental psychology and the social sciences" (Craig, 2006, p. 677). It therefore is no surprise that the institutionalization of the field occurred not only in different corners of academia with different names (e.g., in English: communication, communication studies, communication science, journalism, speech communication, rhetoric, media studies, media science; or in German: *Zeitungswissenschaft*, *Publizistik(wissenschaft)*, *Medienwissenschaft*, *Kommunikationswissenschaft*, to name just a few) but also in line with different levels of analysis (micro-, meso-, macro-), with different methodological goals ("understanding" versus "explanation"), with different theoretical and methodological orientations, with different objectives, and with sometimes

(if not often) incompatible visions and values. Craig (1999) described a comprehensive model of the field, in which he identified no fewer than seven distinct traditions: rhetoric, semiotics, cybernetics, phenomenology, social psychology, socio-cultural theory, and critical theory.

Even if a more narrow view on the field is taken, for example, by focusing only on the audience—as in “audience research”—it seemed to be meaningful if not necessary to distinguish between different traditions that apply divergent theoretical, meta-theoretical, and methodological positions. An interesting example of this is Jensen and Rosengren’s (1990) attempt to systematize audience research along five sub-areas: effects studies, uses and gratifications, literary criticism, cultural studies, and reception analysis. On the background of these systematizations it is only understandable that many communication scholars have rather adopted and referred to the simplifying dichotomous model (between “communication studies” and “media studies,” or between “a social science tradition” and “a humanistic tradition” respectively) than Craig’s (1999) or Jensen and Rosengren’s (1990) certainly more differentiated models when it came to pointing to the diversity of the field (e.g., Vorderer & Groeben, 1992). Lang (2013) drew the line between mass communication and interpersonal communication and concluded that these two research programs “at least over the last 50 years, do indeed represent different disciplines” (p. 12). She explained this by pointing to the fact that mass communication research (and more specifically, media effects research as its dominant paradigm) has been remarkably unsuccessful and almost obsessed with its narrow focus on effects, which in this tradition are seen “as an agent of change, external to people and their immediate social environments” (Lang, 2013, p. 14). Building on this perspective, Lang explained the development from critical and cultural approaches within communication (see above) towards a new discipline that might be called communication and culture (e.g., Miller, 2009) as “a direct response to the failure of the dominant paradigm” (Lang, 2013, p. 16).

A Psychological Turn in Media Effects?

Following Lang’s (2013) argument, it was approximately 1980 when “the dominant paradigm [was] one of effects,” (p. 17) with its then-prevailing perspective that media effects are usually weak at most—and with a good part of the discipline having left the mainstream to make up their own program in communication and culture—that a new approach was developed. The new approach focused on psychological—more precisely, on cognitive—processes of individuals who are exposed to media content. Lang (2013) identified Byron Reeves and Esther Thorson as the most important patrons of this emerging perspective, as they claimed as early as 1986 that we need to begin to study “processes that are covert and that these questions require close examination of relevant psychological studies” (Reeves, Thorson, & Schleuder, 1986, p. 251). This is exactly what Lang and her collaborators successfully did over the ensuing decades (e.g., Lang, 2000, 2006) but certainly they were not alone.

Following the so-called “cognitive turn” in psychology, which focused on information processing and thereby succeeded what still remained of the behavioristic perspective in psychology, *media psychology* tried to establish itself as a research program somewhere between psychology and communication studies. Harris published the first of several editions of his well-received *Cognitive Psychology of Mass Communication* in 1994. Bryant and Ewoldsen started a new journal *Media Psychology* in 1999. Yet, a full decade earlier, Winterhoff-Spurk, Groebel, and Vitouch edited *Medienpsychologie*, likewise a journal dedicated to psychological research on the uses and effects of media. But as this journal published only papers written in German until 2008, when it was relaunched as the *Journal of Media Psychology*, its output remained almost completely unnoticed within the English-speaking world.

Something similar happened to a number of textbooks on media psychology that, from the late 1980s on, were also published only in German (Batinic & Appel, 2008; Groebel & Winterhoff-Spurk, 1989; Kagelmann, 1982; Krämer, Schwan, Unz & Suckfüll, 2016; Mangold, Vorderer, & Bente, 2004; Six, Gleich, & Gimmler, 2007; Trepte & Reinecke, 2013; Winterhoff-Spurk, 2004). These publications reveal that this new perspective called media psychology covered all sorts of media-related cognitions, effects, and behaviors, but it was not, as Lang (2013) suggested, united in applying an evolutionary foundation to its reasoning (although this evolutionary perspective was particularly important in the U.S.). What the texts did agree upon was an understanding of media effects as something much more complex than previously assumed and the conviction that media effects (as one possible outcome of using the media) can only be understood and studied when the entire process of exposure to media (with a preceding motivation, with the [often unaware although] functional selection of specific content, with the cognitive processing and making sense of this content) is taken into account (Vorderer, 2008). Nevertheless, it would be an exaggeration to claim that media psychological research in total represents media effects research after the 1980s, although it has certainly been a big part of it.

A Short (Official) History of Media Effects Research: Strong, Weak, Moderate, Negotiated Effects

To backtrack slightly, many communication scholars seem to have agreed on the notion that the historic development of media effects research within the past 60-some years may be divided into a few more or less distinct phases, whose number and time boundaries vary by author. The most common classification differentiates between four phases.

Beginning in World War I and up to the end of the 1930s, many assumed that some if not all media outlets had almost unlimited power to change their users' attitudes, habits, and behavior. This period is therefore often called the phase of strong (Esser, 2008) or all-powerful media effects (McQuail, 2010); it is the period associated with the "hypodermic" theory mentioned previously. The media were considered to be almighty for two main reasons: First, society was then understood as an entity of fragmented individuals whose only source of information was the media (Esser, 2008). Second, the individual was then seen as weak, receptive of influences from outside, and therefore inherently susceptible to manipulation (McQuail, 2010). This could be illustrated by examples of "successful" propaganda used during World War I, typically described "in the language of stimulus-response" (Lasswell, 1927, p. 630). This stimulus-response model reflected the then contemporary psychological (and more precisely, the behavioristic) understanding of how human learning works: Media effects happen to a generally passive receiver who is more or less defenseless against messages (or messengers) that usually achieve their intended goal, and this goal is a change of attitude or even of behavior.

These conceptions of the individual and of society changed to some extent at the beginning of the 1940s, which, for some scholars, marked the beginning of the second ("weak effects") phase that lasted until the end of the 1960s (Esser, 2008). However, the term "weak" did not imply that the media would not have any impact on its users at all. More precisely, it referred to the fact that there was no direct link between the media (content) and the users' response. At the individual level, psychological factors such as prior attitudes were taken into account as intervening instances, symbolizing a change toward an understanding of him or her as an "active user" (McQuail, 2010). This led to an extension of the classical stimulus-response model by adding the organism as an important interface between the stimulus and the response (to become the so-called S-O-R model). This model was used, for example, in Klapper's (1960)

limited effects theory, according to which media can merely confirm prior beliefs but not cause an attitude change. Moreover, such intervening variables did not always have to be on the individual level only, as in the case with prior beliefs or attitudes. They were also conceived of existing at the social level, for example in the two-step flow model of communication (Lazarsfeld, Berelson & Gaudet, 1944). This model took into account that individuals also interact within groups, which necessarily suggests a weaker direct effect of media messages.

By the end of the 1970s, after a rather long period of assuming those weak effects, strong media effects were rediscovered by focusing on cognitive (instead of behavioral) and long-term effects (McQuail, 2010) in the context of some more narrowly defined research programs. Cultivation research (Gerbner & Gross, 1976), agenda-setting research (McCombs & Shaw, 1972), and the spiral of silence theory (Noelle-Neumann, 1974) are prominent examples of this phase. Particularly Noelle-Neumann's article of 1973 indicates in its very title the ambition of the scholars at that time: "Return to the Concept of Powerful Mass Media" (Noelle-Neumann, 1973). Of course, the media were not considered to be as powerful and strong as they were in the first phase, but certainly stronger than in the second, which is why this period is often referred to as the "moderate effect phase" (Esser, 2008).

According to many authors, the fourth and final phase of media effects history, which continues to this day, began in the late 1970s. Since then, many scholars in the field refer to "negotiated" or "transactional" media effects, which, according to McQuail (2010), can be described as follows: Media present an image of social reality but compete with other opinion-forming sources such as personal experiences or the social environment. These other sources can create resistance to the media's influence on the individual. However, the user is seen to be free to decide whether or not to adopt the views offered by the media. Instead of a direct transfer of meaning, users negotiate between what is offered by the media and what he or she is inclined to believe. This approach differs significantly from the previous ones, as it allows both the media and the users to be powerful.

Naturally, this classification of media effects research into more or less distinct phases has been controversial (e.g., Kepplinger, 2008). Esser (2008), for example, pointed out that this historical systematization of media having "all-powerful" to "limited" to "rediscovered powerful" to "negotiated" effects may ignore findings that did not sufficiently fit into this classification. Klapper (1960), a representative of the second phase, already had described factors that caused media to have strong effects on its users, but compared to his findings on weak effects these considerations never received as much attention. In truth, studies reporting rather strong or rather weak effects can be found in any period of time (Esser, 2008). The question therefore remains whether this description of media effects research history as a step-by-step development is merely a convenient narrative that only represents the perspectives of some leading scholars at the time and disregards the complexities of the actual development. Or, in Lang's (2013) provocative words: Is this merely "history written by the victorious" (p. 12)? Perhaps this is a history of media effects every bit as "airbrushed and Whiggish" as Pooley (2008, p. 1) identified at work elsewhere in the history of communication study.

Theories of Media Effects

Given that there is more than one way to tell the history of media effects research, it seems only plausible that there are also different ways to categorize the various theories and theoretical models that have been developed and applied along the way. In the interest of limited space here, we will pick only two such ways: one from a systematic and more traditional communication

studies perspective, and another from a more historical one. We do recognize that most of these theories mentioned therein remain within what Peters (2008) called the “social psychology of media effects” model (p. 149) and what Valkenburg and Peter (2013) described as “microlevel media-effects theories” (p. 222). We can be brief because this volume contains and outlines most of the currently influential theories and models that equip a great part of past and current media effects research.

The Communication Studies Perspective: Learning Theories versus Cognitive Theories?

Within communication studies, theories on the effects of media sometimes have been categorized into learning theories versus cognitive theories (e.g., Kepplinger, 2008). From the first perspective, learning is understood as an interplay of stimuli and response, in which stimuli are seen as causes, and responses are understood as effects. One typical example of this perspective is the (early) theory of observational learning (Bandura, 1965, 1977), a precursor of what Bandura (2009) later called social-cognitive theory of mass communication (see Chapter 7 in this volume). According to the rather behavioristic reasoning in this theory, individuals observe patterns of behavior represented in the media (stimuli) and perform them afterwards (response) under certain conditions. These conditions were conceived particularly in terms of various forms of reinforcement for the newly learned behavior. The fact that media serve as one, if not the most important, source of information for various audiences is also reflected in McCombs and Shaw’s (1972; also see Chapter 3 in this volume) agenda-setting approach. Even in cultivation research (Gerbner & Gross, 1976; Morgan, Shanahan & Signorelli, 2009; also see Chapter 5 in this volume), the direct influence that frequent media use may have on the perception of reality was of central importance and therefore systematically studied. Any inconsistency between an individual’s beliefs or attitudes with the information provided by media was interpreted as a learning deficit, which indicates a lack of media effects (Kepplinger, 2008).

In contrast to this learning theory perspective, cognitive theories interpret this discrepancy as a result of different ways of information processing. Thus, opinions and beliefs of users are not merely copies of media presentations (Kepplinger, 2008). Following schema theory, Graber (1988) reported that users’ beliefs are based on cognitive structures in their long-term memory (so-called schemas), which structure the way information is understood, interpreted, and, in short, processed. Priming theory (Roskos-Ewoldsen, Roskos-Ewoldsen & Carpentier, 2009; Chapter 6 in this volume) follows this approach, assuming that media content activates parts of an individual’s semantic network, which leads to a more intense processing of similar information. In conclusion, cognitive theories aim to understand how users process the information presented in media.

The difference between what Kepplinger (2008) called learning theories and cognitive theories has much to do with the implicit understanding of the media user that scholars have implied when developing their respective theories. This implicit understanding (or epistemology) has naturally changed over time. It therefore seems to be necessary to take into account when these theories have been developed, explicated, and applied in order to structure this scholarly field.

The Historical Perspective: Theories According to Their Underlying Epistemologies

As early as in the 1980s, Drinkmann and Groeben (1989) systematized the then-extant psychological research on the effects that persuasive texts may have on their readers by means of a meta-analysis. In preparation of this meta-analysis, they categorized the various theories and

theoretical models developed by media effects scholars along the way. More precisely, they used the (often only implicit) epistemology underlying these theories, that is, the respective authors' assumptions about (a) the direction of causality (i.e., who or what within the process of persuasion is agent, what is object) and (b) what is the assumed (cognitive) activity of the user. Using these two dimensions, they systematized the history of media effects research by distinguishing four different models: (a) determined, passive users; (b) selective-reactive users; (c) reductive-modifying users; and (d) active-elaborative users. The first model—that of a determined, passive user—is represented in studies that explain media effects by principles of reinforcement such as the so-called message-learning approach, in which the media user is conceived as being passive and the causal direction is assumed to go from the text to the representation of it by the user. In comparison, the understanding of a reader as (b) a selective-reactive user can be found in the so-called “judgmental approach,” where the causality is still from the text to the reader but the activity of the user is characterized by selection and rejection of content. Whether some content will be selected or rejected mainly depends on how the content relates to the user's existing attitudes. Here, for example, a user's ego-involvement with a specific domain of knowledge matters as it determines the relevance a topic has on him or her, which will lead to a greater latitude of rejection.

Much of the empirical work in media effects has been conducted with the assumption of (c) a reductive-modifying user, where the causality goes from the user to the representation of the content and where the user is seen as someone who can actually modify the content. An example would be Heider's (1946, 1958) balance theory, which postulated a need to balance the various relations between others in service of the much-preferred homeostasis in one's perception. In this perspective, the impact of a text itself is relatively weak as it first and foremost needs to fit into the cognitive system of a user and depends much on the previous experiences of the user. As the most recent and progressive model, Drinkmann and Groeben (1989) identified the (d) active-elaborative user, in which he or she does not “receive” information from a text but interacts with his or her environment and processes information by integrating them into the prevailing cognitive structure.

Information Processing Instead of Media Effects?

Although Drinkmann and Groeben's (1989) systematization was explicated in the late 1980s, much of the theoretical developments in the past 30 years have seen an inclusion of affects and moods, in addition to cognitive processes (e.g., the mood-management theory of Knobloch-Westerwick, 2006 and Zillmann, 1988, in which entertainment experiences are seen as effects of exposure to media; see Bryant & Vorderer, 2006). Most interesting and promising in this context, however, have been theoretical models—like the elaboration-likelihood model (ELM; Petty & Cacioppo, 1986; Petty, Cacioppo, Strathman & Priester, 2005; see also Chapter 8 in this volume)—rather than single theories. What has been unique about the ELM is the fact that it has successfully integrated various cognitive and motivational processes and mechanisms that, in times past, have been identified by media effects scholars as leading to attitude change. ELM scholars have done this by defining the specific conditions on which the user's cognitive activity (“elaboration” in their terms) depends and postulating the particular kind of effect these conditions might have on the user (for an application and extension of this theory in the area of entertainment research, see Bartsch & Schneider, 2014). Even more inclusive than the ELM is the so-called differential susceptibility to media effects model by Valkenburg and Peter (2013)

that, while also focusing on micro-level media effects, distinguishes between users' dispositional, developmental, and social susceptibility to media and claims that three differentiable response states—cognitive, emotional, and excitative—mediate the effects of media.

What these theoretical advances indicate, we believe, is this: In the background of the fact that media effects research has been a dominant paradigm in communication studies, and the fact that the effect sizes found for many dependent measures have been rather small, many scholars have tried to overcome this disappointing situation by either differentiating, specifying, and subsequently integrating the various relations between causes and effects in media use even further (with the ELM being a prominent example of this) or by proposing an alternative paradigm altogether (Lang, 2013; Lang & Ewoldsen, 2010).

Are There Still Media Effects in a Permanently Online, Permanently Connected World?

Media effects research grew within the discipline of communication to become not only one of its main areas of inquiry but also one of its largest fields of empirical study. Given the amount of attention that has been dedicated to this particular research domain, the outcome might be regarded as rather modest in terms of its identified and validated effects (Lang, 2013). But it nonetheless has always been a field where new ideas, assumptions, theories, and models have been conceived and tested. This, we believe, is even more impressive if we consider the fact that the object of study has always been changing. From the effects of listening to the radio or those of reading a newspaper, to watching a commercial or a movie on TV, to entertainment programs on any kind of device, to playing video games on a console or a PC or to communicate in social media, the uses and effects of media have been not only described but most often also explained by media effects theories.

However, some of the facts this scholarship has long taken for granted have also changed most recently: users accessing a media outlet that carries a certain content within a specific format, with the user starting the process of exposure at one point in time and ending it at some later point. The results of most media effects research describe changes in the thinking, feeling, or behavior of individuals that would not have occurred if the individuals had not been exposed to media. This is what has changed significantly within only the past few years. Media outlets and their message systems are now available everywhere, and exposure can happen anytime, with implications for both mass and (mediated) interpersonal communication. Because of the ubiquitous availability of smartphones and other carry-on devices such as tablets or smartwatches, today's media users are permanently online and permanently connected (Vorderer, Hefner, Reinicke & Klimmt, 2018). As a result, media use and media effects may now materialize everywhere, anytime, and with respect to any sort of content. Access to the internet today is similar to what access to reading glasses has meant to many nearsighted readers: something that is (almost) always available and is (often enough) sufficiently powerful to change our perceptions and understandings of others and the world. It can, and often does, change our thinking, believing, feeling and behavior, and therefore it is commensurate with what we used to call "media effects," although we are unable to identify a single source of influence. Today, for instance, we would most likely not—as many media effects scholars have in the past—argue that a televised debate is the most important (let alone, the only major) factor influencing the outcome of a national election. Rather, we would assume that no single source of information taken alone would have a strong enough effect to make such a difference. However, we do not yet exactly know how the diversity and multiplicity of sources users can interact with today make them think, feel, or act

differently. We have only begun to map the cognitive structures behind mobile media use in search for the “permanently online and permanently connected mind” (Klimmt, Hefner, Reincke, Rieger & Vorderer, 2018). From this point of view, we are only at the beginning of media effects research in our always-on environment.

Independent from these technological developments, it is striking to note that macro-level media effects have largely been put out of focus in communication studies, at least within the social psychology of media effects model. Interestingly and, maybe regrettably, this has happened at a time that sociologists describe as most significant in terms of fundamental societal changes, like technological acceleration and higher rates of cultural innovation (e.g., Rosa, 2005), and during which changes in media use certainly play an important role. Take, for example, the effects that reading texts and listening to audio files posted on the internet in American English may have on the proficiency of understanding and speaking English by non-native speakers of this language. Today, many students are presumably more often exposed to the English language on the internet than to formal language instruction they receive at school. Exposure to certain cultural content (be that “mainstream” content or highly specialized depictions of certain events) through the internet might also lead to culturally specific effects that have not yet been studied. To put it more provocatively, the reflection of media effects on a social level (e.g., Reckwitz, 2017) remains by and large outside of communication studies. Much of what cultural sociology has done in the past years, however, is focused on what these changes in the macro-structure of modern societies mean for the well-being or the “good life” of the individual (e.g., Rosa & Henning, 2018; Vorderer, 2016). It is noteworthy that communication studies has mainly ignored this so far.

Finally, there is the old outlook that the integration of different traditions in our field is more promising than their juxtaposition. We do not want to argue here for a melting of all the different meta-theoretical and methodological approaches within communication studies. But maybe psychologically driven micro-theory development can benefit from sociologically oriented macro-theory approaches, the social-science perspective from the humanistic, and vice versa. It looks as if media users today cannot and should not be regarded anymore as isolated (either active or passive) individuals, who live outside of or independent from social structures and networks, who are either completely dependent from available media content or (hyper-) active and fully aware of what to do with this new abundance of offerings. All of these assumptions and perspectives in media effects research have at some point been helpful heuristics in order to structure the field, possibly even by putting it, for some time, into different silos (Vorderer & Weinmann, 2016). However, now that the field and the questions that it raises have grown well beyond the traditional boundaries, it might be time to also find explanations by crossing such well-known boundaries of our field.

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2 Media Effects Theories¹

An Overview

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Theories and research on the effects of media emerged under the umbrella concept *mass communication*. This term arose during the 1920s as a result of the new opportunities to reach audiences via the mass media (McQuail, 2010). In early mass communication theories, *mass* not only referred to the “massness” of the audience that media could reach but also to homogeneous media use and homogeneous media effects, notions that are increasingly challenged in the contemporary media landscape (Valkenburg, Peter & Walther, 2016). In the past two decades, media use has become progressively individualized, and, with the introduction of Web 2.0, decidedly more personalized. It is no surprise, therefore, that media effects theories have undergone important adjustments in the past decades. And it is also no surprise that the *mass* has turned increasingly obsolete in contemporary media effects theories (Chaffee & Metzger, 2001).

The aim of this chapter is to provide an overview of the most important media effects theories that have been coined in the past decades and to chart changes in these theories. We start by providing a definition of a media effects theory and explaining the differences between media effects theories and models. In the second section, we discuss the results of several bibliometric studies that have tried to point out the most prominent media effects theories in central communication journals, and, based on these studies we identify “evergreen” and upcoming theories. In the third section, we discuss the communalities between contemporary media effects theories along three potential characteristics of such theories: selectivity, transactionality, and conditionality. We end with a discussion of the future of media effects research, with a special focus on the necessity of the merger between media effects and computer-mediated communication theories.

What Is a Media Effects Theory?

As Potter (2011) rightly observes in his review of the media effects literature, few scholars have attempted to provide a formal definition of a media effect. We can add to this observation that even fewer scholars have formulated a definition of a media effects theory. Without such

a definition, it is difficult to assess which theories qualify as media effects theories and which do not. But to be able to document well-cited media effects theories that have been developed over the years, we first and foremost need a definition of a media effects theory. We define such a theory as one that attempts to explain the uses and effects of media on individuals, groups, or societies as a whole. To be labeled a media effects theory, a theory at least needs to conceptualize media use (or exposure to specific mediated messages or stories) and the potential changes that this media use can bring about in individuals, groups, or societies (i.e., the media effect). We define media use broadly as the intended or incidental use of media channels (e.g., telephone, email), devices (e.g., smartphone, game console), content/messages (e.g., games, narratives, advertising, news), or all types of platforms, tools, or apps (e.g., Facebook, Instagram, Uber). Media effects are the deliberate and non-deliberate short and long-term individual or collective changes in cognitions, emotions, attitudes, and behavior that result from media use (Valkenburg et al., 2016).

Some media effects theories that fit within this definition have previously been labeled as media effects *models*, oftentimes (but not always) because they are accompanied by a pictorial model to explain the processes or relationships between media use, media outcomes, and other relevant concepts, such as individual differences or social-context variables (e.g., the Elaboration Likelihood Model, Petty & Cacioppo, 1986; the Reinforcing Spiral Model; Slater, 2007). In other scholarly publications, the labels *theory* and *model* are used interchangeably. For example, in the previous edition of this book, some authors referred to the agenda setting *model* (Tewksbury & Scheufele, 2009, p. 21), whereas others referred to agenda setting *theory* (McCombs & Reynolds, 2009, p. 13). Although there are many conceptions about the differences between theories and models within and beyond the communication discipline, these conceptions do not seem to be helpful in distinguishing media effects theories from models. In fact, all media effects models that will be discussed in this chapter fit within our definition of media effects theories. Therefore, although we will use the original labels of existing models/theories (e.g., the Elaboration Likelihood Model versus cultivation theory), we will use these labels without distinction.

Prominent Media Effects Theories

In the past 20 years, five bibliometric studies have tried to single out the most prominent media effects theories in scholarly communication work (Bryant & Miron, 2004; Chung, Barnett, Kim & Lackaff, 2013; Kamhawi & Weaver, 2003; Potter, 2012; Walter, Cody & Ball-Rokeach, 2018). These bibliometric studies have content-analyzed a varying number of communication journals to document, within a certain time frame, which theories are most often cited in these journals. For example, Bryant and Miron (2004) analyzed one issue per year from three communication journals (*Journal of Communication*, *Journal of Broadcasting and Electronic Media*, and *Journalism & Mass Communication Quarterly*) from 1956 to 2000, Chung et al. (2013) analyzed all issues from four communication journals from 2000 to 2009 (*Journal of Communication*, *Communication Research*, *Human Communication Research*, and *Communication Monographs*), and Walter et al. (2018) analyzed all issues from one communication journal (*Journal of Communication*) from 1951 to 2016.

The bibliometric studies all focused on the prevalence of *mass communication* theories rather than media effects theories specifically. Although both types of theories are sometimes used interchangeably, the focus of mass communication theories is decidedly broader than that of media effects theories. Generally, mass communication theories do not only conceptualize the effects of mass communication, but also its production, consumption, and distribution, as well

as the (changes in) policies surrounding mass communication. For example, in Bryant and Miron's (2004) analysis, mass communication was defined as "any scholarship that examined processes, effects, production, distribution, or consumption of media messages" (p. 663). In addition, whereas mass communication theories have traditionally embraced both postpositivist and critical or cultural approaches (Chaffee & Metzger, 2001), media effects theories are primarily associated with postpositivist approaches. Postpositivists derive their quantitative research methods from those developed in the physical sciences, but they do recognize that humans and human behavior are not as constant and homogeneous as elements in the physical world (Baran & Davis, 2010). Indeed, most chapters in this book rely on theories or discuss research that stem from postpositivist approaches.

Some bibliometric studies did not only analyze (mass) communication theories, but *all* theories, including those that originated in cognate disciplines. For example, Bryant and Miron identified 604 theories in their analyzed journals, including theories such as feminist theory, attribution theory, and Marxism. Likewise, Potter (2012) found 144 different theories from within and beyond the communication discipline, including theories like the availability heuristic, cognitive dissonance, and self-perception (see also Potter & Riddle, 2007; Walter et al., 2018). According to Potter, these theories all described "some aspect of the media effects phenomenon" (p. 69). However, although all these theories may be helpful to explain media effects, in themselves they cannot be considered media effects theories as defined in this chapter. As discussed, a media effects theory at least needs to conceptualize media use and the individual or collective changes that this media use brings about.

Despite the fact that the bibliometric studies used different classifications of communication theories and analyzed different communication journals, together they provide an indispensable picture of the use and development of media effects theories in the past decades. Because media effects theories did play such a dominant role in all bibliometric studies (Chung et al., 2013), we were able to reanalyze the results of these studies with an exclusive focus on the media effects theories that they identified. For example, of the 144 theories that Potter (2012) identified, about one-fifth qualify as media effects theories according to our definition.

Table 2.1 lists the media effects theories that have been identified as most prevalent in the bibliometric studies. In ranking these theories, we opted to include the 1956–2000 period reported by Bryant and Miron (2004) and the most recent years (2010–2016) from Walter et al.'s (2018) study so as to provide a picture of changes and trends within the discipline. However, in listing these theories, it is important to note that their ranking should be understood in general terms rather than as necessarily representing stark or significant differences. First, some of the theories listed were "tied" in terms of their frequencies. For example, in Bryant and Miron's (2004) analysis, agenda setting and uses and gratifications had 61 citations each, and medium dependency and linear theory had 16 citations each; in Kamhawi and Weaver's (2003) analysis, priming and knowledge gap theory were mentioned in fewer than 1.5% of the articles sampled. Second, even when theories differed in terms of their prevalence, some of these differences are so small as to warrant caution in their interpretation. For example, in Chung et al.'s (2013) analysis, cultivation theory was associated with 68 mentions, and agenda setting was associated with 65 mentions. Finally, in some analyses, different theories were sometimes grouped together with similar theories in a common category, thereby increasing their prominence in the rankings. For example, in Walter et al.'s (2018) study, the "narrative theory" was employed to refer to articles that employed theories or concepts such as transportation, entertainment education, and character identification.

Table 2.1 Prominent Media Effect Theories Listed in Five Bibliometric Studies to Document Communication Theories

Study	Bryant and Miron (2004)	Kamhawi and Weaver (2003)	Potter (2012)	Chung et al. (2013)	Walter et al. (2018)
Period	1956–2000	1980–1999	1993–2005	2000–2009	2010–2016
Journals (<i>n</i>)	3 comm. journals	10 comm. journals	13 comm. journals; 3 other journals	4 comm. journals	1 comm. journal
Articles (<i>n</i>)	1,806	889	8,855	1,156	294
Top theories	1. Agenda setting (tied)	1. Information processing models (e.g., limited capacity model)	1. Cultivation theory	1. Framing theory	1. Framing theory
	1. Uses and gratifications (tied)	2. Uses and gratifications	2. Third-person effect	2. Priming theory	2. (Narrative) entertainment theories
	2. Cultivation theory	3. Cultivation theory	3. Agenda setting	3. Cultivation theory	3. Agenda setting
	3. Social learning theory	4. Agenda setting	4. Uses and gratifications	4. Agenda setting	4. Selective exposure theory
	4. Diffusion of innovations theory	5. Diffusion of innovations theory	5. Priming theory	5. Elaboration Likelihood Model	5. Dual processing models (e.g., ELM)
	5. McLuhan's medium theory	6. Framing theory	6. Limited capacity model	6. Third-person effect	6. Priming theory
	6. Medium dependency (tied)	7. Medium dependency theory	7. Framing theory	7. Social cognitive theory	7. Uses and gratifications
	6. Linear theory (tied)	8. Priming theory (tied)	8. Social cognitive theory	8. Diffusions of innovations theory	8. Social cognitive theory
	7. Laswell's communication model	8. Knowledge gap (tied)	9. Elaboration Likelihood Model	9. Theory of reasoned action	9. Mood management theory/Hostile media effect

Table 2.2 Prominent Media Effects Theories and Their Google Citations

Author(s)	Theory/Model	Citations	Description
Lazarsfeld et al. (1948)	Two-step flow theory	9,783	Argues that media effects are indirect rather than direct and established through the personal influence of opinion leaders.
Rogers (1962)	Diffusion of innovations	94,813	Explains how, why, and at what rate new ideas and technology spread among participants in a social system.
Gerbner, 1969	Cultivation theory	574	Argues that the more time people spend 'living' in the television world, the more likely they are to believe the social reality portrayed on television.
Tichenor et al. (1970)	Knowledge gap theory	2,049	Discusses how mass media can increase the gap in knowledge between those of higher and lower socioeconomic status.
McCombs and Shaw (1972)	Agenda setting theory	10,181	Describes how news media can influence the salience of topics on the public agenda.
Katz et al. (1973)/ Rosengren (1974)	Uses and gratifications theory	2,277/ 719	Attempts to understand why and how people actively seek out specific media to satisfy specific needs.
Noelle-Neumann (1974)	Spiral of silence theory	1,696	Discusses people's tendency to remain silent when their views differ from the majority view. Media contribute to the development of majority views.
Ball-Rokeach and DeFleur (1976)	Media system dependency theory	1,173	Argues that the more a person depends on media to meet needs, the more important media will be in a person's life, and the more effects media will have.
Bandura (1977, 2009)	Social learning/ social cognitive theory	47,049/ 3,878	Analyzes the mechanisms through which symbolic communication through mass media influences human thought, affect, and behavior.
Berkowitz (1984)	Priming theory	875	Argues that media can activate cognitions and related affect/behaviors stored in human memory.
Davison (1983)	Third-person effect	1,875	Predicts that people tend to believe that media messages have a greater effect on others than on themselves.
Petty and Cacioppo (1986)	Elaboration Likelihood Model	9,089	Explains how mediated stimuli are processed (via either the central or peripheral route), and how this processing influences attitude formation or change.
Entman (1993)/ Scheufele (1999)	Framing/ Framing as a theory of media effects	11,965/ 3,816	Discusses how the media draw attention to certain topics and place them within a field of meaning (i.e., frame), which in turn influences audience perceptions.
Lang, Dhillon and Dong (1995)/ Lang, (2000)	Limited capacity model	279/ 1,522	Analyzes how people's limited capacity for information processing affects their memory of, and engagement with, mediated messages.

Evergreen Media Effects Theories

As Table 2.1 reveals, six media effects theories have held up fairly well over the past decades, and so they can rightly be named “evergreen theories.” These theories showed up as top-cited theories in both the earliest bibliometric study (time frame 1956–2000; Bryant & Miron, 2004), and in two to four bibliometric studies that covered subsequent periods: cultivation theory (Gerbner, 1969), agenda setting theory (McCombs & Shaw, 1972), diffusion of innovations theory (Rogers, 1962), uses and gratifications theory (Katz, Blumler & Gurevitch, 1973; Rosengren, 1974), social learning/social cognitive theory (1986), and media system dependency theory (Ball-Rokeach & DeFleur, 1976).

Other theories that were identified as well-cited theories in the bibliometric studies are two-step flow theory (Lazarsfeld, Berelson & Gaudet, 1948), knowledge gap theory (Tichenor, Donohue & Olien, 1970), spiral of silence theory (Noelle-Neumann, 1974), priming theory (Berkowitz, 1984), third-person effects (Davison, 1983), the Elaboration Likelihood Model (Petty & Cacioppo, 1986), framing theory (Entman, 1993), and the limited capacity model (Lang, 2000). Table 2.2 gives a short description of the well-cited media effects theories identified in the bibliometric studies, listed according to the dates in which they were originally coined.

Changes in the Prominence of Theories over Time

When comparing the results of the five bibliometric studies summarized in Table 2.1, some theories appear to have lost their appeal over the years. One such theory is Lasswell’s (1948) model of communication that was listed as one of the top-cited theories in Bryant and Miron’s (2004) analysis but lost that status in the more recent bibliometric studies. The same holds for other classic, linear media effects models, such as Shannon and Weaver’s (1949) mathematical model of communication. Another theory that was present in Bryant and Miron, but which lost its influence after the 1970s, is McLuhan’s medium (or sense-extension) theory (McLuhan, 1964). By means of his aphorism, “the medium is the message,” McLuhan theorized that media exert their influence primarily by their modalities (e.g., text, aural, audiovisual) and not so much by the content they deliver. His theory probably lost its appeal among media effects researchers because research inspired by his theory often failed to produce convincing results (Clark, 2012; Valkenburg et al., 2016). Although no one can deny that modality is an essential feature of media and technologies (Sundar & Limperos, 2013), media effects are often a result of a combination of features, among which content plays a prominent role. It is probably no surprise that “Content is King” is still one of the more popular adages in modern marketing.

Another change over time suggested by the bibliometric studies is the “cognitive turn” in media effects theories coined in the 1980s and 1990s. This increased attention to internal cognitive processes of media users is at least in part a result of the cognitive revolution in psychology that started in the 1950s in reaction to behaviorism (Gardner, 1985). Behaviorism (or stimulus-response theory) is a learning theory that argues that all human behaviors are involuntary responses to rewarding and punishing stimuli in the environment. What happens in the mind during exposure to these stimuli is a “black box” and is irrelevant to study.

In the 1980s and 1990s, several media effects theories have tried to open the black box between media use and media outcomes (e.g., priming theory, Berkowitz, 1984; the limited capacity model, Lang et al., 1995; the Elaboration Likelihood Model, Petty & Cacioppo, 1986). At the time, scholars started to acknowledge that in order to validly assess whether (or not) media

can influence individuals, they need to know why and how this happens. This new generation of theories acknowledged that media effects are indirect (rather than direct). More specifically, they argued that the cognitive mental states of the viewer act as a mediating (or intervening) variable between media use and media outcomes. Indeed, these new theories recognized that the mental states of the media user play a crucial role in explaining media effects.

In the same period, some classic media effects theories were adjusted to better acknowledge cognitions in the media effects process, sometimes by the author him or herself and sometimes by others. For example, in Bryant and Miron's bibliometric study, Bandura's theory was still named social *learning* theory (Bandura, 1977). This early version of his theory had its roots in behaviorism, which is evident, for example, from its unconditional emphasis on rewarding and punishing stimuli to realize behavioral change. In the 1980s, Bandura modified his theory and renamed it social *cognitive* theory to better describe how internal cognitive processes can increase or decrease learning (Bandura, 1986). In addition, although cultivation theory is an all-time favorite and its name is still current, over the past few decades researchers have proposed numerous adaptations to the theory to better understand how, why, and when cultivation effects occur. For example, Shrum (1995) has argued for the integration of cultivation theory in a cognitive information processing framework. According to Potter (2014), the adaptations of cultivation theory are so numerous and extensive that its original set of propositions may have gotten glossed over. Indeed, there appears to be only minimal overlap between the macro-level, sociological cultivation theory that Gerbner (1969) proposed and the more recent micro-level, psychological interpretations of the same theory (Ewoldsen, 2017; Potter, 2014).

Upcoming Media Effects Theories

Although highly informative, together the five bibliometric studies either do not (Bryant & Miron, 2004; Kamhawi & Weaver, 2003; Potter, 2012) or only partly cover the past decade of media effects research (Chung et al., 2013; Walter et al., 2018). The most recent study by Walter et al. (2018) does cover publications that appeared up to 2016. But due to their study's broader scope, they only focused on research papers and omitted theoretical papers from their analysis, whereas these latter papers typically are the ones in which new media effects theories are coined. Given the rapid changes in media technologies in the past decade, it is highly relevant to investigate whether this recent period has witnessed an upsurge in novel or adjusted media effects theories. After all, as media technologies change, "new theories may be needed with which to understand the communication dynamics that these technologies involve" (Walter, Van Der Heide, Hamel & Shulman, 2009, p. 230).

To identify upcoming media effects theories, we conducted an additional bibliometric analysis, in which we included the same 14 communication journals as the most extensive earlier analysis did (Potter, 2012; see Potter & Riddle, 2007). To capture theories and research that are particularly relevant to newer communication technologies, we included an additional communication journal: the *Journal of Computer Mediated Communication*. To identify highly cited articles in these 15 journals, we used the "highly cited paper" option provided by the citation indexing service Web of Science (WoS). Highly cited papers in WoS reflect articles in the last ten years that were ranked in the top 1% within the same field of research (e.g., communication) and published in the same year (Clarivate Analytics, 2017). An advantage of this analysis is that, within the designated ten-year period, older and recent papers are treated equally. Whereas in regular citation analyses older papers typically outperform more recent ones, the algorithm of WoS controls for this "seniority bias."

Our analysis yielded 93 highly cited papers in these 15 journals.² Of these papers, about half involved media effects papers, which underscores the relevance of media effects research in the communication discipline. Most of these effects papers were empirical papers that used one or more existing theories to guide their research. However, a small percentage (about 10%) either introduced a new media effects theory or extended one or more existing theories. Some of these theoretical papers focused on media use in general (e.g., the reinforcing spiral model, Slater, 2007; the Differential Susceptibility Model of Media Effects, Valkenburg & Peter, 2013). Others dealt with specific types of media use, such as exposure to news (e.g., framing theory, Entman, 2007; the communication mediation model, Shah et al., 2017), persuasive messages (e.g., the model of psychological reactance to persuasive messages, Rains, 2013), or communication technology (extensions of spiral of silence theory and two-step flow theory, Neubaum & Krämer, 2017; the uses and gratifications theory 2.0, Sundar & Limperos, 2013).

A first noticeable trend revealed by the highly cited media effects papers is the emergence of theories that attempt to explain the uses and effects of media entertainment (for a similar observation, see Walter et al., 2018; Table 2.1). Some of these theories try to better understand this type of media use by focusing on cognitive and emotional processing. They try to explain, for example, why and how exposure to narrative entertainment leads to less resistance than traditional persuasive messages (the entertainment overcoming resistance model, Moyer-Gusé, 2008; Moyer-Gusé & Nabi, 2010). Other theories have tried to better understand the concept of enjoyment in response to media entertainment (Tamborini, Bowman, Eden, Grizzard & Organ, 2010), or the “eudaimonic gratifications” (i.e., media-related experiences associated with contemplation and meaningfulness) that people experience in response to thought-provoking and poignant entertainment (Oliver & Bartsch, 2010; Oliver & Raney, 2011).

Another trend that can be inferred from the highly cited media effect studies is that the traditional gap between media effects and CMC (Computer-Mediated-Communication) studies seems to have narrowed somewhat in the past years. Traditionally, “media effects research” and “CMC research” were part of two subdisciplines of communication science that developed in separation and rarely interacted with each other. Media effects research was part of the mass communication subdiscipline, whereas CMC research belonged to the interpersonal communication subdiscipline. Over time, many authors have argued for bridging the gap between these two subdisciplines, oftentimes without much success (for a review see Walther & Valkenburg, 2017).

However, the significant changes in media use in the past decade seemingly have been an important impetus for the merger between media effects and CMC theories. After all, whereas previously “media use” referred only to a handful of mass media such as newspapers, radio, film, and television, the current definition of media use, including the one in this chapter, also includes an array of media technologies that stimulate give-and-take interactions of individuals or groups with technologies (e.g., games) or other individuals (e.g., social media) and that traditionally belonged to “the realm” of CMC theories and research.

In fact, several CMC studies in our collection of highly cited papers did investigate “media effects” that fall within our definition of such effects. For example, Walther, Van der Heide, Kim, Westerman and Tong (2008) found that CMC users’ perceptions of an individual’s online profile are affected by the posts of friends who may have posted on the profile. We consider such a scenario as an example of a media effect. Namely, people (i.e., the receivers) look at online profiles (i.e., media use), and the messages or posts that they see (i.e., the messages) affect their perceptions (i.e., the media effect). Similarly, Tong, Van Der Heide, Langwell and Walther (2008) investigated how exposure to the number of friends listed on online profiles

(i.e., media use) influenced observers' perceptions of these profiles (i.e., the media effect). Their study showed that this system-produced information significantly influenced the cognitions and attitudes of the receivers of these messages.

Core Features of Contemporary Media Effects Theories

The previous section revealed several changes in media effects theories over the past decades, such as the cognitive turn in these theories as of the 1980s and 1990s, the emphasis on media entertainment and emotional media processing, and the gradual integration of media effects and CMC research. Generally, the more recent theories appear to be more comprehensive than earlier ones. For example, they more often recognize the interaction between media factors (media use, media processing) and non-media factors (e.g., dispositional, situational, and social context factors), and they better acknowledge that media effects are indirect rather than direct. In the next sections, we discuss how contemporary media effects theories differ from the earlier ones. We focus on three related core features of these theories: selectivity, transactionality, and conditionality.

Selectivity Paradigm

Selectivity is one of the oldest paradigms in communication. Already in the 1940s, Lazarsfeld et al. (1948) discovered that individuals predominantly select media messages that serve their needs, goals, and beliefs. These early ideas have been further conceptualized into two theories: the uses and gratifications (Katz et al., 1973; Rosengren, 1974) and selective exposure theory (Knobloch-Westerwick, 2014). Both theories are generally based on three propositions: (1) individuals only attend to a limited number of messages out of the miscellany of messages that can potentially attract their attention; (2) media use is a result of dispositional (e.g., needs, personality), situational (e.g., mood), or social-context factors (e.g., the norms that prevail in the social environment); and (3) only those messages they select have the potential to influence them (Klapper, 1960). This influence of media use is named "obtained gratifications" in uses and gratifications theory and "media effects" in selective exposure theory.

Early empirical research guided by uses and gratifications and selective exposure theory usually investigated only the first part of the media effects process. This research typically conceptualized media use as the outcome, whereas the consequences or "effects" of this media use were typically ignored. Therefore, these early theories do not fit within our definition of media effects theories. In the past decade, however, the selectivity paradigm has progressively become an integrated part of media effects theories, including the reinforcing spiral model (Slater, 2007); the SESAM model (Knobloch-Westerwick, 2014; see Chapter 10 in this volume) and the Differential Susceptibility to Media Effects Model (Valkenburg & Peter, 2013). Indeed, in Walter et al.'s (2018) bibliometric analysis, selective exposure appeared as a top theory only in the last time frame examined (2000–2016). Contemporary selective exposure theories conceptualize that media users, rather than media sources, are the center points in a process that may bring about media effects. This insight has important implications for media effects research. It means, for example, that individuals, by shaping their own selective media use, also (deliberately or not) partly shape their own media effects (Valkenburg et al., 2016).

The selectivity paradigm is also part and parcel of CMC theories and research. For example, Walther, Tong, DeAndrea, Carr and Van Der Heide (2011) argue that the specific goal(s) that

prompt an individual's media consumption "shape attention to variations in the content and features of the topical information one consumes, affecting its interpretation and recall" (p. 187). However, although selectivity is clearly an important feature of CMC, it is still unknown whether CMC users are more (or less) able to contribute to their own media effects than users of more traditional media are. On the one hand, CMC users have more agency in their media selection than they had with traditional media. They can, for example, openly comment on incoming messages, thereby publicly discounting this information. They can also more easily avoid incongruent or conflicting messages, and, due to technological algorithms that use their preferences or search terms, co-create their own "filter bubbles" (Pariser, 2011). Due to this increased agency and selectivity, CMC users may thus have more opportunity than traditional media users to shape their own media effects.

On the other hand, the blending of mass (e.g., a television program) and interpersonal messages (e.g., viewer comments on Twitter about this television program) in CMC environments could also stimulate a type of gratification (or effect) that have been named "process gratifications" (Stafford, Stafford & Schkade, 2004). Unlike content gratifications, process gratifications (or effects) are not so much driven by preexisting needs, goals, or beliefs of the media user, but they develop while using media. For example, individuals may start surfing the web with specific a priori needs, beliefs, or goals, but while interacting with technologies or other people they may develop different and unforeseen needs, goals, and beliefs, which in turn may lead to different and unforeseen media gratifications (or effects). Therefore, in contemporary media effects theories, media effects can best be understood as the result of an interaction between need-driven media use and situational, process-based media use (for a further discussion, see Sundar & Limperos, 2013).

Transactionality Paradigm

In the early days of the communication discipline, most mass media effects theories were linear, one-directional models of communication that pointed from senders (mass media) to receivers. Examples of linear media effects theories are cultivation theory (Gerbner, 1969), Lasswell's (1948) communication model, and McLuhan's (1964) medium theory (see the first column of Table 2.1). Unlike one-directional media effects theories, transactional theories conceptualize media use and media outcomes as reciprocally related. Like uses and gratifications and selective exposure theory, transactional media effects models embrace a user-oriented approach (e.g., Wang & Tchernev, 2012). They argue that (1) certain dispositions of media users (e.g., needs, goals, beliefs) can cause their selective media use; (2) which can, in turn, cause certain outcomes (i.e., the media effect); (3) which can, then, further cause selective media use. For example, adolescents' aggressiveness may stimulate their use of violent media, which, in turn, may increase their aggressiveness, which may then further stimulate their violent media use (Slater, Henry, Swaim & Anderson, 2003).

Transactional media effects theories are relatively recent in the communication discipline. The first transactional media effects model appeared in the early 1980s in Germany (Früh & Schönbach, 1982), but that model probably suffered from the rule of the restrictive head start. Transactional models are difficult to investigate and, at the time, both the expertise and the methods to empirically test such complex models were not widely available then. Subsequent transactional media effects models are Bandura's (1986) social cognitive model, Anderson and Bushman's (2002) General Aggression Model, and Slater's (2007) reinforcing spiral model.

Although transactionality is relatively new to media effects theories, it has always been a core paradigm of interpersonal communication theories, which, par excellence, attempt to explain the reciprocal influences from interaction partners on one another. However, interpersonal communication has been increasingly mediated through CMC devices. Moreover, in newer media environments, many traditionally one-directional mass communication processes, such as news and entertainment consumption, have become transactional: Message producers and consumers can now exert reciprocal influences on one another and can easily switch their roles from consumers to producers and vice versa. These transactional processes necessitate alterations to existing media effects theories. Such alterations have already been suggested, for example, for agenda setting theory (Lee & Tandoc, 2017), spiral of silence theory (Neubaum & Krämer, 2017), communication mediation theory (Shah et al., 2017), diffusion of innovations theory (Rice, 2017), and entertainment theory (Raney & Ji, 2017).

Conditionality Paradigm

Like the transactionality paradigm, the conditionality paradigm elaborates on the uses and gratifications and selective exposure theories. It postulates that media effects do not equally hold for all media users, and that media effects can be contingent on dispositional, situational, and social-context factors. Remarkably, already in the 1930s, the first large-scale empirical studies into the effects of media on children and young adults, the Payne Fund Studies, concluded:

That the movies exert an influence there can be no doubt. But it is our opinion that this influence is specific for a given child and a given movie. The same picture may influence different children in distinctly opposite directions. Thus in a general survey such as we have made, the net effect appears small.

(Charters, 1933, p. 16)

However, despite these early empirical findings, many subsequent media effects theorists have been rather slow in acknowledging conditional media effects. Particularly early theories aimed at establishing linear, across-the-board effects of mass media. For example, although Gerbner's (1969) cultivation theory did recognize that individuals differ in their interpretation of messages, it did not conceptualize such differences, but instead focused on the macro-level effects of mass-mediated message systems on the public (Potter, 2014). And even today, there seems to be a tendency to ignore individual differences in susceptibility to media effects. As Neuman (2018) recently observed: "Perhaps our paradigm would be strengthened if we recognized that media effects are neither characteristically strong nor are they characteristically minimal: they are characteristically highly variable" (Neuman, 2018, p. 370; see also Rains, Levine & Weber, 2018).

However, despite Neuman's (2018) recent criticism, in fact, most contemporary media effects theories do recognize conditional media effects, including the reinforcing spiral model (Slater, 2007), the communication mediation model (Shah et al., 2007, 2017), and the Elaboration Likelihood Model (Petty & Cacioppo, 1986). Most of these theories have proposed that conditional media effects are not only due to selective exposure but also to selective processing. For example, Valkenburg and Peter (2013) argue that dispositional, situational, and social context factors may have a double role in the media effects process: They not only predict selective exposure, but they can also influence the way in which media content is

cognitively and emotionally processed. Individuals have the tendency, at least to a certain extent, to seek out content that does not deviate too much from their needs, goals, and beliefs (Knobloch-Westerwick, 2014). It is conceivable that the same factors that predict selective exposure can also influence the way in which media content is processed. It has been shown that people's opinions on a given issue influence how they respond to media messages and characters. For example, in their now-classic study about the American series *All in the Family*, Vidmar and Rokeach (1974) found that high prejudiced viewers tended to be more sympathetic to Archie, the bigoted main character, whereas low-prejudiced individuals tended to be more sympathetic to Mike, the politically liberal main character of the series.

Unfortunately, although in the past decades there has been ample research on selective exposure and selective recall, there has been relatively less attention to selective reception processes (Hart et al., 2009). Moreover, the scarce research that did focus on selective reception has mainly focused on individual differences in *cognitive* processing of media content and less on emotional processing. However, as our analysis of recent highly cited communication papers suggests, two decades after the cognitive turn in media effects theories, an emotional turn in these theories seems to have unfolded. Indeed, contemporary media effects theories increasingly recognize that emotional processes, such as identification with characters or emotional involvement in the narrative, are important routes to media effects (Moyer-Gusé & Nabi, 2010; Nabi, 2009; Slater & Rouner, 2002).

Discussion

Together, the five bibliometric studies that we attempted to integrate in this chapter and our highly cited paper analysis suggest that the use of theory in communication papers has increased significantly across time. For example, whereas Bryant and Miron (2004), who reported on the period from 1956 to 2000, found that only 26% of articles provided a theoretical framework, Potter and Riddle (2007), who reported on the period from 1993 to 2005, found that 35% of articles featured a theory prominently. Finally, Walter et al. (2018) observed that whereas in the 1950s only 9% of all empirical papers that appeared in the *Journal of Communication* featured a theory prominently, this percentage increased towards 65% in the 2010s.

Although it is promising that the development of theory in communication journals has quantitatively increased over the years, it is even more important to establish whether it has improved in a qualitative sense. Some of the bibliometric studies are pessimistic about this qualitative development. For example, Walter et al. (2018) observed a “remarkable slowdown in new theory development” (p. 424) and “a general increase in theory use, yet a decrease in theory development” (p. 435). It must be noted, though, that Walter et al.'s analysis did not include theoretical articles and literature reviews in their bibliometric analysis, which together comprised 11% of their sample of papers. Their conclusions about the state of the field would undoubtedly have been more positive if they had included theoretical papers in their sample.

Walter et al. (2018) based their conclusion on the fact that a number of theories, such as cultivation theory, social cognitive theory, and agenda setting theory, which we dubbed as ever-green theories, remained prominent in every decade after the 1970s. Several other authors have also observed that some theories have been used over and over again up until the present day (Ewoldsen, 2017; Katz & Fialkoff, 2017; Potter, 2014). One explanation for this phenomenon

may be that these theories have managed to become part of the shared identity of media effects researchers, who, by referring to or adjusting these theories in their work, are able to communicate this identity. Another explanation may be the high “tolerance” of evergreen theories for multiple interpretations of their claims. Social cognitive theory, for example, is a comprehensive theory with broad concepts that are related to one another in complex ways. An unforeseen consequence of such theories is that they allow researchers to freely interpret or select parts of the theory to justify or explain their results.

Some authors fear that the recurrent referral to these theories distorts what the theory originally proposed (Potter, 2014) or hides the progress that has been made in the understanding of media effects theories (Ewoldsen, 2017). Others have proposed the “retirement” of these old theories and replace them with newer ones that better explain contemporary media use and effects (Katz & Fialkoff, 2017). Indeed, we agree that it is important for the progress of the media effects field to develop new theories with new names rather than to selectively use claims of old theories to justify or explain expected or unexpected results. After all, true theoretical progress can only occur if certain claims of theories that do not hold are formally falsified. Despite the concerns of some authors about the progress in the media effects field, our analysis of recent highly cited communication papers suggests a somewhat more optimistic view. We found that about 10% of the highly cited papers in 15 communication journals published between 2007 and 2017 either introduced a new theory or significantly extended an existing one. These extensions of old theories, such as spiral of silence and diffusion of innovations, were partly due to the rapid changes in the new media landscape, which demands a rethinking of theories that originated in periods when the relation between media and audiences was predominantly anonymous and one-directional.

In this chapter, we summarized several important theoretical trends over the past decade. One such trend is the development of theories that attempt to understand the effects of (narrative) media entertainment and the role of emotional processing in these effects. Another trend is that theories that were coined or extended in the past decade increasingly recognize the selectivity, conditionality, and transactionality of media effects. Finally, despite concerns about the lack of integration between mass and interpersonal communication, we did observe an increased tendency to merge media effects, interpersonal, and CMC theories in papers that investigate the uses and effects of messages communication via the internet and social media.

Challenges and Opportunities for Future Media Effects Research

We are encouraged by the development of media effects theories revealed in our analysis, and we look forward to the new theory development that will undoubtedly evolve in our changing media landscape, where most technologies are simultaneously rapidly new and rapidly old. Both the proliferation of new media technologies and the possibilities to instantaneously interact with other media users pose important challenges and opportunities for future researchers.

Conceptualizing “Media Use 2.0.”

First, we anticipate that newer theory development must confront how best to conceptualize what constitutes “media use.” Whereas foundational theories often used sweeping measures such as hours-a-day spent with television (e.g., Gerbner, 1969), newer theories need to account for a seemingly endless array of media platforms, even when focusing on a single “type” of

media such as social networking sites. Moreover, given the mobility and multiplicity of media channels, the prevalence of media multitasking has reached new heights, and particularly among younger individuals (Voorveld & van der Goot, 2013). Consequently, watching a favorite television program may now also simultaneously involve chatting with other viewers on fan sites, posting one's reactions to the program on social media, or searching online for information about the actors.

Finally, evolving technologies facilitate media “use” well beyond the time boundaries of any single instance of media consumption. For example, although an individual may watch a given television program for a span of an hour, she may continue to “watch” the show for much longer by engaging with other viewers about the show, by watching replays and commentaries about the show on YouTube, or even expressing her thoughts about the program through self-generated media content such as mashups or fan fiction (Shade, Kornfield & Oliver, 2015). These examples are but a handful of the many ways that media use is changing, thereby highlighting the need to revise or develop new ways to conceptualize and measure how individuals now “use” media content and technology.

New Methods to Assess Cognitive and Emotional Media Processing

Related to the need to reassess how to measure media use, media effects theories may stand to benefit from the evolving use of newer means of assessing individuals' emotional and cognitive processing of messages and resultant changes in beliefs, attitudes, affective states, and behaviors. Whereas traditional scholarship has typically relied on self-reports for studying media effects, many researchers are now turning to alternative techniques. For example, an increasing number of scholars are now examining the neural patterns associated with media use, pointing out its relevance in a host of areas including persuasion, stereotyping, health, and social interaction (see, for example, Falk & Scholz, 2018; Weber, Eden, Huskey, Mangus & Falk, 2015). Likewise, devices such as face readers and eye trackers are currently providing ample opportunity to assess changes in emotional responses to media messages and devices (e.g., Jennett et al., 2008; McDuff, Kaliouby & Picard, 2012; Russell, Russell, Morales & Lehu, 2017). Such measurement holds the promise of helping us develop theories about changes in emotions that occur during media use and what such changes imply for resultant media outcomes (Nabi & Green, 2014). Further, the opportunity to scrape and analyze big data and networks of information sharing will open many new avenues for media effects theorizing. Although numerous theoretical perspectives have acknowledged the sharing of media messages among individuals (e.g., two-step flow model, diffusion of innovations), network analysis of online communities represents ample opportunities to develop new or adjust existing communication theories.

The Effects of “Mass Self-Communication”

Finally, we eagerly anticipate the growth of media theory that grapples with the implications of the shift from mass communication to what O'Sullivan (2005) has named “masspersonal” and Castells (2007) “mass self-communication.” In traditional mass media effects theories, the influence process is unidirectional, from one generator of messages to recipients. Mass self-communication theories provide an extension to these theories, in that they do not only focus on the effects of messages on recipients but also on the effects of those messages on the generator him or herself. The effects of self-generated and self-modified media messages on the message generators themselves have

garnered increasing interest among scholars with the emergence of interactive technologies. For example, research on the Proteus Effect demonstrates that people often adopt the characteristics of the avatars that they use to present themselves online (Yee & Bailenson, 2007). Likewise, research on customization of websites and user-interfaces shows that when individuals have the opportunity to select their own digitized environments (e.g., interests, colors, banners), they tend to feel greater affiliation for the environments and heightened perceptions of relevance and interactivity (e.g., Kalyanaraman & Sundar, 2006).

Most recently, Valkenburg (2017) coined the phrase “self-effects” to refer broadly to the effects of messages on the cognitions, emotions, attitudes, and behaviors of the message generators themselves. She argued that in the context of social media, expressing an attitude, stating one’s opinion, or even selecting an avatar with a particular appearance may not only influence the cognitions, beliefs, and attitudes of message recipients, but also those of the message generators. Further, as discussed, given individuals’ tendencies to select media content that is congruent with their cognitions, beliefs, and attitudes, it is likely that messages which are self-generated and originate from their generator’s own beliefs may have an even stronger effect on the message generators themselves than on their message recipients. There is an apparent need for future communication research that investigates and compares the effects and effectiveness of messages on both recipients and message generators themselves.

Conclusion

In sum, our review of media effects theories leads us to end on an optimistic note. Whereas some reviews may suggest that our scholarship is somewhat slow to evolve, our review of media effects theories is heartening. Some theories have remained evergreen, and likely for good reason. Although some of these evergreen theories were developed in what may seem like a long-ago past, their fundamental assumptions about media and human psychology are likely applicable across a wide acreage of media landscapes. At the same time, newer theories, concepts, and foci are populating our scholarship, and reflecting a greater nuance of human experience and of its intersection with communication technologies. Undoubtedly, media effects as a focus of study is at the center of public discourse about interpersonal interaction, political exchange, and even the striving for well-being. We await the insights that will certainly arise from scholars who work toward our understanding of media in the emotional, cognitive, and behavioral lives of its consumers and creators.

Notes

- 1 Some parts of this chapter are based on Valkenburg et al. (2016). This mostly holds for the section about the three core features of media effects theories, and Table 2.2, which offers an extension and update of a table that appeared in Valkenburg et al. (2016).
- 2 The list of highly cited articles in these journals can be obtained from Patti Valkenburg: p.m.valkenburg@uva.nl. Two out of the 14 journals that Potter (2012) analyzed (the *Quarterly Journal of Speech* and the *Mass Communication Review*) are not indexed in WoS; as a result, no highly cited papers from these journals could be included in our analysis.

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3

The World of News and Politics

Yariv Tsfati and Nathan Walter

The world of news and politics is one of the most-studied contexts in media effects research. *News* can be understood as an umbrella term that encompasses a wide array of content (e.g., blogs, political posts on Facebook, political comedy programs), and though the chapter focuses mainly on traditional political news, it also touches upon political communication more generally. Political communication is such a popular context because any definition of politics—be it “the pursuit of collective interest or well-being,” “the pursuit of self-interest of individuals, parties or organized interest groups,” or “the authoritative allocation of values” (definitions from Gabriel, 2017, pp. 2–3)—invokes a vast field connected to various aspects of social and private life. The founding fathers of communication research (e.g., Lazarsfeld, Berelson, & Gaudet, 1948) regarded news and politics as a pivotal context for effects research (Reinemann, 2014). Concerns about the political influence of news media and whether democracy could function despite such influences were the primary motivations for the study of the effects of political campaigns and news media (Delia, 1987, p. 22), and such motivations have shaped the discipline for decades, and continue to shape it until this very day.

Given that news is such a popular context for the study of effects, and that politics is such a vast domain, any attempt to review the entire research literature about news and political effects would be futile. Instead of offering an incomplete review, we begin this chapter by summarizing the accepted view about the political effects of media at the end of the 20th century, as reflected by the main theories of news effects, described in textbooks and taught in most introductory communication courses. Over the past two decades, changes in media technology, in the ecology of media, and in the political environment have defied many of the assumptions that lay at the core of political effects research a generation ago in a way that has challenged the paradigm of media effects as previously understood. The bulk of this chapter describes five main such developments: the return of partisan media, the polarization of the political environment, the spread of social media, the vast use of misinformation in political contexts, and the blurring boundaries between news and other genres. The chapter concludes with an explanation of how these developments serve to contradict longstanding assumptions in news effects research and with a review of central research findings about news effects in light of these developments.

Political News Effects at the End of the 20th Century

By and large, several decades of research on the political effects of media through the late 1990s could be summarized by the following two points:

1. Previous conceptions of minimal or limited media effects, on the one hand, and of an omnipotent media, on the other, were both considered inaccurate. Research demonstrated noticeable effects of media on political life, and while these tended to be moderate at best (in terms of effect sizes), they potentially carried rather substantive political consequences.
2. Given that most people's political preferences tended to be strikingly stable, and thus not easily malleable by news and campaign information, voting—seen as “the ultimate criterion variable” of earlier studies (Chaffee & Hochheimer, 1985, p. 82)—was no longer considered an extremely useful dependent variable in political media effects studies. Rather than shaping voting directly, the media were widely believed to affect politics through their effects on other relevant attitudes and perceptions.

For the final three decades of the 20th century, the main theories of news effects belonged to what could be considered the “return to a relatively powerful media” tradition, following an earlier focus on limited effects characterized by the importance of selectivity, predispositions, and interpersonal communication. Five central lines of research predominated this “return to powerful media” tradition. The main innovation offered by each was an alternate, dependent variable to replace “voting” as the primary outcome of media influence. For example, research on agenda setting (e.g., McCombs, 2005) proposed that media affect politics by shaping the importance assigned to different social problems by the public. Spiral of silence research (Noelle-Neumann, 1984) turned the spotlight of media effects on people's perceptions regarding the social climate of opinion, namely, what people perceive to be the dominant opinion in society, held by the majority of citizens. Research on framing effects argued that news media shape *how* people think about issues and social problems, including audiences' moral evaluations, causal attributions, and problem definitions (Entman, 1993; see Chapter 4 in this volume). Although not affecting voting directly, such evaluations, perceptions, and assessments do often-times advance support for certain policy solutions (Edy & Meirick, 2007). Priming effects scholars (e.g., Iyengar & Kinder, 1987) argued that the news media have the ability to make certain constructs or considerations more influential in decision-making (see Chapter 6 in this volume). Finally, although research on media cultivation (see Chapter 5 in this volume) was originally designed to model the effects of entertainment, several scholars found cultivation effects in the context of news watching (Romer, Jamieson, & Aday, 2003), demonstrating, for instance, how exposure to prevalent presentation of crime in the news can shape audience assessments of risk and fear of crime.

On top of these five central traditions, many studies explored an array of additional outcome variables. Especially noteworthy is a vast tradition on “video-malaise” (e.g., Mutz & Reeves, 2005) that argued that the content and style of presentation of politics in news promotes political mistrust and apathy, and decreases political participation (for a review, see Norris, 2000). Yet another tradition examined news effects on political knowledge (e.g., Grabe, Kamhawi, & Yeghyan, 2009). Both video-malaise and knowledge studies focused, again, on outcomes that were not straightforward attitudes or vote choice, and both assumed that these outcomes carry important political consequences.

Beyond sharing the belief that news media affect political life *indirectly* by shaping various individual-level cognitions, and that these effects are not trivial, agenda setting, priming, framing, spiral of silence, cultivation, video-malaise, and knowledge studies all implicitly shared a few additional underlying assumptions. The first assumption—consonance—was that different media outlets portray political realities in a homogeneous manner. Because of similarity in sources, journalists' professional values, and production routines and practices, different news outlets were presumed to have similar news agendas, tended to describe political events using similar frames, to present the same climate of opinion, and to describe politicians and politics negatively. Empirical research examining the assumption of consonance, by and large, verified it, with all but a few exceptions (Noelle-Neumann & Mathes, 1987).

As a result of the assumption of homogeneous and consonant content, the possibility of audience selectivity was not considered as playing a major role in the process of media influence. Gerbner and his colleagues (2002) claimed that television provides a restricted set of choices and is “designed to be watched in a non-selective fashion” (p. 45); selectivity was viewed as similarly impossible by spiral of silence theory (Noelle-Neumann & Mathes, 1987). Agenda setting research likewise assumed that no real alternate agenda existed to that of mainstream news organizations (given “intermedia agenda setting”; Dearing & Rogers, 1996), and while framing research acknowledged the existence of competing frames (Edy & Meirick, 2007), audience selectivity as the underlying motivation for exposure to frames was, by and large, ignored by researchers.

But while “the return to a relatively powerful media” scholars assumed consonant messages and disregarded (some even denied) selectivity, they did not assume news effects were uniform for all audiences. Moderating variables were discovered for each and every central theory of media effects, pointing out that some audiences are affected more than others. For example, audience trust in the news media was found to moderate agenda setting (Iyengar & Kinder, 1985), priming (Miller & Krosnick, 2000), and effects on political knowledge (Ladd, 2012), such that trusting audiences were found to be more affected by the news compared to those scoring low on news media trust. Political involvement was found to moderate effects on news on political participation and trust (Norris, 2000), such that those involved in politics were not negatively affected by news (as they hardly consumed news), while those involved were positively affected by news, increasing further their political engagement. Similarly, media dependency theory demonstrated that media are more powerful when audiences lack alternative, non-mediated sources of information, and less influential when audiences are less dependent on them (Ball-Rokeach & DeFleur, 1976).

Media effects were not only moderated by predispositions and individual differences, but also by external factors. For example, effects on political decision-making are stronger in imbalanced campaigns (i.e., when one candidate receives much more attention than the other), compared to regular times when media balances between political contenders (Zaller, 1996). With regard to public support of the use of force in wartime, media effects were observed to be stronger when the media “are parroting [the] elite consensus” compared to when they “report negative or controversial issues” and “in times of elite dissensus” (Aday, 2010, p. 458).

Finally, although the understanding that media effects are often mediated by interpersonal communication could be found in communication textbooks since the 1950s, relatively few news effects scholars incorporated interpersonal communications into their designs and modeled interactions between news and conversation. True, spiral of silence as a theory of news effects included both news and interpersonal opinion expression, and much other research controlled for political conversation when modeling news effects. But in general, interpersonal communication was not

assigned an important role by the predominant research traditions in the late 20th century. In addition, feedback from other audience members was also largely neglected by news effects research. As a result, most research in the “return to powerful media” tradition modeled audiences as atomized unconnected units, despite the fact it was common knowledge that audiences did (and still do) not consume news in isolation.

To sum up, political communication research at the end of the 1990s conceived news content to be consonant across media outlets and perceived audiences as consuming news in isolation without receiving information or feedback from other audiences. In addition, political effects were perceived to be small to moderate in size (but at times still highly politically consequential), and to affect political decision-making via their influence on mediating cognitions. However, changes in communication technologies, in media ecology, and in the political environment have shaken the assumptions that were at the core of political communication for decades in ways that have shaped effects research.

Five Disruptions to News Effects Studies in the New Millennium

Multiplication of Channels and the Return of Partisan Media

The advent of cable television in the early 1980s brought about an increase in the number of choices available for television viewers, and the possibility of various alternatives resulted in increased gaps in political knowledge and involvement (Prior, 2007). However, the availability of 24-hour news channels on cable TV, together with the popularization of the internet and the emergence of political talk radio, have challenged the assumption of news consonance widely held by news effects scholars until the 1990s. By the early 2000s, scholars could no longer assume a homogeneous presentation of the important problems, a uniform presentation of the climate of opinion, and a consonant set of homogeneous frames. Furthermore, while audience selectivity was by and large overlooked in the previous era, selective exposure was widely documented in the era of partisan news outlets and blogs (e.g., Iyengar & Hahn, 2009), despite the fact that some evidence highlighted that ideologically slanted cable news channels do not enjoy widespread exposure (Prior, 2013).

Given the changes in the post-broadcast media landscape, Bennett and Iyengar (2008) called on political communication scholars to revisit previous theories of media effects and to examine whether each theory “needs to be adapted, and in some cases overthrown” (p. 713). They envisioned a new era of minimal effects advanced by the rise of partisan media, in which media effects are limited only to reinforcement and polarization of existing attitudes.

In line with Bennett and Iyengar’s (2008) call, a few studies examined how the previous theories of media effects were faring in the age of diversification and partisan media. With regard to framing, Jamieson and Cappella (2008) demonstrated that listeners of the conservative talk radio host Rush Limbaugh were more likely to accept his interpretations of political events, while conservative non-listeners did not share his interpretations. In a similar manner, ideological news exposure was associated with acceptance of an ideologically congruent opinion climate, with those watching right-wing media perceiving a more right-wing opinion climate, and vice versa for those watching left-wing media (Tsftati, Stroud, & Chotiner, 2014). When applying the same question to agenda setting effects, Shehata and Strömbäck (2013) found that despite the fact that mainstream media still have the ability to shape the agenda, individual-level effects were weaker for audiences who did not depend on mainstream media and consumed news more heavily from online

sources. Right-wing issues were perceived as more important by right-wing voters, and left-wing issues were perceived as more important by left-wing voters, but partisan effects occurred predominantly for low-salience issues, while traditional media effects were observed for issues high on the mainstream media agenda.

Polarization of the Political Environment

The most studied effect of exposure to ideological media is by far its effect on political polarization. The political science literature has documented a process of elite polarization, referring to increasing divisions between American party elites, expressed in congressional voting, party platforms, and in politicians' and activists' attitudes (Ladd, 2012). Whether or not a similar process of mass polarization has taken place in response, and how to measure such polarization, is a matter of debate (Iyengar, Sood, & Lelkes, 2012).

Most communication scholars focus on affective polarization, which is conceptualized as a negative affect towards one's political opponents, a construct that is inconsistently related to issue positions (Iyengar et al., 2012). Time and again, and across cultures, political communication scholars have documented an association between exposure to like-minded ideological media and affective polarization, controlling for a host of covariates (Garrett et al., 2014). They have also established, using cross-lagged designs, that the direction of at least part of the association is from the former to the latter (Stroud, 2010; for an example of a laboratory study demonstrating such results see Arceneaux & Johnson, 2013). However, though manipulating ideological exposure is possible (e.g., exposure to liberal media in one experimental condition compared to exposure to conservative media in another condition), it is much more challenging to manipulate selective exposure—that is, *choice* of like-minded content—while maintaining random assignment to experimental conditions, a prerequisite for causal inference (Feldman, Stroud, Bimber, & Wojcieszak, 2013). In other words, when researchers allow participants to choose to read a liberal or a conservative article, comparing those who have selected a like-minded or a cross-cutting article cannot lead us to the conclusion that their exposure *caused* the difference in the dependent variable because they were not randomly assigned to the liberal or conservative content (but rather selected it).

Several theoretical standpoints account for the association between congruent selective exposure and polarization. Theories of motivated processing (Taber & Lodge, 2006) account for both selection of ideologically congruent news and their effects (Levendusky, 2013). These theories argue that when people are presented with information that challenges their worldview, they are motivated to discount the quality of the arguments, derogate the source of the message, or question the accuracy of the claims. By contrast, information that fits within people's broader belief system is often judged as probative and accepted at face value, even when its validity is called into question by experts and authority figures (Chang, 2015). The most typical outcomes of motivated processing are considered to be the selection of news sources, political knowledge, recall of information, as well as attitude reinforcement and polarization (Nisbet, Cooper, & Garrett, 2015). The level of polarization appears to be contingent upon the extent of biased processing of information (Taber, Cann, & Kucsova, 2009). Contrary to the common belief that quality information in the public domain has the potential to bring people together and encourage prosocial behavior, these studies demonstrate that in a news environment governed by motivated processing, even exposure to accurate information has the potential to polarize the public (Hart, Nisbet, & Myers, 2015).

Further research suggests additional mechanisms mediating the association between selective exposure and affective polarization. These include the perceived opinion climate (e.g., Republicans watching Fox News believe that society in general is more conservative and Democrats watching MSNBC perceive society as more liberal, and these perceptions polarize the audience via normative influence; Tsfati et al., 2014), and acceptance of frames from ideological media (conservatives and liberals accept partisan frames from conservative or liberal media, respectively, and these frames polarize opinions; Tsfati & Nir, 2017). Another possible route is through the activation of partisan identity, with a salient partisan identity leading to more positive evaluations of the in-group and more negative evaluations of the outgroup (Garrett et al., 2014). Finally, attitudes may polarize from selective exposure as a result of the elaboration and retention of ideologically consistent arguments (Dvir-Gvirsman, 2014). That is, when exposed to partisan media, partisans more thoroughly process and internalize the like-minded arguments they read or hear, perhaps due to increased trust in the sources of these arguments.

Despite the fact that the association between ideological media exposure and affective polarization has enjoyed ample attention and is arguably one of the most important political effects of news media in the post-broadcast era, some have argued that the association is actually spurious, stemming from inflated self-reports of ideological news exposure. Prior (2013) demonstrated that the number of self-reported Fox News or MSNBC viewers is at least three times larger than that revealed by automatic tracking. He claims that self-reports of ideological exposure are used by respondents to express their partisan identity, and this is the underlying reason for the association between exposure and polarization. Studies using observational data, however, at least partly, alleviate the concern that the polarization finding merely reflects a measurement error. For example, Lelkes, Sood, and Iyengar (2017) reported a significant association between internet broadband availability (an indicator for the availability and consumption of more ideological options) and polarization; this finding cannot stem from inflated reporting of partisan news exposure.

Beyond polarization, additional consequences of exposure to like-minded ideological media have been explored. These include increased political participation (Dvir-Gvirsman, Garrett, & Tsfati, 2018), the Balkanization of knowledge (i.e., each political side learns different political facts from its media; Jamieson & Cappella, 2008), and emotional responses, in particular anger (Wojcieszak, Bimber, Feldman, & Stroud, 2016).

The Spread of Social Media

For the vast majority of human history, information has been limited, restricted, and expensive. Today, most of the Western world has access to virtually unlimited amounts of information, all at the tips of our fingers. According to some estimates, humans currently create 2.5 quintillion bytes of new data every day, the equivalent of five trillion 600-page books (Helfand, 2016). In addition, social media platforms allow people to spread content to online communities that extend far beyond their daily contacts, and at the same time provide indicators about how popular the content is (e.g., likes, shares) and how people react to it. The larger volume of information, the fact that it originates not only from institutionalized media sources, and the fact that different members of the audience see the same item with different reactions from their friends, all stand in contrast to the consonance assumption of the “return to powerful media” paradigm.

Researchers have vocally questioned the validity of agenda setting theory, for example, in a highly diversified and decentralized social media landscape, as compared to the one experienced

by citizens half a century ago (Tewksbury & Rittenberg, 2012). For instance, a study examining the interplay between Twitter feeds of the 2012 U.S. presidential primary candidates, Twitter feeds of the Republican and Democratic parties, and articles published in top newspapers indicated that news outlets followed, rather than preceded, the political agenda (Conway, Kenski, & Wang, 2015). Specifically, political Twitter feeds appeared to influence newspaper coverage on six (economy, employment, energy, foreign policy, healthcare, and taxes) of the seven issues analyzed in the study (but see Conway-Silva, Filer, Kenski, & Tsetsi, 2018 for traditional effects of newspapers on social media in the context of the 2016 campaign). Conversely, other studies find traditional agenda setting effects even in today's bifurcated and information-rich environment. For example, a recent study found clear evidence for an agenda setting effect on Facebook, with users allocating more importance to issues that appeared on their newsfeeds, including immigration, climate change, local crime, and the annexation of Crimea (Feezell, 2018). Similarly, differentiating between three groups of Twitter actors (representatives of media organizations, political actors, and media users), Harder, Sevenans, and Van Aelst (2017) demonstrated that actors representing media organizations set the agenda for both political and other actors on Twitter most of the time.

Scholars have also examined the validity of spiral of silence theory on what others are thinking in an era of abundant social media information. The first step of the spiral of silence involves the effect of media on audience perceptions and subsequent inferences about public opinion. Studies have demonstrated that in the online environment people infer public opinion not only from news stories (that are shared and discussed on social media) but also from user-generated content, such as audience comments (Lee, 2012) or popularity indices, such as likes or retweets (Kim, 2018). In the context of TV news, exemplification research has consistently demonstrated that exemplars (televised presentations of the perspectives of vivid individuals, such as a woman explaining her position on camera) are more influential than base-rate information (general information on the distribution of the opinion in society, such as news presentation of public opinion poll results) in shaping people's perceptions regarding the societal distribution of opinion (Brosius & Bathelt, 1994). Recent findings show that indicators such as likes and tweets shape audience perception of public opinion, implying that some social media indicators are processed as vivid exemplars rather than as general base-rate information.

The next step in spiral of silence effects involves the association between perceived majority opinion and opinion expression. Numerous studies observed a negative relationship between one's perceived climate of opinion and willingness to speak out on various social media platforms, such as Facebook (e.g., Gearhart & Zhang, 2014). Studies also recorded a spiral of silence spill-over effect, whereby people who are less willing to discuss controversial topics on social media were also less likely to discuss them in person (Hampton et al., 2014).

While both agenda setting and spiral of silence emphasize social dynamics that can trigger political effects on social media, both theories (and other theories of the "return to powerful media" tradition) share a blind spot, as they under-theorize a central component of social media: interpersonal influence. The two-step flow model of communication argues that information flows from mass media to opinion leaders and from them to a wider public (Katz & Lazarsfeld, 1955). With the spread of social media, politically sophisticated opinion leaders can help extend the audience for any given news outlet by spreading information to otherwise inattentive citizens, helping to offset some of the negative consequences of audience fragmentation and polarization (Feezell, 2018). This view of opinion leaders as personal hubs for political information was supported in a recent two-wave study, demonstrating that highly active social media users are not only aware of their position as influencers but they are trying to actively

educate and affect their followers (Weeks, Ardèvol-Abreu, & Gil de Zúñiga, 2017). Beyond the spread of political information, social media opinion leaders can also increase the public's trust in news organizations. Indeed, recent results show that opinion leaders' recommendations improve levels of trust and make people want to follow more news from endorsed news outlets (Turcotte, York, Irving, Scholl, & Pingree, 2015). This is important, given that research on the hostile media phenomenon demonstrates that, in general, people tend to perceive relatively balanced news as hostile to their point of view (Vallone, Ross, & Lepper, 1985).

While these results could have important implications for news media and democracy, at this point the paucity of empirical evidence regarding the effects of social media opinion leaders warrants some caution. Indeed, either online or offline, opinion leaders are only as good as the information they share; hence, more dystopian scenarios of misinformation spread and cynicism toward mainstream media should not be discounted.

The Spread of Misinformation

Misinformation produced by political actors to arm their agendas and the rise of “fake news” disguised as serious journalism and sometimes reported as actual news by mainstream sources (Bennett & Livingstone, 2018; Pickard, 2017) pose new challenges to democracies and news outlets. According to Allcott and Gentzkow (2017), several factors contributed to a reality where false information gets disseminated frequently, including the fact that entry barriers to the media industry are gradually dropping, the financial incentives on clicks in the online news economy, reliance on directional motivations (i.e., those aimed at reaching the conclusion that suits one's political preference) that underlie news seeking, the limited repercussions for non-institutional actors for knowingly reporting false stories, and the erosion of trust in traditional media. Remarkably, according to some reports (e.g., Silverman, 2016), during the weeks leading to the 2016 U.S. presidential elections, the most popular “fake news” stories were circulated more often compared to the most popular “real news” stories, with large proportions of the readers of the former reporting that they believed the false information (Silverman & Singer-Vine, 2016).

Unlike other media effects presented in this chapter, this subsection does not deal with the ability of news media to shape or reinforce public perceptions but rather to attenuate the influence of incorrect information. The two most common approaches undertaken by news outlets to correct political misinformation are ad watches and fact-checking.

Ad watches

Ad watches are attempts by news media to analyze candidates' television ads as a regular feature of election campaign coverage and, in particular, to monitor their veracity and correct misleading statements. The first few studies that assessed the efficacy of ad watches have reached the surprising conclusion that the critical scrutiny provided by journalists often results in bolstering the credibility of the attacking party, ultimately reinforcing the messages of the negative ad (Pfau & Loudon, 1994). This boomerang effect was attributed to two factors. First, by simply negating an incorrect statement, news anchors lead people to easily remember the core of the sentence and, over time, forget the negation (Nyhan & Reifler, 2012). Second, repeating the false statements verbatim increases the level of familiarity with the claims, which is later used as a heuristic to infer the accuracy of the statements (Schwarz, 2015). Notwithstanding this, scholars have demonstrated that when produced in a way that minimizes exposure to the

criticized ad while maximizing exposure to the journalistic correction, ad watches do not increase the favorability of the attacking ad (Cappella & Jamieson, 1994).

Recently, scholars examined the role played by ad watches in eight U.S. Senate races (Meirick et al., 2018). The number of ad watches in a race overall and the number of ad watches that explicitly criticized campaign ads were positively related with the level of accuracy of political ads. Though this result can be interpreted as simply suggesting that more negative campaigns warrant more scrutiny from the media, coverage of ad watches was not related to ad tone or to the number of negative ads in a race. Reading these results optimistically, one can argue that, on an aggregate level, criticizing false claims is healthy for democracy.

Fact-Checking

One of the most popular innovations in journalistic practices in recent years has been fact-checking, aimed at evaluating the accuracy of claims made by politicians and correcting them. The use of fact-checking has increased by more than 900% since 2001 in newspapers and by more than 2,000% in broadcast media (Amazeen, 2013).

Though nonpartisan fact-checkers have gained prominence, only limited empirical evidence supports their presumed effects. For instance, Thorson (2016) demonstrated that negative political information continues to shape beliefs even after the information has been discredited with an objective fact-checker. Beyond effects on beliefs and attitudes, studies also examined how partisanship shapes patterns of sharing and commenting on candidates' fact-checker rulings. During the 2012 U.S. presidential election, people tended to selectively share fact-checking information that celebrated their preferred candidate and denigrated the opposing party's candidate (Shin & Thorson, 2017).

In addition to partisanship, researchers have proposed that political knowledge and tolerance for negative campaigning can moderate the influence of fact-checking. For instance, Fridkin, Kenney, and Wintersieck (2015) found that fact-checks positively affected people's assessments of the accuracy, usefulness, and tone of negative political ads, with stronger effects being recorded for sophisticated citizens and individuals with low tolerance for negative campaigning. Another important characteristic of fact-checkers that could make them more engaging and easier to understand is the inclusion of visual truth scales (e.g., Truth-O-Meter). While there is some evidence to suggest that video formats of fact-checking are more effective than equivalent print versions (Young, Jamieson, Poulsen, & Goldring, 2018), contrary to common belief, the inclusion of visual elements that complement the fact-checkers' conclusions, such as a color system, do not substantially change people's beliefs. One possible explanation echoes the persuasion literature regarding the elaboration likelihood model: It seems that for lowly involved individuals, truth scales serve as a heuristic cue that helps to infer the veracity of the judged claims, whereas for highly involved individuals, the truth scale has little impact (Amazeen, Thorson, Muddiman, & Graves, 2018).

The Rise of Political Entertainment

When analyzing the larger universe of news, the growing popularity of political entertainment or political satire is inescapable. While the explicit intention of shows like *Late Night with Seth Meyers* and *Full Frontal with Samantha Bee* may be to entertain rather than serve as an alternative to news programs, it seems that these non-news outlets can still generate political effects

that were traditionally associated with hard news (Holbert, Garrett, & Gleason, 2010). These statements are supported by recent surveys, demonstrating that U.S. adults were roughly as likely to learn about the 2016 presidential election from late night comedy shows (25%) as from national print newspapers (23%) and local print newspapers (29%) (Pew Research Center, 2016a). When focusing on Democratic millennials these numbers jump to around 47% (Pew Research Center, 2016b).

Holbert (2005) defined political satire programs as outlets devoted to the presentation of political humor and comedic social commentary. These entertainment venues use predominantly implied political messages (by the very nature of their humor) and audience members play an active role in determining the true meaning of the statements and anecdotes being offered to them. This interpretational vagueness is part of the reason why young people prefer political satire, as they see it as unbiased, fun, and contextualizing (Young, 2013). At least among younger audiences, exposure to political humor is associated with increased knowledge gains, as well as trust in government and political efficacy (Feldman, 2013). Yet, a closer look at the literature of political humor reveals a much more complicated reality, where the success of a given humorous message appears to be contingent on numerous factors. In fact, a recent meta-analysis that summarized the effects of 21 studies that examined the use of humor found no evidence of direct effects on political attitudes (Walter, Cody, Xu, & Murphy, 2018).

One of the potential explanations for the limited effects of political satire harkens back to selective processing and the idea that satire tends to be open to interpretation. In a seminal study, Vidmar and Rokeach (1974) offered some evidence for this argument when they analyzed how viewers understood the then-popular CBS sitcom *All in the Family*. Their evidence demonstrated that bigoted viewers identified with Archie Bunker (a working-class chauvinistic and conservative bigot) and saw nothing wrong with his use of racial and ethnic slurs, whereas liberal viewers identified with his well-educated and progressive son-in-law Mike (nicknamed “Meathead”). More recently, these results were replicated in the context of another popular show, *The Colbert Report*, with conservatives being more likely to think that the host (the liberal Stephan Colbert who portrayed a caricature of a conservative political pundit) was really against liberalism (LaMarre, Landreville, & Beam, 2009).

Conclusions

Some of the core assumptions underlying theories of the “return to the powerful media” tradition (such as agenda setting, priming, and the spiral of silence) now seem outdated. Technological changes and economic realities no longer allow us to assume messages are homogeneous across platforms, and in this environment audiences use a richer media menu to avoid politics altogether, to select ideologically congruent political information, or to limit their encounters with the political realm. Despite this changing environment, many of the individual-level predictions of previous theories seem to remain accurate, albeit with very different macro-level implications. Whereas in the era of mass media, “the media” told us what to think about (as predicted by agenda setting theory), what others are thinking (as predicted by the spiral of silence), or how to think about political issues (as predicted by framing effects), nowadays each encounter with political news, in its various shapes and formats, may still result in similar individual-level effects. However, given the plenitude and diversity of messages and platforms, society no longer has a shared set of important problems, opinion climate perceptions, and homogeneous interpretations of current events.

Many challenges remain for scholars interested in the effects of political communication in the future. First, we should reconceptualize the news with a focus on a larger universe of content and media that includes political comedy, user-generated comments, reactions, and memes. Second, we should better conceptualize and operationalize the notion of audience exposure in the online environment. While online media bring with them automated options for tracking of exposure, the possibilities for incidental exposure have also diversified, and this, together with second and third-screen exposure, makes measurement much more complex. Third, a much broader array of dependent variables should be considered as the outcome of news exposure, and the associations between these outcomes and immediate reactions such as likes or retweets should be further explored. Finally, before substituting old questions and theories for a new set of frameworks, we can pause to think whether existing theories can shed light on new challenges and opportunities. As the present chapter demonstrated, many scholars have invested efforts in such endeavors but many questions still remain as a challenge for the future.

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4

News Framing Theory and Research

David Tewksbury and Dietram A. Scheufele

Artists know that the frame placed around a painting can affect how viewers interpret and react to the painting itself. As a result, some artists take great care in how they present their work, choosing a frame that they hope will help audiences see the image in just the right way. Journalists—often subconsciously—engage in essentially the same process when they decide how to describe the political world. They choose images and words that have the power to influence how audiences interpret and evaluate issues and policies. The simplicity of this analogy belies the complexity of the processes and effects of framing in the news, however. Framing in the field of communication has been characterized by equal degrees of conceptual obliqueness and operational inconsistency (Scheufele & Tewksbury, 2007). Part of this vagueness at different levels stems from the fact that framing researchers have often approached the theory very inductively and examined framing as a phenomenon without careful explication of theoretical premises and their operational implications.

This chapter provides an overview of framing research in three steps. In the first we examine the theoretical foundations of framing in psychology, economics, sociology, and communication. Based on this theoretical framework, we explicate the cognitive processes and mechanisms that explain framing effects. In this section, we also distinguish framing effects from other models of media effects. Finally, we outline agendas for future research in this area and discuss unresolved issues in framing research.

Theoretical Foundations of Framing

Framing theory has its roots in a number of disciplinary traditions, and different scholars have defined framing as a concept at different levels of analysis (Scheufele, 1999). In particular, the various approaches to framing can be distinguished along at least two distinct dimensions: *disciplinary origins* (psychological vs sociological approaches) and *explanatory models* (applicability models vs other effects models).

Disciplinary Origins

The disciplinary origins of framing are often traced to macro-level or sociological approaches, and to more micro-level or psychological approaches.

Sociological Roots

Macro-level or “sociological” approaches to framing, as Pan and Kosicki (1993) call them, draw heavily from assumptions outlined in attribution theory (Heider, 1959) and frame analysis (Goffman, 1974). Heider’s experimental work (1959) shows that human beings process complex information in their everyday lives by reducing social perception to judgments about causal attribution. A vast majority of research participants who were shown movies with abstract movements of geometrical shapes, for instance, interpreted these movements as actions of human beings with particular underlying motivations (Heider & Simmel, 1944). Heider (1959) defines attribution as the perceived link between an observed behavior and a potential cause. Responsibility for observed actions can be attributed to personal factors or to societal or environmental factors. This distinction between contextual and individual attributions of responsibility is mirrored in Iyengar’s (1991) work on episodic and thematic political news framing and attributions of responsibility.

A separate but related intellectual tradition underlying sociological approaches to framing is Goffman’s (1974) work on frames of reference. Rather than simple attributions of causality, individuals rely on broader interpretive schemas called “primary frameworks” (Goffman, 1974, p. 24). These primary frameworks are often described as relatively stable socially shared category systems that human beings use to classify new information. In this sense, they are similar to the notion of “radical categories” and related constructs in cognitive linguistics (e.g., Lakoff, 1996).

The relevance of primary frameworks for communication research is two-fold. First, primary frameworks are socially constructed category systems that serve as important tools for information processing among citizens. Second, societal and media discourse is often tailored toward specific primary frameworks in order to influence audience interpretations. Or as Edelman (1993) puts it: “The social world is ... a kaleidoscope of potential realities, any of which can be readily evoked by altering the way in which observations are framed and categorized” (p. 232).

Psychological Roots

The psychological roots of framing are summarized in work on “frames of reference” (Sherif, 1967) and prospect theory (Kahneman, 2003; Kahneman & Tversky, 1979, 1984). In his experimental work, Sherif (1967) shows that all individual judgments and perceptions occur within certain frames of reference. Therefore, it is possible “to set up situations in which appraisal or evaluation of a social situation will be reflected in the perceptions and judgments of the individual” (Sherif, 1967, p. 382).

Kahneman and Tversky’s Nobel Prize winning work (1979, 1984) expands on this idea and claims that all “perception is reference-dependent” (Kahneman, 2003, p. 459). The idea of reference dependency assumes that a given piece of information will be interpreted differently, depending on which interpretive schema an individual applies. More importantly, however, different interpretive schemas can be invoked by framing a message in different ways (Scheufele & Tewksbury, 2007). For example, “an ambiguous stimulus that is perceived as a letter in a context of letters is seen as a number in a context of numbers” (Kahneman, 2003, p. 455). Kahneman’s experimental work focuses primarily on the impact of framing on economic and risk-related choices, but the implications for communication research are obvious.

Explanatory Models: Framing as an Applicability Process

Regardless of its theoretical underpinnings, framing research argues that news frames function to suggest how audiences can interpret an issue or event. In fact, news frames can exert a relatively substantial influence on citizens' beliefs, attitudes, and behaviors. Therefore, it is not surprising that they appear to be related to other consequential processes in news consumption and processing. Three other processes and effects bear at least passing resemblance to framing effects and very likely occur in parallel to framing. Distinguishing them from one another will illustrate what is unique about framing.

Information Effects

News stories about political issues and events contain both information and frames. One question researchers have faced is how they distinguish between these two story elements and their effects. When Gamson and Modigliani (1987) discussed the framing process, they described packages that elites and media use to characterize an issue. These packages are comprised of arguments, information, symbols, metaphors, and images (Gamson & Modigliani, 1987). Presumably, packages can affect how people understand, interpret, and react to a problem or issue. At their core, issue packages have a frame, "a central organizing idea or story line that provides meaning to an unfolding strip of events" (1987, p. 143). Another element of a package is the information it provides about an issue. This may be detail about the people affected by a problem, its costs, implications, and so on. This information can affect audience members' beliefs about the issue and its treatment. A frame is what unifies information and other linguistic elements into a package that can influence audiences.

This description suggests that frames are the devices that build the associations between concepts; information in a news story can cement the link, but it relies on a frame to build the associations. If an issue and its frame are relatively novel to an audience reading an article, the presence of information (e.g., facts, figures, images) about the issue can serve to form the basis for the link the frame represents. However, if audiences already have the frame available to them, the mere presentation of a frame in a news story can exert an effect. Indeed, both the cultural approach to framing and common sense suggest that a frame effect is not due only to the associations that are explicitly introduced in some news account. Rather, a very effective frame needs no supporting arguments to give it meaning within some text. Frame effects can rely upon culture-based meanings, norms, and values. Simon and Jerit (2007) showed this efficiently in an experiment in which news articles about an abortion procedure used the word *fetus* or *baby* to describe the object of the procedure. There were no other differences between the articles. Not surprisingly—given American cultural norms regarding these words—audiences who read the "baby" article expressed significantly more support for regulating the procedure than did readers who read the article that used "fetus" (Simon & Jerit, 2007). Thus, it is possible in some situations for a single word to affect audience cognitions and attitudes about a complex issue.

In sum, information effects result from a process in which people acquire beliefs and impressions of an issue and its context. A framing effect occurs when a phrase, image, or statement links issues to particular beliefs that carry with them concepts for interpreting the origins, implications, and treatment of the issue. It is very likely that news stories frequently have both framing and information effects, but a story could presumably have one effect and not the other, as the Simon and Jerit (2007) study illustrates.

Persuasion Effects

On the surface, framing contains many elements that characterize basic persuasion processes (Hovland, Janis, & Kelly, 1953). Both concern the presentation of content that can influence attitudes in a predictable direction. What is more, framing research has examined the moderating effect of source credibility (Druckman, 2001a), a standard concern in persuasion research. To be sure, framing effects research and a host of other experimental studies of message effects owe a basic debt to the persuasion studies of the World War II era. However, a number of elements distinguish these effects (see, e.g., Nelson, Oxley, & Clawson, 1997).

The first is the basic process each domain describes. Persuasion studies usually involve the presentation of intentionally persuasive content to audiences presumably aware of that intent. Frames in the news can take the form of journalists' descriptions of people and other political objects, their choice of event elements to include in the news, words used to name an issue, and more. The framing literature suggests that audiences of news frames often are not aware of the presence of frames and the influence they can wield (e.g., Tewksbury, Jones, Peske, Raymond, & Vig, 2000). As a result, the message processing that persuasion and frame audiences are undergoing is likely very different.

Of perhaps equal importance is the fact that persuasion and framing effect studies are typically concerned with different outcomes. The approaches share an interest in cognitive responses as a dependent variable. However, cognitive responses that reveal audience issue interpretation is a primary effect of framing (e.g., Riles, Sangalang, Hurley, & Tewksbury, 2015) whereas persuasion research is typically concerned with responses as an indication of acceptance of a message. Much like information effects, persuasion effects are visible in what people know or believe about an issue (Nelson, Oxley, & Clawson, 1997). Framing effects are perhaps most visible in what people think is important about an issue or relevant to understanding it. Indeed, perhaps the most important distinction between the two processes lies in the fact that framing effects are not typically defined as attitude effects but as interpretation effects (e.g., Tewksbury et al., 2000).

Agenda Setting Effects

Framing effects may superficially resemble agenda setting effects, a relationship that has garnered some attention (e.g., McCombs, 2014; Scheufele & Tewksbury, 2007). Agenda setting is the process by which audience exposure to news about an issue raises its *accessibility* (Price & Tewksbury, 1997). When people consider the issues that face a country, they may recall problems that have received attention in the news. Issues that have received the most attention may be perceived to be the most important, all else being equal (e.g., McCombs & Shaw, 1972). A number of studies has suggested that framing effects can be thought of as a second-step of agenda setting, after effects on perceived issue importance (McCombs, 2014). That is, the agenda setting model has been used to describe how news messages affect perceptions of both the importance of an issue and how the issue can be understood. As a result of this line of research, there is some disagreement about whether agenda setting and framing represent distinct processes (Scheufele, 2000). The resolution of this disagreement may be possible by a look at the basic psychological processes behind these effects.

Price and Tewksbury (1997) and Nelson, Clawson, and Oxley (1997) suggest that the primary effect of a frame is to render specific information, images, or ideas *applicable* to an issue.

The basis of a psychological difference between agenda setting and framing, therefore, lies in the accessibility/applicability distinction. Brewer, Graf, and Willnat (2003) demonstrated that information primes that merely raised the accessibility of potentially relevant concepts failed to prompt audiences to use those considerations in their judgments. Rather, frame-suggested links between issues and concepts seemed to exert substantial influence on audience members. This result supports the primacy of applicability in understanding framing effects.

Perhaps ironically, the best way to conceive of the difference between framing and agenda setting is to recognize that accessibility and applicability go hand-in-hand in everyday information processing. Fundamental to basic priming effects models in psychology research (e.g., Higgins, Rholes, & Jones, 1977) is a very explicit link between applicability and accessibility (Higgins, 1996). All else being equal, the accessibility of a construct is positively associated with the likelihood that it will be used to interpret some political issue. Likewise, the more applicable a construct is to an issue, the more likely people are to use it when thinking about the issue. Naturally, then, a construct that is both accessible and applicable is all that much more likely to be used (whether the relationship between these two processes is additive or interactive in this situation is unclear). In practice, priming effects in the laboratory are found for constructs that are both applicable and accessible, but the empirical emphasis is on contextual prompts that increase concept accessibility.

How the field classifies the framing process should influence how researchers conceptualize the conditions under which frames have their effect. A consideration of frames as creating primarily applicability effects emphasizes focusing scholarly attention on how links between concepts and interpretations are presented to audiences. That is, an applicability interpretation should encourage researchers to look at how news content builds the strength of the connection of descriptors and considerations with an issue or policy. The more powerful the arguments for the links, the stronger the framing effects should be, *ceteris paribus* (Chong & Druckman, 2007). An accessibility emphasis, on the other hand, could suggest that researchers should look for repetitions of associations between concepts and issues as the chief cause of framing effects (e.g., Kim, Scheufele, & Shanahan, 2002). These two approaches suggest differences in both the characteristics of news that should be the cause of effects and the operation of studies designed to test framing effects.

In summary, perhaps the best way to consider the relationship between information, persuasion, agenda setting, and framing effects is to observe that all four effects can result from exposure to a news message. They are distinct processes and very likely operate in tandem, together determining the ultimate outcome of exposure to the news (Nelson, Oxley, & Clawson, 1997). The distinctions between them are worth recognizing and exploring, of course. Too often, research in one tradition ignores parallel traditions. We would learn more about the impact of a message or class of messages if we were to examine multiple processes simultaneously.

Framing in Communication Research

Framing research can be broadly categorized into two groups: studies of framing as the dependent variable, and studies of framing as the independent variable. The former group usually deals with “frame building,” that is, the question of how frames get established in societal discourse and how different frames compete for adoption by societal elites and journalists. The latter group is mostly concerned with “frame setting,” that is, framing effects on audiences (Scheufele, 1999).

Frame Building

Frame building deals with the creation and social negotiation of frames in at least three related areas: journalistic norms, political actors, and cultural contexts. Work in this area is often based on sociological foundations of framing research (e.g., Gamson & Modigliani, 1987, 1989) and assumes that media frames might help set the terms of the debate among citizens as part of a “frame contest.” In such a contest, one interpretative package might gain influence because it resonates with popular culture or a series of events, fits with media routines or practices, and/or is heavily sponsored by elites (Scheufele & Nisbet, 2007).

Practices of News Production

Previous research on news production and selection suggests at least five aspects of news work that could potentially influence how journalists frame a given issue: larger societal norms and values, organizational pressures and constraints, external pressures from interest groups and other policy-makers, professional routines, and ideological or political orientations of journalists (e.g., Shoemaker & Reese, 2013). Different studies have examined subsets of these five influences on frame building. Some have argued that the way news is framed in mass media is a result of social and professional routines of journalists (van Dijk, 1985), “driven by ideology and prejudice” (Edelman, 1993, p. 232), or shaped by an interaction of journalists’ norms and practices and of the influence of interest groups (Gamson & Modigliani, 1987).

Political and Corporate Actors

The second potential influence on frame building comes from elites, including interest groups, government bureaucracies, and other political or corporate actors (Scheufele, 1999). All of these groups routinely engage in frame building efforts (e.g., Gamson & Modigliani, 1987; Hänggeli, 2012; Nisbet, Brossard, & Kroepsch, 2003; Nisbet & Huges, 2006). Empirical evidence on the link between elite communication and the way issues are framed in mass media, however, is inconsistent at best.

Edelman (1993), for instance, argues that “authorities and pressure groups categorize beliefs in a way that marshals support and opposition to their interests” (p. 51). In fact, political campaigns are spending more resources on message testing and delivery in order to control how messages are framed in news media (e.g., Luntz, 2007). These efforts are consistent with Bennett’s (1990) Indexing Hypothesis, which states that “mass media professionals ... tend to ‘index’ the range of voices and viewpoints in both news and editorials according to the range of views expressed in mainstream government debate about a given topic” (p. 106). More recent analyses suggest that media coverage of candidates in presidential primaries, for instance, differs from how candidates frame their issue stances in press releases, and that candidates are only moderately successful in getting their frames across in election coverage (Miller et al., 1998). Subsequent research, however, showed much stronger influences of the rhetoric offered by various interest groups (Andsager, 2000) or policy players (Nisbet et al., 2003) on the ways journalists framed issues. These influences seem to be strongest for issues where journalists and others in the policy arena can find shared narratives around which to construct issue frames (e.g., Nisbet et al., 2003).

Cultural Contexts

As outlined earlier in this chapter, some of the earliest discussions of frames in communication settings (e.g., Goffman, 1974) assume that the meaning of a frame has implicit cultural roots. What a frame implies for the understanding of some event or issue is therefore not simply communicated in a news message. Rather, a frame makes reference to something resident in the surrounding culture, and the presence of the frame essentially invites audiences to apply the information and meanings within which the culture has imbued the frame. This context dependency of frames has been described as “cultural resonance” (Gamson & Modigliani, 1989) or “narrative fidelity” (Snow & Benford, 1988).

Van Gorp (2007, p. 62) suggests that there is a “cultural stock of frames” available to a communicator and that this stock is both large and confining. On the one hand, there are many frames available in a culture, but on the other hand, building communication efforts around a concept without commonly shared cultural roots is unlikely to produce an effective frame. This culture-specific perspective suggests that the shared nature and cultural familiarity of most frames also means that their impact can go unnoticed (van Gorp, 2007). Journalists, by definition, are working within the culture of their society and will therefore rely unconsciously on commonly shared frames. As we outlined earlier, however, other players in the policy arena will likely make a very conscious effort to tailor their messages to the background culture in their attempts to create successful frames. The degree to which a frame resonates with the surrounding culture, Gamson and Modigliani (1989) argue, can also “facilitate the work of [frame] sponsors by tuning the ears of journalists to its symbolism. They add prominence ... by amplifying the effects of sponsor activities and media practices” (p. 6).

Metaphors, Similes, and Analogies

The importance of contexts suggests that frames that tap into culturally resonant concepts can act as powerful framing tools for both journalists and issue advocates. Figurative language such as metaphors, similes, and analogies can provide both linguistic and conceptual elements to frames (Burgers, Konjin, & Steen, 2016). Lakoff and Johnson (1980) wrote, “metaphors create realities for us, especially social realities. A metaphor may thus be a guide for future action” (p. 156). Consequently, figurative language can summarize background concepts applicable to an issue and suggest new ways audiences can think about it. Most important for the study of news framing, figurative language can influence audience interpretations of an issue without explicitly presenting new information and arguments concerning the issue. That is, such frames influence applicability without creating information effects.

However, metaphors can be an unwieldy tool (Hellsten, 2000). Any given metaphor can suggest different implications for different people and contexts. This is particularly likely for metaphors that have a rich background and for objects that are relatively abstract or ambiguous. Hellsten (2003) showed, for example, that policy advocates and news organizations describing genetically modified food have used the metaphor “Frankenfood” as one frame for a GMO’s origins and implications. More specifically, Hellsten found that news organizations use language that is consistent with the Frankenfood metaphor such that they can evoke it by merely using language related to the metaphor; they do not need to explicitly use the term. Presumably, a reference to Frankenfood can prompt audience members to think about considerations such as the artificiality of genetically modified foods, the unpredictable nature of the outcomes of genetic engineering, and the like.

Frame Setting

When media effects theorists conceptualize the potential outcome of the production and exhibition of news content, they typically consider both the macro-level and micro-level effects of that content. On the micro-level, theories of effects are used to predict and explain how individuals can be influenced by exposure to a message. Most theorizing about framing effects occurs on this level. As we argued earlier, frame setting can best be considered an applicability effect. The most widely cited description, penned by Entman (1993), states that frames, “promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described” (p. 52). The most effective frames are those that build associative connections between an issue and particular considerations relevant to its definition, causes, implications, and treatment. Not all frames are so powerful, of course. These four outcomes are rarely identified separately in research, and most attention is given to the definition and treatment linkages.

Following the focus of most of the research on framing and frame effects, our discussion of frame setting will examine the individual level cognitive and affective outcomes of frame exposure. Analyses of frame effects are rooted in a set of assumptions about how applicability processes operate, the individual-level locus of frame effects, and the nature of audience exposure to media messages. These assumptions will be discussed, with attention given to the implications of each for understanding frame effects.

Applicability Effects

Research in applicability effects has focused on either the introduction of links between issues and their meanings or the reinforcement of those links. We consider each of these processes, in turn. Frame setting can occur when both an issue and the considerations relevant to it can be introduced together in the body of a news account. This may occur for news about some emerging issue or a sudden event. For example, Tewksbury and colleagues (Tewksbury et al., 2000) introduced a local policy issue that had received only limited news coverage and manipulated the considerations most relevant for understanding it. Holding the news content constant but altering the headline and lead emphasis of news articles affected how news readers understood the issue. It stands to reason that news accounts addressing a novel issue should be particularly powerful for audiences. If audiences lack (as we would expect with a novel issue) a set of linkages between an issue and diverse or countervailing considerations, news framing should strongly determine how audiences understand the issue. Indeed, Tewksbury et al. (2000) observed that different story versions substantially affected audience interpretations of a novel issue immediately after exposure to them, and the effect persisted when measured again three weeks later.

Frames may also create linkages between very familiar issues and existing beliefs, values, and attitudes (e.g., Brewer & Gross, 2005; Domke, McCoy, & Torres, 1999). In this case, the frame suggests novel issue interpretations. In one such instance, Nelson, Clawson, and Oxley (1997) tested the effects of news stories about a rally by the Ku Klux Klan. Different news stories linked the group alternately to considerations about free speech and public order, both very familiar concepts. People exposed to the free speech frame exhibited substantially more tolerance toward the Klan’s speeches and rallies. Similarly, Terkildsen and Schnell (1997) reported that news accounts of women’s rights issues framed in terms of economic versus political equality affected male news readers’ endorsement of feminist values (the economic frame lowered support for feminist values).

Framing effects researchers have identified limits to the extent to which frames can directly build issue-interpretation links. For one, the evidence suggests that the extent to which frames

tap into audience members' existing beliefs and impressions will help shape their effect (Rhee, 1997). For example, Shen (2004) reported that news frames appear most powerful when they activate existing constructs. Prior to exposure to news stories that depicted stem cell research and oil drilling in Alaska in economic or environmental terms, Shen (2004) measured the extent to which participants held schemas (structures of beliefs and attitudes) for economic and environmental considerations. The results showed that audiences will accept novel constructs made applicable to an issue, but they are significantly more likely to use a frame when they have existing schemas for the constructs that a frame suggests are applicable.

There is an important caveat to this process, of course. When a frame invites people to apply their existing schemas to an issue, the implication of that application depends, in part, on what is in the schema. As a general rule of thumb, the more the receivers know about politics, the more effective frames are (e.g., Druckman & Nelson, 2003). However, a frame producer (e.g., a journalist or an issue advocate) may not be able to predict whether audiences' existing knowledge or values will encourage the interpretation that they intended when they constructed the frame (Brewer, 2002). For example, Boyle et al. (2006) found that how people reacted to depictions of a political activist group was a partial function of how they felt about the group prior to reading a news account. Thus, it is not always possible to estimate the effects of a frame based purely on the linkages suggested in a news account.

Level of Effects

The applicability approach carries with it an assumption that the primary locus of interest to researchers and practitioners is the network of associations people have regarding issues. This hardly describes the range of research that has examined the effects of frames in the news, however. For many researchers, formation or changes to associative links between concepts is a mediating step on the way to some other effect. Attitude formation or change—commonly studied outcomes of frame setting—is a most obvious next step. In an example of this research, Brewer (2002) demonstrated that exposure to frames can influence how people justify their attitude reports. Some researchers have taken the process a step further by looking at the potential influence of frames on receivers' behaviors (Borah, 2014).

Some studies of framing effects have focused on psychological processes other than applicability. One early discussion of framing effects examined the impact of news depictions of an issue on attributions of responsibility for problems (Iyengar, 1991). Iyengar suggested that news about social problems can influence attributions of causal and treatment responsibility. These attributions mediate the effect of frames on attitudinal outcomes (Springer & Harwood, 2015). Other research has looked at the effects of frames on receivers' evaluative processing style (Shah, Domke, & Wackman, 1996) and the complexity of audience members' thoughts about issues (Shah, Kwak, Schmierbach, & Zubric, 2004).

Framing effects research has opened a number of doors to thinking about the not-so-powerful but still consequential effects of the news media. However, the variety of dependent variables that has been studied may raise concerns about the validity of measurement. It is possible that researchers are using measures that are intended to tap different concepts but are all measuring a core phenomenon. For example, applicability effects are frequently studied by gathering and analyzing open-ended responses to questions about the news article (e.g., Riles et al., 2015), the relevant issue (e.g., Shen, 2004), or attitudes about the issue (e.g., Brewer, 2002). One can look at these targets of audience thought as distinct, but it seems likely that they are

strongly related to one another and might, in practice, all tap a basic set of considerations. A similar tale can be told for the relationship between attitudes toward an object (e.g., a policy proposal) and intentions to act toward it (expressing support for the policy). Attitude theory suggests that these are distinct phenomena (Fishbein & Ajzen, 1975), but researchers must take great care at the level of operationalization to ensure that they are measured accurately.

Nature of Exposure to Frames

How researchers talk about the frame setting process is substantially affected by how they assume audiences are exposed to frames. On an operational level, most studies of frame effects are set in contexts in which audiences are exposed to a news account of an issue. In these experiments, participants read print stories (and occasionally view televised stories; e.g., Nelson, Clawson, & Oxley, 1997) about an issue framed in a specific way. Immediately after this exposure, typically, participants have reported their interpretations, beliefs, and/or attitudes vis-à-vis the issue (this is not always the case, naturally; for a good counterexample, see Rhee, 1997). Most studies, therefore, are designed to measure the immediate effects of exposure to news stories. As such, these studies are not measuring long-term memory effects and, indeed, closely resemble studies of priming effects. A priming study may feature a manipulation of some construct and then measure whether audiences exposed to the construct use it to interpret a person, event, or issue (Roskos-Ewoldsen, Roskos-Ewoldsen, & Dillman Carpentier, 2002). The operational resemblance between such priming studies and many frame setting studies may be affecting how researchers understand the latter phenomenon.

Persistence of Framing Effects

Researchers are paying attention to the question of the durability of frame setting (e.g., Matthes & Schemer, 2012). Baden and Lecheler (2012) developed a model of frame setting that incorporates news frame information, applicability, and accessibility effects. They argue that a news frame exerts a longer-term influence when it suggests relatively novel information and applicability relations. Audience members who have enough knowledge to be able to process and integrate new information and applicability beliefs—but not so much knowledge that the frame suggests no novel concepts—are those most likely to experience lasting frame-setting. A subsequent study of the effects of repetitive frame exposure across time supports this interpretation (Lecheler, Keer, Schuck, & Hanggli, 2015).

Directions for Future Research

Research on framing during the last 30 years has tried to clarify the concept, its underlying mechanisms, and the contingencies under which framing works best. The sheer amount of research, however, has also raised new questions that have yet to be answered.

Types of Frames

The first question relates to the idea of specific sets of frames or interpretive schemas in various cultures (Scheufele & Nisbet, 2007). Previous research has conceptualized framing along very distinctive dimensions, examining the effects of these very specific frames on audience reactions.

This includes sets of frames, such as gains vs. loss (Kahneman & Tversky, 1979), episodic vs. thematic (Iyengar, 1991), strategy vs. issue (Cappella & Jamieson, 1997), or human interest, conflict, and economic consequence (Price, Tewksbury, & Powers, 1997).

By taking this inductive approach, previous research has often identified unique sets of frames with each new study and paid significantly less attention to identifying what some scholars have called master frames (Snow & Benford, 1992) or more enduring cultural themes (Gamson & Modigliani, 1989), that is, sets of frames that could potentially be applicable across issues. As a result, communication researchers continue to have a limited understanding of the more generic sets of frames that can trigger certain underlying interpretive schemas among audiences and therefore lead to various behavioral or cognitive outcomes.

Researchers have begun to criticize this somewhat short-sighted tendency for frame reductionism (Scheufele, 2004) and have called for a more systematic effort to identify stable, consistent sets of schemas or frames (Scheufele & Nisbet, 2007). As Reese (2007) noted,

highlighting simple description of media frames is tempting, and a frequent approach given the easy availability of media texts, but this risks reifying them—locking them in place, as though they were not part of a larger conversation, serving particular interests, and undergoing changes over time.

(p. 149)

This issue will be discussed further below.

Framing as a Multi-Level Problem: Internal vs. External Validity

The second issue that previous empirical research has left unanswered is the issue of framing as a multi-level problem. The different disciplinary traditions of the field outlined earlier also helped shape somewhat separate strands of research in the field of communication. They can be categorized, based on the types of manipulations each study is concerned with (see Table 4.1).

Table 4.1 classifies studies on framing effects in communication into four separate cells, based on the type of framing they examine empirically. Most research continues to approach frames in a very broad sense, that is, using messages that confound framing effects with information effects (Cacciatore, Scheufele, & Iyengar, 2016). This makes some sense, given that

Table 4.1 Internal and External Validity of Framing Research: Confounds of Frame and Content

		Informational Content Manipulation	
		Yes	No
Frame Manipulation	Yes	News stories in the “real world”; high external validity; limited internal validity due to frame/content confounds	“Pure” framing manipulation with informational content held constant; limited external validity; high internal validity
	No	“Pure” informational content manipulation without frames; limited external validity; high internal validity	No informational content or framing effects (e.g., agenda setting)

differences in framing in “real world” journalism usually go hand-in-hand with content differences. On the other hand, using these more externally valid messages also limits the ability of these studies to isolate framing effects that are uncontaminated by information effects, and many of the behavioral and attitudinal outcomes measured by previous research are likely a function of both frame *and* content.

These studies are distinctively different from research that examines pure information or pure framing effects. An example for the former would be a study on media coverage of stem cell research that compares stories on the scientific processes behind the research with stories about the religious and moral debates surrounding the research. These stories present different facts and arguments about stem cell research and therefore have less to do with framing and more with information presentation and persuasion. An example of the latter would be Kahneman and Tversky’s (1979) research on framing as purely presentational differences of identical information.

This distinction between uncontaminated framing and content effects is an important one for future framing research. Not only has the label “framing” been used to describe phenomena that are clearly not framing, but we have also yet to clearly delineate which effects in everyday news coverage of issues are due to informational content differences and which ones are a function of differences in the mode of presentation or other framing devices.

Frame Distribution

Contemporary technologies of news production and consumption have created the potential for a third domain of framing, frame distribution, falling between frame building and setting (Tewksbury & Riles, 2018). Frame distribution is the process through which news consumers appropriate frame elements and incorporate them into new messages. Through the use of social media platforms, blog sites, website user comment sections, and the like, news audiences can distribute frame elements in ways that change or reinforce the activities of issue advocates and journalists. For example, Holton, Lee, and Coleman (2014) find that the type of frame (e.g., gain versus loss frames) used in health-related news was associated with the frame users included in their online comments on the news. The key point, though, is that readers did not echo the frames they found in the stories. They generated systematically different versions of the frames, and those frames could have affected subsequent audience reactions. Thus, the distribution of an issue frame can change its nature and effects.

Hashtags in Twitter-based interactions can provide a form of frame distribution. For example, a news story presenting a frame for an important social issue could suggest responsibility for the source of the issue. News audiences on Twitter could adopt a hashtag based on the frame, spreading the concept or metaphor beyond the initial story (Borah, 2018). The frame element and its interpretation will likely evolve through the life of the hashtag, affecting the use and effects of the initial issue framing. This example prompts questions about the ways that issue frames move from a news story into personal communication (e.g., social media interaction). Does the shift into the interactive sphere leave the frame intact? Do the elements of the frame, such as a visual element or a metaphor, become disassociated from the original issue? If they do, how does circulation of the frame element on its own affect the reception and processing of news stories that connect issues with frames? These are some avenues for future research in framing. It could be that the technologies and behaviors of frame distribution provide a meaningful mediation between the initial construction of the frame in news and its eventual reception and processing.

Frame Selection

Most of the research on the effects of news frames examines their influence on how audiences perceive issues and policies (i.e., frame setting). There has been far less research on the effects of frames on audience members' news selection behaviors (Tewksbury & Riles, 2018). Contemporary news presentation technologies empower news consumers to select stories that they most want to see or hear. This has resulted in enhanced selectivity in news exposure. For example, news consumers can select stories on the basis of political ideology or attitudinal predispositions (e.g., Iyengar & Hahn, 2009). A small number of studies has tested article selectivity in terms of news frames. Trussler and Soroka (2014) examined the news story factors that affected whether people chose political stories on a news site. They found that politically interested readers were particularly likely to choose stories with a headline that included a strategic political frame. Similar findings have been reported regarding the tone of online article headlines (e.g., Zillmann, Chen, Knobloch, & Callison, 2004).

The growth of audience selectivity in news exposure poses challenges to journalists and issue advocates. On one level, audience members' increasing propensity to choose stories that feature frames they prefer merely extends existing patterns into a new domain. Issue advocates are perennially aware of what the news public wants to see and hear. Likewise, journalists have long put their faith in news values, beliefs about news elements that increase audience attention. They look for frame elements that help them tell stories that people want to see and hear (Price & Tewksbury, 1997). Thus, frame selectivity could represent simply more of the same. On a normative level, however, increased audience selectivity could represent a contraction of the potential frames that circulate in political discussion and that aptly characterize the many problems and policies citizens must consider. If audience members are likely to choose stories that feature a relatively narrow range of frames, both advocates and journalists will have fewer tools at their disposal, resulting in a narrow range of policy options and actions. This scenario begs for research. We need to know more about how audience members structure their news selection and about the extent to which frame presentation drives news exposure, and—as a result—affects political perceptions, opinions, and behaviors.

A More Precise Terminology?

The notion of framing being a fragmented field has become a trope in communication research. Attempts to “defragment” have largely focused on subsuming and categorizing disparate strands of research under a single terminological umbrella. It is unclear whether this approach has helped refine our field's understanding of different types of cognition-based media effects or instead removed granularity and explanatory nuance from our understanding of an important area of media effects research. As a result of the inconsistent nature of theory development, some have argued for a more precise nomenclature when it comes to different types of framing effects research (Cacciatore et al., 2016).

One particularly noteworthy terminological distinction is the one between emphasis and equivalence framing. Emphasis framing (Druckman, 2001b) refers to the idea that news coverage might highlight some aspects of an issue over others. Does a story about the death penalty, for instance, emphasize the cost of lengthy legal appeals to taxpayers, or on the moral concerns about wrongful convictions? Many framing studies focus on emphasis framing, confounding information, persuasive, framing, and, potentially, priming effects. As we

argued earlier, there is value in this work, given its ecological validity. But it taps a much broader swath of effects than what has been called equivalence framing (Scheufele & Iyengar, 2017). Work on equivalence framing is concerned with precise tests of framing effects, holding constant informational, persuasive, or other cognitive media effects mechanisms that may co-occur with framing. Do the terms “gun safety” and “gun control,” for example, often used by opposing partisan groups to describe the same gun control legislation, produce applicability effects that connect the issue to different audience schemas? Emphasis frames might be much more difficult to test (Cacciatore et al., 2016). But difficulties in measuring a particular media effect should not keep us from striving for terminological, conceptual, and methodological precision.

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5

Cultivation Theory, Media, Stories, Processes, and Reality

Rick Busselle and Jan Van den Bulck

By the 1960s, television dominated both media use and leisure time. Researchers realized that this was not a fad or a temporary situation. Not only did people spend a lot of time watching television on a daily basis, television constituted a media environment that enveloped the whole lifespan. In describing this television age, Rosengren (1994) remarked that most people in post-industrial societies would have spent more time watching television than with any socializing agent, including schools and parents, by the time they had become adults. It took up so much time that Morgan and Signorielli (1990) wrote “more time is spent watching television than doing anything else besides working and sleeping” (p. 15). Prompted by a media reality that materialized between the end of World War II and the assassination of U.S. President John Kennedy, George Gerbner and his collaborators at the Annenberg School for Communication at the University of Pennsylvania introduced the concept of cultivation and the cultural indicators project to study which messages television was spreading and what these messages might do to the audience. To describe the breadth of cultivation, Gerbner (1969) referenced Anatol Rapoport’s (1969) “ocean of words” metaphor and suggested that audiences are immersed in a television-mediated, cultural environment that determines understanding and constructs social reality.

Gerbner wanted to conduct three types of research to fully understand the impact of storytelling on society. Via *Institutional Process Analysis* he wanted to understand the forces that guided the production and distribution of media messages in contemporary society (see Gerbner, 1965). With *Message System Analysis* he wanted to chart how television presented the world and what the overall message was (Gerbner, 1973). *Cultivation Analysis*, finally, wanted to examine the impact these messages and this message system had on society by analyzing the relationship between television viewing and reality perception.

Cultivation Theory

Gerbner’s media effects theory was based on a number of observations about the nature of the TV message. First and foremost, he remarked that violence was omnipresent in media drama. Violence, in his view, was important because it was an essential tool to talk about norms and rules. “TV

violence is a dramatic demonstration of power which communicates much about social norms and relationships, about goals and means, about winners and losers, about the risks of life and the price for transgressions of society's rules" (Gerbner & Gross, 1976, p. 178). When someone willfully kills a helpless victim in a television story, it demonstrates to us who the bad guy is. When another character then kills the transgressor, the second act of violence tells us who the good guy is, often by showing how that behavior is rewarded. "Violence laden drama shows who gets away with what, when, why, how, and against whom" (Gerbner & Gross, 1976, p. 178).

Gerbner's second observation was that the picture of the world drawn by television was homogeneous. Even though individual stories differed, there was an overarching message about good and bad, about what mattered in the world and what did not, and about who was powerful and who was not. Through television, most people were constantly confronted with similar stories and thus lived in the same *symbolic environment* (see Gerbner, Gross, Morgan, & Signorielli, 1980a). In analyzing the content of this symbolic environment, Gerbner identified the need to create an analysis method capable of capturing the central propositions "of the most widely shared (i.e., mass-produced and rapidly distributed) message systems of a culture" (Gerbner, 1969, p. 144). The goal was to document not necessarily specific messages, but rather to capture what the message system called attention to, identified as important, defined as right and wrong, and to explain why things in life are the way they are.

This led to a number of studies of the "demography" of the television world. These "violence profiles" (e.g., Gerbner & Gross, 1976; Gerbner et al., 1977; Gerbner, Gross, Signorielli, Morgan, & Jackson-Beeck, 1979) reported quantitative content analyses of television shows that indicated which groups in society were more likely to be presented as perpetrators of crime and violence, which groups were more likely to be powerless or victims, which groups were overrepresented, and which ones were underrepresented. The cultivation authors argued that not just the way people are treated in television stories, but the presence or absence of entire groups, signaled something about their place in society, where "representation in the fictional world signifies social existence; absence means symbolic annihilation" (Gerbner & Gross, 1976, p. 182).

Once television's image of the real world had been charted, the researchers used this knowledge to examine the relationship between television viewing and perceptions of the world. Gerbner and his colleagues offered survey respondents two options for answering questions about their reality perceptions. Study participants were asked, for instance, to estimate what percentage of the male workforce worked in law enforcement. They were offered a "television answer" of 5% (which the researchers described as "slanted in the direction of the world of television," Gerbner & Gross, 1976, p. 191) and 1%, which was closer to the real answer. In Gerbner's research, heavy viewers were more likely to give the television answer than light viewers were:

While no member of society remains unaffected by an influence so persuasive as television, those who spend more time in the world of TV have been found to be more likely to perceive the real world in terms of television's lessons.

(Gerbner, Gross, & Signorielli, 1978, p. 3)

Although much of the early research focused on issues of law enforcement, violence, crime, and trust in other people, later studies looked at other aspects such as gender roles (Morgan, 1982; Signorielli, 1989), health (Gerbner, Morgan, & Signorielli, 1982; Signorielli, 1993), politics (Gerbner, Gross, Morgan, & Signorielli, 1982, 1984; Morgan & Shanahan, 1992), and more.

Gerbner developed a specific terminology for describing cultivation effects. In the violence profiles, he compared the number of characters perpetrating violence with the number of victims in the same demographic group to compute *risk ratios*, which thus expressed whether, for instance, old white males were more likely to appear as victims than as instigators of violence. In an attempt to develop a specific measure expressing the size of the cultivation effect, Gerbner introduced the concept of the *cultivation differential*, defined as “the margin of heavy viewers over light viewers giving the ‘television answers’ within and across groups” (Gerbner & Gross, 1976, p. 182).

Cultivation as a Sociological Theory

In essence and origin, cultivation was a sociological theory. Gerbner was interested in macro-level or ecological effects of television’s omnipresence. In response to criticisms that certain relationships did not go in the causal direction implied by cultivation theory (see, for instance, the debate about TV and fear of crime in the next section), Gerbner often countered that such micro-level observations mattered little in a world where television was so omnipresent that it changed not just individuals (of whom few could escape television’s reach), but culture as a whole. Cultivation was not a hypodermic-needle concept (Morgan & Signorielli, 1990, p. 18). “Thus, television neither simply ‘creates’ nor ‘reflects’ images, opinions and beliefs. Rather, it is an integral aspect of a dynamic process” (Gerbner, Gross, Morgan, & Signorielli, 1986, p. 23). If television is affecting the worldview of heavy viewers, that will ultimately also affect how light viewers see the world, given that they live and interact in the same environment (Gerbner et al., 1986). From a methodological point of view, this perspective is a considerable problem for cultivation theory. If light viewers end up being influenced indirectly in the same way that heavy viewers are influenced directly, demonstrating the effect of television becomes a considerable empirical challenge.

This view was reflected in a number of specifications that would later be turned against the theory. First, while social scientists may depend on demonstrating statistical significance to document processes and effects, Gerbner felt that one effect of television might be the preservation of the status quo—in other words, the lack of an effect—and remarked that researchers too often assume that “no change means no effects” (Gerbner, Gross, Morgan, & Signorielli, 1994, p. 45). Second, Gerbner realized that television often operates within the boundaries of commonly held beliefs. As such, heavy TV viewers were likely to get a double dose of the stereotypes and worldviews they were already familiar with, a process Gerbner and his team called *resonance* (Gerbner et al., 1980a). Third, when society offers strongly differing views of the world, as is the case for political worldviews, Gerbner believed that television’s homogeneous way of presenting the world would bring the extremes closer together, a process they coined *mainstreaming* (Gerbner et al., 1980a). As such, heavy viewing liberals would, over time, differ less from heavy viewing conservatives than light viewing liberals and conservatives would.

Criticism and Critique

Cultivation theory struck a chord. It ranks among the most cited models in communication research (Bryant & Cummins, 2007; Bryant & Miron, 2004). A meta-analysis from the late 1990s showed that study after study found relationships that, although small, were remarkably similar and stable (Morgan & Shanahan, 1997). The concept’s appeal also attracted a lot of criticism. Hughes (1980), who reanalyzed the data Gerbner had used for early publications, argued

that the cultivation effect was a spurious relationship that disappeared if the right control variables were taken into account. Other authors made similar claims (Doob & Macdonald, 1979; Tamborini, Zillmann, & Bryant, 1984; Weaver & Wakshlag, 1986). In Hughes's view, the relationship between fear and television viewing was indirect and accidental. Fearful people, Hughes (1980) argued, were less inclined to leave their house, a view that finds support in criminological research (Cook, Kendzierski, & Thomas, 1983). People who spent more time at home had more time to watch television, hence a positive, but spurious, relationship between higher levels of fear and a higher volume of TV viewing. Van den Bulck (2004a) called this the *withdrawal hypothesis*. Gerbner and his colleagues responded at length to Hughes's reanalysis of their data (e.g., Gerbner, Gross, Morgan, & Signorielli, 1980b).

The best known of the early comments on cultivation came from Paul Hirsch (1980, 1981a, 1981b). In view of current discussions about replicability, it is interesting to note how much reanalysis cultivation theory prompted and how public the debate between different proponents was, with much of that debate published in the main scholarly communication journals of the period (see Gerbner, Gross, Morgan, & Signorielli, 1981a, 1981b, for the Gerbner team's discussions with Hirsch). Hirsch had many comments about cultivation. Some were petty: He claimed, for instance, that mainstreaming effects were explained by *regression to the mean* (Hirsch, 1981a), even though that statistical artifact did not apply in this particular case (Van den Bulck, 2003). Other criticisms, however, attacked the core of cultivation theory. To Hirsch, the addition of such concepts as mainstreaming and resonance meant that cultivation was an idea that was not falsifiable. In another preview of contemporary discussions about fuzzy analysis decisions and replicability, Hirsch argued that, in cultivation research, every relationship could be explained as a TV effect. Not unlike Hughes, he also felt that it was more likely that attitudes and judgments affected TV viewing instead of the other way around.

Some of Hirsch's criticism resulted from a reanalysis in which he found the opposite of what Gerbner had found. He achieved this by comparing extremely high viewers with non-viewers, arguing that whichever effect television had should be biggest at the extremes. Hirsch argued that the television answer should have been absent among non-viewers, given that they were not exposed to such messages. Hirsch's criticism is based on a common misconception among researchers that leads some to assume that people who are not influenced by the media are more likely to have correct perceptions of reality (Van den Bulck, 2004b). Even though the real discussion with Hirsch should, perhaps, have been about methodology, given that cross-sectional approaches to media effects could not answer the most fundamental question (about the direction of effects), Gerbner and his co-authors responded with rhetorical arguments (and with considerable wit) by arguing that Hirsch's approach was "a little bit like trying to study religion by comparing atheists and fanatic fundamentalists" (Gerbner et al., 1981a, p. 682).

Whether it is valid to invoke cultivation as an explanatory process sometimes appears to depend on one's view of the validity of the theory as a whole. That, in turn, depends on what counts as a cultivation study. This is no trivial matter, as Potter (2014) identified at least three different perspectives on cultivation research. The first perspective is based on a literal invocation of Gerbner's own words. In Potter's view, Gerbner's descriptions are, however, too imprecise to lead to specific empirical predictions, an echo of Hirsch's claim that Gerbner's conceptualization of cultivation was not falsifiable. According to Potter (2014), the second way to define cultivation is to explore how various scholars have operationalized studies that focus on the concept. From that point of view, concepts such as first and second order judgments (discussed below) appear to have streamlined much of the research, paving the way for a cognitive theory of cultivation effects.

While the second perspective narrows cultivation to specific reality perceptions (first and second order judgments) and specific psychological processes, Potter (2014) argued that a third group of researchers used cultivation as a label for a variety of socialization effects of the media, without any adherence to the original formulations or any limitation to certain types of variables or explanatory psychological processes. Cultivation thus becomes a very broad and general term for social reality effects, which probably explains why cultivation theory is one of the most cited theories in communication scholarship (Bryant & Cummins, 2007; Bryant & Miron, 2004). Cultivation effects are often summarily mentioned as a potential explanation for statistically significant relationships between media use measures and a plethora of social reality perceptions and beliefs. In this chapter, we do not take a position on which approach is most appropriate. Our discussion includes studies we think illustrate larger points.

Inside Cultivation's Black Box

People older than 11 generally realize that television fiction does not portray real events (Busselle & Greenberg, 2000). Therefore, any theory that claims that people's real-world perception is somehow influenced by fictitious portrayals needs an explanation of how that might work (Hawkins & Pingree, 1990) beyond an *implicit theory approach* (see Roloff & Berger, 1982, p. 17) that simply states that people "form impressions." With this in mind, just labeling correlations as "cultivation" was not enough to explain what was going on, nor did equally unspecific claims such as calling media effects "learning processes" (Hawkins & Pingree, 1990, p. 36). Media effects research, and, by extension, cultivation theory, needed to understand what went on in "the black box of human information processing" (Geiger & Newhagen, 1993, p. 42).

The effort to disentangle how cultivation actually works took a major leap forward when Hawkins and Pingree (1981, 1990) introduced the idea of first and second-order cultivation effects. Hawkins and Pingree realized that, generally speaking, two types of variables had been used to measure cultivation and that, consequently, two types of influence on perceptions of reality had been charted. *First-order judgments* measured quantifiable concepts, such as the frequency with which joggers might be attacked when running after dark, or the proportion of the male workforce working in law enforcement. First-order judgments can be quantified in several ways. First, respondents in surveys or participants in experiments can be asked to give an actual numerical estimate of what they believe the real world looks like. Second, using content analysis, it is possible to quantify the extent to which the same concepts are a part of television's reality, as Gerbner did when developing violence profiles that charted the demography of TV violence. Third, researchers can attempt to determine the actual demography in the real world. With first-order judgments, then, it is possible to compare television to the real world and to examine the extent to which viewers' perceptions resemble either version of reality. *Second-order judgments* was a concept used to refer to questions about attitudes and beliefs, such as the commonly used *trust in other people* scale. For judgments such as "the world is not a safe place" or "most people can't be trusted" it is much less evident to determine what television is actually claiming about the real world and it is even more difficult to determine what, if anything, the *real-world answer* might be. Both types of judgments, therefore, offer substantially different challenges for those trying to find empirical evidence of an effect of television on reality perceptions.

In the early theorizing about first and second-order judgments, Hawkins and Pingree (1981) assumed that people store first-order judgments in memory, largely a result of accidental learning caused by low viewer involvement, and then use them to arrive at second-order judgments.

“The individual may use these bits of information to construct more general and integrated conceptions of the world, and it is probably here that the ‘higher’ processes like inference or weighing television against other sources of information occurs” (Hawkins & Pingree, 1981, p. 358). Shrum and O’Guinn (1993) referred to Hawkins and Pingree’s conceptualization as, respectively, the learning process and the construction process. The idea that a relationship had to exist between both processes was a commonly held view in social cognition theory at the time (see Fiske & Taylor, 1991, p. 328). However, when they tested this view empirically, Hawkins and Pingree (1990; Hawkins, Pingree, & Adler, 1987) could not demonstrate that a relationship between first and second-order judgments existed. It appeared that “the two types of beliefs seem to be independently influenced by viewed television content” (Hawkins & Pingree, 1990, p. 43). More recently, while investigating heuristic and systematic processing during the judgment process, Schnauber and Meltzer (2016) did find that overall exposure among a sample of German viewers influenced both first and second-order judgments and that first-order judgments appeared to influence second-order judgments directly.

L. J. Shrum solved the first and second-order puzzle by looking at processes that explain the role of memory in judgment formation. He drew on the seminal work of Kahneman and Tversky (1973) and Hastie and Park (1986) and developed a *heuristic processing* (Shrum, 2002) or *accessibility* (Shrum, 2007) model to explain how television viewing might influence first and second-order judgments. Hastie and Park (1986) remarked that people use their memories for some types of judgments, but develop other judgments *on-line*, that is, when and while they are exposed to certain stimuli. In the second case, the judgment is formed at the time of encoding the memory of the event. Most of us do not have a readymade judgment about the proportion of medical doctors who are female or other typical *first-order* estimates. This means that when cultivation researchers ask study participants to report their estimates, the respondent or participant does not *recall* an estimate but will have to *produce* one. In Kahneman and Tversky’s view, people give higher estimates of the prevalence of an event if it is easier for them to recall examples (from memory) or if they can imagine the event (when relevant memories are not accessible). Shrum argued that heavy viewers would be able to recall or imagine certain events more easily if they have seen many television portrayals of them. People tend not to think about the source of their memories or the reason why it is so easy to imagine a certain concept, and so television memories are not automatically filtered out; if study participants are prompted to source discount, the first-order cultivation effect is bound to disappear (Shrum, 1997).

Second-order judgments, which, as explained earlier, cannot be expressed as estimations of quantities or proportions, are, therefore, not explained by Kahneman and Tversky’s *availability heuristic*. Instead, Shrum (2009) argued that second-order beliefs develop *on-line*. In the context of television effects, this means that when a person is watching a story in which an important character behaves dishonestly, that viewer may reflect about these actions and may affirm, adjust, or change their *trust in other people*. For example, Shrum’s own research focused a lot on how the omnipresence of wealth and consumerism as a theme in television messages affected materialism (Shrum, Lee, Burroughs, & Rindfleisch, 2011).

On the Importance of Genre

While cultivation’s original focus was on the cultural environment produced by the totality of television content, cultivation researchers early on distinguished among daytime programming (soap operas, game shows, and talk shows), news programs, and commercials as potentially different from prime-time content (Gerbner et al., 1978). Yet, there was debate over whether research into exposure

to different content categories strayed too far from the original cultivation mission (for a discussion, see Potter, 2014). For example, Buerkel-Rothfuss and Mayes (1981), as well as Carveth and Alexander (1985), investigated the influence of soap opera viewing on perceptions of demographics and divorce. Bilandzic and colleagues (Bilandzic & Busselle, 2008; Bilandzic & Rossler, 2004) argued that genre-specific research was important because of differences in topics and story structures across genres. This argument, along with a proliferation of television channels (due primarily to cable and satellite TV through the 1980s and 1990s), created the opportunity both for greater delivery and availability of content in the most popular genres and for viewers to concentrate their consumption within a favorite genre. These factors made genre-specific research more appealing and more necessary. Currently, cultivation studies have investigated the influence of programming focused on relationships (Gamble & Nelson, 2016), romance (Lippman, Ward, & Seabrook, 2014), medical dramas (Cho, Wilson, & Choi, 2011; Chung, 2014), TV news viewing (Lee & Niederdeppe, 2011), crime-related TV (Brewer & Ley, 2010), among others. Of particular note for their attention to cultivation's assumptions, Scharrer and Blackburn (2018a) found that genre-specific exposure, specifically situation comedies and reality programs, predicted conceptions of masculinity, whereas total exposure did not. The same authors (Scharrer & Blackburn, 2018b) found "docusoap" viewing (e.g., *Real Housewives*) predicted approval of physical and verbal aggression. So, although the concept of "genre-specific cultivation" may challenge the original conception of the theory (Morgan, Shanahan, & Signorielli, 2014), research linking specific genres with specific judgment topics appears revealing and fruitful.

The Role of Realism

Gerbner was clear about the importance of stories in the cultivation process:

Stories socialize us into roles of gender, age, class, vocation and life-style, and offer models of conformity or targets for rebellion. They weave the seamless web of the cultural environment that cultivates most of what we think, what we do, and how we conduct our affairs.

(Gerbner, 1999, p. ix)

Drawing on research into the phenomenon of being transported into a narrative (Green & Brock, 2000, 2002), Bilandzic and Busselle (2008) explored trait *transportability* (Dal Cin, Zanna, & Fong, 2004) as mediating the influence of films from three different genres on genre-specific effects. Genre-specific effects occurred only among participants who reported moderate and high levels of trait transportability, suggesting that a viewer's level of engagement in the story may mediate cultivation processes.

Gerbner and his colleagues also argued that stories do not have to be real to offer "a coherent picture of what exists, what is important, what is relevant to what, and what is right" (Gerbner & Gross, 1976, p. 176). However, viewers' tendency to perceive fictional content as more or less realistic has been treated as an intervening (e.g., Potter, 1986) or antecedent variable (e.g., Perse, 1986). Several more recent studies support that perceived realism judgments play a role in cultivation at the genre level. Quick (2009) found that perceiving a popular medical drama program (*Grey's Anatomy*) as realistic or credible mediated the relation between viewing frequency and positive perceptions of physicians. Investigating the influence of exposure to three medical dramas, Cho et al. (2011) found that narrative realism (the extent to which the story is coherent and logical), but not perceived plausibility, typicality, or viewing frequency, predicted positive perceptions of physicians. Lippman et al. (2014) found perceived realism of

romantically oriented television and film to be a more consistent predictor of romantic beliefs than exposure to these types of content. Alternatively, Gamble and Nelson (2016) found the relationship between viewing programs that focus on relationships and expectations about sex was stronger for men who perceived this program category as less realistic.

Three points about perceived realism in cultivation research are worth noting. First, viewers perceive different genres as being more or less realistic. This complicates measurement of perceptions of overall television realism because responses to realism items are likely influenced by the genre most salient to the respondent at the moment (Busselle, 2001). Thus, there may be an advantage to genre-specific perceived realism measures, which is that they likely contain less error variance and more closely align with genre effects of interest. Second, Busselle and Bilandzic (2008, 2012) have suggested that perceived realism manifests not as positive realism evaluations, but instead as the absence of negative evaluations. This is because evaluations that occur during viewing should interact negatively with the viewing experience. Viewers should only attend to realism if some element of a narrative seems unrealistic or out-of-place. Noticing such a perceived flaw likely interferes with the narrative experience and decreases the program's potential to influence or reinforce relevant attitudes, beliefs, or knowledge. Finally, across two studies, Appel and Richter (2007) found that viewing fiction, but not non-fiction, was related to "belief in a just world." This likely reflects the tendency for fictional content to provide audiences with resolution in the form of justice. It also suggests that the over-arching lessons of television may differ across content categories aside from genres and it also illustrates Gerbner's point that stories need not be true to convey lessons about social reality.

Challenges to Cultivation Research in the 21st Century

When Nancy Signorielli summed up the state of affairs regarding viewer selectivity in 1986, she concluded that most viewers were exposed to a similar picture of the world (Signorielli, 1986). Viewers tended to "watch by the clock" (e.g., Gerbner et al., 1986, p. 19). Research on audience behavior seemed to confirm this. In the 1980s it was estimated that simple factors such as programming strategies by channels and habits and loyalty on the side of the viewer explained up to 80% of all viewing (Van den Bulck, 1995). Television has changed a lot since Gerbner developed his theory, however, and keeps evolving at a rapid pace. Television viewers are faced with a much larger supply of messages via a much more varied number of channels and platforms. Twenge, Martin, and Spitzberg (2018) found that adolescents, in particular, spend more time online and less time with media such as television and print. Other studies challenge this view, however. A wealth of research will be needed to determine to what extent people continue to be exposed to a common symbolic environment, as Gerbner conceptualized it, or a hyper-individualized *filter bubble* as has been hypothesized more recently (Pariser, 2011), in which a very large supply is fed by algorithmic interaction with a media consumer's selection behavior. Some recent research suggests that there may not have been as much audience fragmentation as has always been predicted (Riles, Pilny, & Tewksbury, 2018). And television may not yet be obsolete. Wiard and Domingo (2016), for instance, found an increased interest in television in a study of European students, who had developed new behaviors regarding selection and viewing practices. They were less likely to watch mainstream TV channels on a TV set, but watched shows on a streaming service on their laptop computers, instead. It is unclear whether today's research participants include such non-traditional TV use when they estimate their time consumption (as Twenge et al., 2018 note). This is a considerable methodological problem. On the one hand, comparability and replicability require that variables are measured in

the same way across studies and across time. On the other hand, the same question wording may mean different things at different times, as viewing and selection practices, formats, and television content change. The word “television” meant different things for Gerbner and his research subjects than it might for today’s researchers and study participants.

The world of video games poses another challenge to cultivation research. Several authors have tried to apply a cultivation framework to video game research. In an early attempt, Van Mierlo and Van den Bulck (2004) examined whether first and second-order variables such as those used in the earliest television studies correlated with video game play and found that most did not. Research that looked at topics that better reflected the content of video games appears to have focused on risk taking and risk perception (Chong, Teng, Siew, & Skoric, 2012; Karazsia & Muller, 2014; Williams, 2006). Karazsia and Muller (2014) analyzed portrayals in popular video games of depictions of safety equipment used in race cars, motorcycles, bicycles, and skateboards. They conducted the content analysis under the assumption that the absence of safety gear may send dangerous messages to video game players about the appropriate use of such protection. Likewise, some video game studies have included attempts to incorporate concepts such as first and second-order effects (Chong et al., 2012; Williams, 2006). These studies may be vulnerable to the same criticism early television studies had to endure, in that unpredicted relationships are also interpreted as meaningful (see Chong et al., 2012, for a discussion of *counter-cultivation*). Other topics have also been examined; see, for instance, Fox and Potocki (2016) on interpersonal aggression, hostile sexism, and rape myth acceptance.

A second discussion about the future is introduced by a study by Tsay-Vogel, Shanahan, and Signorielli (2018) who investigated the influence of over five years of Facebook use on attitudes about privacy and self-disclosure. They found that Facebook use cultivated a relaxed attitude about privacy and subsequently increased levels of self-disclosure among users. This throws the field wide open. Vingilis, Yildirim-Yenier, Vingilis-Jaremko, Wickens, Seeley, Fleiter, and Grushka (2017), for instance, listed cultivation as a theory worth considering when discussing the potential effects of risky driving videos on YouTube.

We draw attention to these studies because they illustrate points about cultivation research in the future and its relation to the original cultivation hypothesis. First, just as citizens in previous decades were enveloped in the media environment of television, one must assume that, at least for important developmental periods of their lives, significant numbers of citizens today are enveloped in mediated environments that provide common messages on screens that vary in shape and size, and are ubiquitous. Further, those messages, while distributed across thousands of different channels, may be relatively homogeneous with respect to important aspects of social reality. Citizens may communicate with a greater number of acquaintances and significant others than ever before through social networking systems. But similar to the powerful handful of television networks that existed at the inception of cultivation theory, a relatively small group of corporations control or influence a few powerful social media platforms. It seems that one of Gerbner’s memorable comments from *The Electronic Storyteller* video series still holds true:

Most of the stories, most of the time, to most of the children are told no longer by the parent, no longer by the school, no longer by the church, but essentially by a shrinking group of global conglomerates that really have nothing to tell them, but have a lot to sell.

(Media Education Foundation, 1997, p. 3)

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6

Media Priming and Accessibility

David R. Ewoldsen and Nancy Rhodes

Imagine you are talking with a colleague about some research and that colleague asks you about a particular theoretical approach to the issue you are discussing. If the theory is one that you work with extensively, then your knowledge of that theory should come to mind quickly, maybe even automatically (e.g., with no intentional effort on your part). Conversely, imagine that the last time you had discussed this theory was 30 years ago in graduate school. In this instance, the knowledge of the theory is not likely to easily be brought to mind. In other words, these two theories (and the related knowledge) vary in how chronically accessible they are from memory.

Now imagine a slightly different scenario. In this instance, due to serendipity, you had just received an email from the individual who developed that past theory minutes before talking to your colleague. In this instance, the knowledge related to that old theory was temporarily more accessible due to the recent email activating the information in memory related to the author of the theory. Because information related to the author of the theory had been active, information about the theory was likely activated at the same time. In other words, that knowledge had been primed, which temporarily increased its accessibility. We discuss both *chronically accessible* constructs, that is, the theory you work with daily, and contrast it with temporary accessibility, or the *priming* of constructs in specific situations, in this chapter. Research on priming and chronic accessibility has grown increasingly important for media scholars during the past 30 years. This chapter will review this work and the major theories that explain these related phenomena.

Accessibility

Simply put, accessibility refers to the ease by which a concept is activated from memory. Research on accessibility originated in theoretical work within cognitive and social psychology during the 1970s and 1980s. Specifically, network models of memory posited that concepts are represented in memory as nodes (J. Anderson, 1983; Wyer, 2004).¹ Going back to the opening example, you would have a node in memory for the theory you learned in grad school, as well as potentially separate nodes for elements of the theory depending on how elaborate the memory representation was for that theory. You may have very elaborate networks for those aspects of the theory that you work with a lot and only a few nodes in components of the

theory that are not relevant to your current work. The critical point is that your representation in memory is hypothesized to reflect your knowledge of that domain.

A node in a resting state is not active. But a node can receive activation if something in the environment or the cognitive system triggers that concept (e.g., someone mentions an old theory or you think about a related theory). Each node is hypothesized to have a threshold, and once there is enough energy in the node to reach that threshold, the node fires or is activated. A concept's threshold is not set but can change for various reasons. For example, if a concept is activated repeatedly, the threshold for that concept is hypothesized to change so that it is easier for the concept to be activated (J. Anderson, 1983). This change in the threshold explains how concepts can vary in their chronic accessibility.

Research suggests several ways in which the resting threshold of a concept can change to make it more accessible. By far the most often cited way to chronically increase a concept's accessibility is through frequency of activation (Wyer, 2004). Likewise, more effortful processing of a concept should increase the chronic accessibility of that concept (Wyer, 2004). The activation threshold can also weaken across time so that the concept becomes less accessible. If a concept is not activated for an extended period of time, it will become less chronically accessible. In other words, *once* accessible does not mean *always* accessible (Grant & Logan, 1993).

These models also hypothesize that nodes are interconnected via associative pathways. These pathways allow energy to spread from one node to a related node. Further, the strength of these associative pathways varies. Stronger pathways allow more energy to transfer from one node to another node. The classic example is that if the "doctor" node is activated in memory, activation will travel from the "doctor" node to the "nurse" node because doctor and nurse are likely highly associated. Assuming the strength of the pathway is high, if doctor is activated (e.g., its activation threshold is met), then energy should travel to the "nurse" node, which may result in the "nurse" node becoming active or it may increase the ease by which nurse is activated because the node is closer to its activation threshold. The energy that spreads from "doctor" to "nurse" dissipates in time. Therefore, the effect of the spreading activation is to increase temporarily the accessibility of "nurse." This is commonly referred to as *priming*.

Chronic Accessibility

Construct Accessibility

As already discussed, the chronic accessibility of various concepts can vary in memory. Research has generally considered chronic accessibility across three domains: construct accessibility, attitude accessibility, and norm accessibility. Construct accessibility has not been studied extensively by media scholars. Research in media effects in this stream has relied on the availability heuristic, which maintains that people make quick judgments of how frequently something occurs based on the ease with which they can activate exemplars of that construct from memory. The most extensive use of the availability heuristic to understand media effects comes from Shrum's (2009) line of work on cultivation theory. Briefly, cultivation theory (see Chapter 5 of the current volume) hypothesized that heavy viewers of television would have their perception of social reality distorted to assimilate with the reality depicted on television. Later, Shrum focused his explanation more on construct accessibility with the development of the heuristic processing model of cultivation (Shrum, 2009). Numerous studies have supported the construct availability explanation of cultivation effects (Bradley, 2007; Busselle & Shrum, 2003; Riddle, 2010).

The availability heuristic has been offered as an explanation for the agenda-setting effect of the media (Scheufele, 2000; see Chapter 3 of the current volume). Agenda setting refers to the impact of heavy news coverage of an issue on the public's judgment of the importance of that issue. The basic idea is that heavy coverage of an issue should increase the accessibility of that issue from memory. The ease of activating that issue from memory acts as a piece of information to form the judgment that this is an important topic (Roskos-Ewoldsen, Bichsel, & Hoffman, 2002).

Research on political communication has also demonstrated that construct accessibility can serve as both a mediator and moderator of media effects. Consider the area of political framing. *Framing* refers to the information that is emphasized and made salient within a story (see Chapter 4 of the current volume). One obvious explanation for framing effects is that a story's frame influences what information people have accessible from memory after reading the story (Schuldt & Roh, 2014). In this way, then, construct accessibility operates as the mechanism by which message framing affects the audience's perceptions of the issue. However, construct accessibility can also limit the influence of media frames on how people interpret a story. When viewers' accessible constructs about a candidate were contrary to how a message was framed, the message had less influence on viewers' judgments (Shen, 2004). In this case, the chronic accessibility of the audience's constructs overrode the effects of the frame.

Attitude Accessibility

A second area of research that has focused on chronic accessibility is the work on attitude accessibility (Rhodes & Ewoldsen, 2013). Attitude accessibility refers to the ease by which an evaluative response to an object is activated from memory (Fazio, 1986). This work hypothesizes that summary attitudes toward an object (broadly defined) are stored in memory, and these stored attitudes exist along a continuum. At one end of the continuum are attitudes that are so highly accessible from memory that they are automatically activated when the attitude object is in the environment without any intention to activate the attitude on the part of the individual (Roskos-Ewoldsen & Fazio, 1992). For example, many people have an automatic "dislike" response whenever they see a rat or other rodent and may react with revulsion without consciously thinking about it. At the other end of the continuum are attitudes that are stored in memory but that are not accessible and require conscious effort on the part of the individual to activate from memory. For example, if you were asked about a class that you took in graduate school, you almost certainly had an attitude toward that class that was accessible at the time. Even though that attitude may still be stored in memory, because of the passage of time, you now would have to work hard to recall how well you liked that class.

The work on attitude accessibility grew out of work on the attitude-behavior relationship (Fazio, 1986). Extensive research has demonstrated that attitudes that are more accessible from memory are more likely to predict a person's behavior (Rhodes & Ewoldsen, 2009, 2013). This makes sense because an attitude can only influence behavior to the extent it is active in memory, and accessible attitudes should be more likely to be active at the time when the person is engaging in the behavior. Later research demonstrated that accessible attitudes are more likely to bias how a person processes information (Rhodes, Roskos-Ewoldsen, Edison, & Bradford, 2008). For example, people will process information that is contrary to their accessible attitude in a biased manner. Other research has also demonstrated that if you have an accessible

attitude toward the topic or source of a message, it influences how much you elaborate on a message (Rhodes et al., 2008; Roskos-Ewoldsen et al., 2002). Finally, accessible attitudes will influence what people attend to in their environment (Roskos-Ewoldsen & Fazio, 1992).

Research on processing of media messages is consistent with these findings. For example, people with accessible racist attitudes interpreted a movie in a way so that the movie did not threaten their attitude (Eno & Ewoldsen, 2010). Likewise, people with more accessible racist attitudes interpreted newspapers that were sympathetic to blacks as being of lower quality (Holt, Ellithorpe, & Ralston, 2017). Similarly, smokers were biased in how they processed anti-smoking Public Service Announcements (PSAs), which is not surprising; however, this effect was moderated by the accessibility of their pro-smoking attitudes (Rhodes et al., 2008).

Research has demonstrated that media messages can influence the accessibility of attitudes from memory. For example, a feature length anti-racism movie was found to decrease the accessibility of participants' racist attitudes (Eno & Ewoldsen, 2010). Fear appeal messages have been found to increase the accessibility of people's attitudes toward performing adaptive behaviors (e.g., breast self-exams) and the accessible attitudes predicted future intentions to engage in the behavior (Roskos-Ewoldsen, Yu, & Rhodes, 2004). We believe this finding has important implications for health promotion campaigns, given the role of accessible attitudes in predicting behavior. Studies have demonstrated that heavy viewing of TV is associated with more accessible attitudes (Shrum, 2009). Likewise, several studies have also demonstrated that long-term exposure to coverage of an issue or topic can influence the accessibility of attitudes from memory (Arendt, 2010; Arendt & Brantner, 2015).² As Arendt (2010) noted, consistent with second-order cultivation effects, long-term exposure to media can influence the accessibility of people's attitudes from memory.

Additionally, consistent with a network model of memory, it appears that media can influence the accessibility of attitudes indirectly through spreading activation. Rhodes, Toole, and Arpan (2016) found that entertainment programming that contained incidental mentions of pro-environmental practices increased the accessibility of viewers' attitudes toward those practices that were depicted in the program. Importantly, the increased activation of those attitudes also increased the activation of related pro-environmental practices, such as recycling, that were not depicted in the program. The increased accessibility of these related attitudes predicted increased intention to engage in these related, but not depicted, behaviors.

Finally, as discussed, research has found that accessible attitudes influence what people attend to in the environment (Roskos-Ewoldsen & Fazio, 1992). Consistent with these findings, research has found that accessible attitudes are related to selective exposure. Specifically, research suggests that accessible attitudes toward a topic will influence whether people select a news story about that topic (Knobloch-Westerwick, 2015; see also Chapter 10 of this volume). For example, people with more accessible negative attitudes toward the European Union were more likely to avoid reading stories about the EU (Arendt, Steindl, & Kumpel, 2016; cf. Knobloch-Westerwick, 2015). Relatedly, people with more accessible attitudes toward a topic were also more likely to share news stories about that topic on social media (Arendt et al., 2016).

Roskos-Ewoldsen (1997) proposed a transactive model of attitude accessibility. The main point of the transactive model is that accessible attitudes operate to maintain or protect themselves. As already discussed, attitudes that are activated frequently or that are primed are more accessible. The model also posits merely expecting to need an attitude toward a particular object increases chronic accessibility, and cognitive elaboration is another manner by which attitudes become more accessible. According to the transactive model, accessible attitudes tend to

operate in a manner that maintains their accessibility through frequent activation and elaboration. For example, because accessible attitudes orient our attention to objects in our environment, the accessible attitudes are reactivated (Roskos-Ewoldsen, 1997). Additionally, the activation of an attitude motivates biased elaborative processing that maintains or increases the attitude's accessibility (Rhodes et al., 2008; Roskos-Ewoldsen et al., 2002). For example, in a recent study, cigarette smokers showed more biased processing of anti-smoking messages than did non-smokers (Rhodes et al., 2008). In addition, as the smokers judged the anti-smoking ad to be more biased, they also indicated they were less likely to quit smoking. In other words, the anti-smoking ad created reactance in the smoker, which reinforced their desire to smoke. Importantly, the accessibility of the smokers' attitudes mediated this process. The accessible pro-smoking attitude operated as a defense mechanism for these smokers to protect their smoking behavior from threats such as anti-smoking ads, and their accessible attitudes strengthened the behavioral response to continue smoking.

Norm Accessibility

Normative beliefs, such as the subjective norm discussed in the theory of reasoned action (TRA; Fishbein & Ajzen, 2010), can vary in accessibility (Rhodes & Ewoldsen, 2009). The subjective norm is made up of beliefs about whether important others in one's social world would approve or disapprove of one's engaging in a particular behavior. Take, for example, the case of a high school student at a party with friends who is offered an opportunity to smoke marijuana. The decision to smoke or not may rest on the accessibility of normative constructs. If the student anticipates that the other kids at the party will approve, then the student may go ahead and partake. However, if that student can quickly recall that his or her parents would be strongly disapproving, then the student might decline. Research in this area has found that accessible norms are related to a variety of behaviors, such as drinking alcohol, smoking cigarettes, using marijuana, or engaging in early sexual behavior (Rhodes, Ewoldsen, Shen, Monahan, & Eno, 2014). For teenagers, there is often a conflict between parental and peer norms, such that peer norms favor riskier behavior. Accessible parental norms have been found to be a protective factor for teens: When parental norms are accessible from memory, they appear to be predictive of that teen's behavior.

The accessibility of norms also has implications for how individuals process information. In a study of smokers' processing of anti-smoking public service announcements (PSAs), the accessibility of smoking norms was measured, and then participants viewed anti-smoking PSAs. Smokers with accessible norms that were supportive of smoking engaged in less central processing and more peripheral processing than did smokers whose norms were less accessible or were opposed to smoking (Rhodes et al., 2008). Further research found that teens with accessible pro-smoking peer norms reported higher reactance after viewing an anti-smoking PSA. Three months later, these teens reported greater readiness to smoke cigarettes than did their peers with accessible anti-smoking norms (Rhodes, Ralston, & Bigsby, 2016). Thus it appears that chronically accessible norms operate to insulate the individual from thinking about information that may challenge the behaviors that are approved by the peer group.

Two types of norms are commonly discussed in the literature (Cialdini, Reno, & Kallgren, 1990). *Descriptive* norms refer to beliefs about how common a particular behavior is within a particular group. *Injunctive* norms refer to one's belief that a particular behavior will meet with approval from important people in one's life. In this chapter so far, we have mostly reported results of studies that examined the accessibility of injunctive norms, as these measures

were modeled after the subjective norm (a type of injunctive norm) featured in the TRA (Fishbein & Ajzen, 2010).

Theories of norms have tried to explicate when and how these different norms affect behavior. Most work in this area has suggested that there is an interactive effect between injunctive and descriptive norms, such that the effect on behavior is strongest when injunctive and descriptive norms align (e.g., Rimal, 2008). Recent work has examined this relationship by measuring the accessibility of injunctive and descriptive norms and has found these variables interact to affect behavioral intention to engage in environmentally friendly behaviors such as recycling. These data suggest that when injunctive norms are strong and accessible, there is little additional effect of descriptive norms on behavior. In contrast, when someone lacks an accessible injunctive norm, descriptive norms have the strongest effect on behavior (Toole, Arpan, & Rhodes, 2012). Our findings suggest that when individuals lack an accessible injunctive norm to guide their behavior, they seek the environment for information about what people typically do in this situation, an interpretation that is consistent with dual process theories such as the MODE model (see next section; Ewoldsen, Rhodes, & Fazio, 2015).

Predicting Deliberative and Spontaneous Behaviors

Several models incorporate attitudes and norms to predict behavior such as the TRA. The TRA hypothesizes that a person's attitude toward a behavior and the subjective norms concerning that behavior combine to predict a person's behavioral intention. The behavioral intention then predicts behavior. There have been several derivatives of the TRA (Fishbein & Ajzen, 2010). These models have been tested extensively over the years, and research generally has supported these models. However, one criticism of this category of models is that they predict behavioral intentions and thus only explain deliberative behavior (Fazio, 1990; Rhodes & Ewoldsen, 2013).

Fazio's (1986) process model of the attitude-behavior relationship addresses how accessible attitudes predict behavior. The process model maintains that accessible attitudes are more likely to be activated when an object is in the environment. The activation of this attitude biases the perception of the object and, consequently, how the event is defined. A person with an accessible negative attitude toward spiders is likely to have that attitude activated when they see a spider; they will perceive the spider as "bad" and define the event as aversive. Norms operate within the process model by influencing how the situation is defined. Specifically, the accessible norm defines the range of behaviors that are appropriate in the situation. For example, if I see a spider in my basement, I am in a different situation than if I see a spider walk across my plate at my favorite eating establishment. I am much more likely to scoop up the spider and take it outside when in my basement than when I am at a restaurant. As already discussed, accessible injunctive norms guide a person's behavior, and the process model hypothesizes that this occurs because the accessible norms dictate what are or are not acceptable behaviors within that situation.

At this point, we would seem to be in a situation where we have two competing models: the TRA and its derivatives, and the process model and related models (e.g., transactive model of attitude accessibility; Roskos-Ewoldsen, 1997). However, these models apply in different contexts. As already discussed, the TRA and its derivatives do an excellent job of predicting deliberative behavior. Conversely, the process model predicts spontaneous behavior. The Motivation and Opportunities as DEterminants (MODE) model merges these two frameworks (Ewoldsen et al., 2015; Fazio, 1990). Specifically, the MODE predicts that when people are highly motivated and have the opportunity, they will carefully consider the available information when deciding

how to act. In these situations, people are engaged in deliberative behavior, and models such as the TRA and the Integrative Model do an excellent job of predicting behavior. Conversely, when people are not motivated or do not have the opportunity to carefully make a decision, they are more likely to engage in spontaneous behavior and will rely on accessible information (Rhodes & Ewoldsen, 2013).

We believe that the MODE model has important implications for media scholars. Specifically, the distinction between spontaneous and deliberative behavior is often ignored by media scholars (Ewoldsen et al., 2015), but if scholars are going to understand the processes that underlie behaviors related to the media (e.g., media selectivity, bingeing, outcomes of viewing), then these distinctions need to be carefully considered because the processes underlying these different types of behavior will differ.

Priming

Priming refers to the effect of some preceding stimulus or event on how we react, broadly defined, to some subsequent event or person (Roskos-Ewoldsen, Klinger, & Roskos-Ewoldsen, 2007; Roskos-Ewoldsen, Roskos-Ewoldsen, & Carpentier, 2009). As applied to the media, priming refers to the effects of the content in the media on people's later behavior, thoughts, or judgments. Priming is used to explain the short-term effects of media violence, the effects of political coverage on evaluations of a candidate, and stereotyped portrayals of minorities (Roskos-Ewoldsen et al., 2007). More recently, priming emerged as an explanation for the effect of avatars on people's judgments and behaviors (Peña, 2011).

Characteristics of Priming Effects

Not surprisingly, theory predicted and research quickly found that not all primes are the same. Research on priming has demonstrated three important characteristics of priming. First, the effect of a prime dissipates with time. Recent primes have a greater effect on judgments or behaviors than temporally distant primes (Higgins, Bargh, & Lombardi, 1985). *Recency* refers to the time lag between the prime and the target (e.g., the time between seeing a gun on TV and seeing an ambiguous behavior that could be interpreted as hostile). Eventually, given no more activation, the activation level of the node returns to its resting state and is no longer primed. With cognitive tasks such as lexical decision tasks, which involve judgments of whether a string of letters is a word, or attitude priming tasks, which involve judgments of whether a word has positive or negative connotations, the priming effect dissipates typically within one second (Higgins et al., 1985). However, in tasks that involve social judgments or evaluations of a social stimulus, the priming effect can last up to 15 to 20 minutes and possibly up to one hour (Roskos-Ewoldsen et al., 2007). Whereas much media research has ignored the influence of time and the fading of priming effects (Arendt, 2013b; Roskos-Ewoldsen et al., 2009), meta-analysis suggest that media primes do fade with time (Roskos-Ewoldsen et al., 2007) and experimental research clearly indicates that at least certain types of media primes fade with time (Arendt, 2013b; Riddle, 2010; Roskos-Ewoldsen et al., 2007).

Second, primes that are stronger (e.g., involve more energy) will tend to have stronger effects on people's judgments and behavior (Higgins et al., 1985). One of the problems with discussions of prime strength involves exactly what makes a prime stronger. The strength or intensity of a prime is manipulated either through the *frequency* of the priming event (e.g., a single

exposure to a gun vs. five exposures to a gun in quick succession) or the duration of the priming event (e.g., 15 minutes of exposure versus 1 minute). Research has demonstrated both frequency (Arendt, 2013a, 2015) and intensity of priming as influencing media priming effects (Dillman Carpentier, Roskos-Ewoldsen, & Roskos-Ewoldsen, 2008). Vividness might also influence priming, with highly vivid portrayals resulting in stronger priming effects (Riddle, 2010). Importantly, a linear increase in the strength of the prime does not result in a linear increase in the priming effect (Arendt, 2015).

Third, primes tend to have stronger effects on situations that are ambiguous (Roskos-Ewoldsen, 1997). Unambiguous situations leave little room for different interpretations, but an ambiguous behavior can be interpreted in myriad ways. Given the ambiguity of much of social behavior, priming effects can be occurring quite frequently in our day-to-day lives. Arendt (2017) demonstrated this is the context of news coverage priming racial stereotypes. The primed stereotype influenced judgments only when the to-be-judged object was ambiguous.

Priming of Violence and Aggression

Research on media violence and aggressive thoughts, feelings, emotions, and behaviors has been studied extensively (Huesmann, Dubow, & Yang, 2013). The available research indicates that TV and video game violence may influence people's behavior, particularly in the short term (Huesmann et al., 2013), and these effects can range from decreased sensitization to violent behavior to increases in such behavior. Consistent with a priming explanation for media violence, many studies have demonstrated that people who are exposed to a violent TV clip or play a violent video game are more likely to think aggressive thoughts (see Bushman, 1998; Bushman & Anderson, 2002). However, does the priming of aggressive thoughts translate into aggressive behavior? The answer seems to be "it depends" (see Chapter 14 of the current volume).

There are two major models of aggression priming. The first is Berkowitz's (1984, 1990) neo-associationistic model, which draws heavily from network models of priming. The model hypothesizes that depictions of violence in the media activate hostility and aggression-related concepts in memory. The activation of these concepts increases the likelihood that ambiguous behavior is interpreted as aggressive or hostile and increases the likelihood that one will engage in aggressive behaviors. Without further input, however, the activity levels of these hostile and aggressive concepts fades with time, as does their associated likelihood of influencing aggressive behavior. Across the research on Berkowitz's model, people who are primed with violent media content are more likely to respond with hostility when a person provokes them after the priming event. Consistent with our earlier discussion, this provocation is ambiguous and the violent prime leads people to interpret the provocation as aggressive.

The second model is the General Aggression Model (or GAM), which is an extensive elaboration of the neo-associationistic model (C. A. Anderson, Gentile, & Buckley, 2007). This model incorporates affect and arousal into a network framework and introduces a multi-stage process by which situations influence aggressive behavior. In the first stage of the GAM, situational variables (e.g., pain, frustration, depictions of violence) prime aggressive cognitions (e.g., hostile thoughts, memories) and affect (e.g., hostility, anger). These external situational variables can result in increased arousal, aggressive thoughts, and aggressive emotions. This first stage involves relatively automatic processes that are outside the control of the individual. In the second stage, the primed cognitions and affect, in conjunction with the increased arousal, influence *primary appraisals*. Primary appraisal involves the interpretation of the situation, including the attribution of one's arousal in that

situation, and tends to be more automatic than effortful in nature. This stage of the model is similar to Fazio's (1986) process model and explains spontaneous behaviors similar to the MODE. The final stage of the model involves *secondary appraisals*, which are more effortful, controlled appraisals of the situation, and involve thoughtful consideration of various behavioral alternatives to the situation (e.g., deliberative behaviors within the MODE). This final stage can override the primary appraisal. For example, a person may have aggressive thoughts primed by playing a violent first-person shooter game. The activation of these thoughts leads to an increased likelihood of making hostile attributions when, for example, someone cuts the person off in traffic. However, the person can override these attributions and choose not to respond in a hostile manner towards the other driver.

Political Priming

Political priming research has traditionally focused on how media coverage of different events influences what information people use when making judgments about politicians and political issues (Iyengar & Kinder, 1987; S.-H. Kim, Han, & Scheufele, 2010; Krosnick & Kinder, 1990). Historically, scholars in this area have focused on global judgments of presidential approval as the chief outcome variable. Political priming research has found that when the media predominantly focus on domestic issues, then judgments of how well the president is doing on domestic issues weigh heavier in people's overall evaluations of the president, compared to the case where international news is the predominant focus of the media. Importantly, in political priming, the emphasis is on how the media influence what information is salient (e.g., weighted) when people make judgments.

In a classic study, Krosnick and Kinder (1990) measured the priming effect of Iran-Contra media coverage on public evaluations of President Reagan's overall performance. In 1986, the Center for Political Studies at the University of Michigan conducted lengthy face-to-face interviews which included evaluations of President Reagan, both overall and regarding his performance on foreign affairs, domestic policy, and other publicized issues. The interviews were conducted both before and after the date on which the Attorney General publicly confirmed the sale of arms to Iran and the subsequent distribution of the sale profits to the Contras. Krosnick and Kinder (1990) compared responses obtained before and after the Iran-Contra announcement (the priming event) to see which foreign or domestic affairs issues contributed most to the respondents' overall performance evaluations of President Reagan. Before the priming event, domestic issues predicted overall evaluations of Reagan more than foreign affairs issues. After the priming event, the opposite was true; foreign affairs issues, especially those issues involving Central America, predicted the respondents' overall evaluations of Reagan more than domestic issues. This study shows that media coverage of political events can prime the information that people use when making judgments of presidential performance.

In addition, there is a growing focus in research on political priming on the types of information that are primed by news coverage and what type of information people use when primed by the media (S. Kim, Scheufele, & Shanahan, 2002). Research on political priming has implicitly assumed a "hydraulic model" in which the media prime people to use certain information at the expense of competing information. In a study of political priming in coverage of the first Gulf War, Y. M. Kim (2005) found evidence that news coverage increased the variety of information that was used by people who pay careful attention to the media.

Models of Political Priming

Until recently, the theoretical mechanisms by which the media prime evaluations of the President have been largely unspecified. Initially, some scholars argued that priming is really just an extension of agenda setting (Iyengar & Kinder, 1987). Consistent with this idea, Iyengar and Simon (1993) used the availability heuristic to explain political priming effects. As in other domains, the availability explanation has not been well developed within the political priming domain.

Only one model of political priming has been developed sufficiently to explain the political priming (Price & Tewksbury, 1997). Price and Tewksbury's model of political priming is based on network models of memory and the role that the media play in increasing the accessibility of information from memory. As discussed earlier, network models maintain that both chronic and temporary accessibility of constructs influences their likelihood of firing. In addition, Price and Tewksbury incorporate the *applicability* of information into their model. Applicability refers to deliberate judgments of the relevance of information to the current situation. Clearly, if primed information is not relevant, it should not be used when making political judgments. Within Price and Tewksbury's model, constructs that are activated by the media and judged as applicable to the current situation influence how the message is framed or interpreted. On the other hand, those constructs that are activated by the media and judged as not applicable to the current situation are not brought into working memory, but the activation of these constructs by the media means that they may act as a prime.

The research by Dillman Carpentier et al. (2008) is generally consistent with Price and Tewksbury's model of political priming. The one difficulty is the time frame of the priming effect. Dillman Carpentier and her colleagues found that the effect of a prime faded within 30 minutes after exposure (see also S.-H. Kim et al., 2010). Although these time frames are consistent with Price and Tewksbury's model, they are difficult to reconcile with much of the political priming literature that looks at effects of exposure that last for several weeks. Price and Tewksbury's model can explain these long-term priming effects by assuming that continued media coverage makes the concepts chronically accessible.

Some research challenges the accessibility explanation of political priming. Miller and Krosnick (2000) experimentally manipulated media exposure to current issues and found a standard priming effect. The accessibility of the primed issues was also measured using reaction times. Contrary to an accessibility explanation, those participants who were quicker at the reaction time task did not weigh the accessible information more heavily than those who were slower. Thus, the researchers concluded that construct accessibility could not be the direct cause of political priming. However, Miller and Krosnick (2000) incorrectly interpret the role of deliberative processing as meaning that accessibility was not an important component of the political priming effect. The activation of highly accessible constructs can motivate deliberative processing (Rhodes et al., 2008; Roskos-Ewoldsen et al., 2002). Thus, the deliberative processing that they found evidence for may well be a consequence of increases in the accessibility of the constructs primed by the manipulated media coverage.

Priming of Stereotypes

A growing area of research concerns the potential for media to prime various stereotypes, including gender (Hansen & Hansen, 1988), mental illness (Holman & McKeever, 2017), and

racial stereotypes (Arendt, 2013b, 2017; Dalisay & Tan, 2009; Oliver, Ramasubramanian, & Kim, 2007; Power, Murphy, & Coover, 1996; see also Chapter 16 of this volume). This area of research has grown remarkably with a focus on the impact of media primes on perceptions of both individuals in interpersonal settings and on the media, and the effects of stereotype primes on political judgments (Oliver et al., 2007).

Exposure to rock music videos that portray stereotypical images of men and women resulted in more stereotypical impressions of a man and a woman interacting in a second video (Hansen & Hansen, 1988). In particular, participants perceived the woman as less dominant after exposure to the stereotypical portrayals than after exposure to rock music videos that included no stereotypical portrayals. Also focusing on perceptions of individuals, Power et al. (1996) found that reading stereotypical information in a newsletter about either African Americans or women influenced judgments of later unrelated media events concerning the target group. For example, counter-stereotypical depictions of women resulted in higher ratings in Anita Hill's credibility in the Clarence Thomas sexual harassment hearings, whereas stereotypical depictions lowered ratings of Hill's credibility (see also Brown Givens & Monahan, 2005). However, research is mixed on the impact of stereotypical depictions in video games on the accessibility of racial stereotypes (Burgess, Dill, Stermer, Burgess, & Brown, 2011; Cicchirillo, 2015).

An interesting area of research involves how priming a stereotype can spread to influence other judgments. For example, representations of African Americans in the news was found to influence people's attitudes toward various political issues (Oliver et al., 2007). Dixon (2006) found that participants had stronger support for the death penalty after viewing a newscast with African American suspects as compared to a newscast involving the same crimes but in which the race of the criminal was unspecified. Domke, McCoy, and Torres (1999) also demonstrated that the framing of a news story about immigration (the story focused on the economic effects versus the ethics of immigration) could influence whether racial stereotypes of Hispanics were primed, despite no mention of Hispanics in the story. These activated stereotypes also influenced subsequent political judgments such as the effects of immigration on the economy (see also Domke, 2001). Similarly, priming the Asian American as a "model minority" stereotype resulted in more positive judgments of Asian Americans and more negative judgments of African Americans, even though African Americans were not represented in the story (Dalisay & Tan, 2009). In addition, priming the Asian American "model minority" stereotype undermined support for affirmative action.

A final issue that has been explored in research on racial stereotypes involves whether highly accessible stereotypes can be further primed. In a laboratory setting, chronically accessible constructs can be primed so that they are even more accessible in memory (Bargh, Bond, Lombardi, & Tota, 1986). The question is whether such an effect—which is by its nature subtle—can be demonstrated in a media context. Specifically, for Caucasians in the United States, racial attitudes of African Americans tend to be highly accessible from memory. Can these already chronically accessible racial stereotypes be primed? Certainly, evidence suggests political campaigns have attempted to prime high accessible racial stereotypes. For example, a content analysis of pictures of Barack Obama from the 2008 presidential campaign suggests that the McCain campaign might have used pictures of Obama with darker skin tone, particularly in ads that associated Obama with crime issues (Messing, Jabon, & Plaut, 2015). However, can media prime already highly accessible racist attitudes? Research does suggest that media can increase the accessibility of these chronically accessible attitudes through priming (Luttig & Callaghan, 2016; Messing et al., 2015).

Avatars as Primes

Other than the research on video games, little research has directly assessed the impact of new communication technologies on chronic accessibility or priming and the research. Research has found that pictures and texts interact to influence priming, suggesting the potential for complex priming effects from websites (Northup & Dillman Carpentier, 2015). Likewise, sidebar and banner ads on a website that featured strong sexual appeals primed judgments of an individual's social media profile picture (Dillman Carpentier, Parrott, & Northup, 2014). Research like this has certainly demonstrated that priming can occur in rather novel ways in online environments.

But the area that has received by far the most recent research is the potential for avatars to prime people's judgments and behavior (Peña, 2011). In a particularly clever experiment, Peña, McGlone, and Sanchez (2012) demonstrated that avatars could prime social stereotypes. Specifically, participants assigned sophisticatedly dressed avatars used significantly different language than participants assigned a glamorously dressed avatar. For example, participants with sophisticatedly dressed avatars were more likely to talk about education and books, whereas participants with glamorously dressed avatars talked more about sports, entertainment, and clothes.

The Proteus effect is the finding that the appearance of a person's avatar can influence judgments of the self (Yee, 2014). Research suggests that the Proteus effect is consistent with priming effects (Peña, Hancock, & Merola, 2009). As an illustration, Peña et al. (2009) had participants in a virtual museum use avatars that were either wearing Ku Klux Klan (KKK) garb or dressed as a doctor (or the "avatar" was transparent in the control condition). The KKK garb primed more aggressive thoughts and potentially inhibited positive thoughts.

The research on media priming has greatly improved in the last decade with a growing focus on understanding the processes underlying media priming effects. Clearly, media content act as a prime. In addition, media operate as a prime in a number of different domains, through a number of different channels. Critically, there has been an increased focus on understanding the processes underlying the media priming phenomenon. Unfortunately, there have been no attempts to integrate the research on media priming across the different research domains.

Conclusion

This chapter has reviewed research on both chronic and momentary accessibility (i.e., priming) of concepts in memory. Using Fazio's MODE model and Roskos-Ewoldsen's transactive model as an organizing framework, we have shown how the media can affect the chronic accessibility of concepts through repeated exposure and in the moment through priming. In turn, we have shown how the accessibility of concepts in memory affects interpretation of media content as well as the prediction of future behavior.

This is an exciting time to be studying accessibility and priming effects. The research across the last decade in this area is much more theoretically driven than was true of earlier research. Likewise, research is demonstrating greater generality of both of these phenomena. The study of norm accessibility has emerged in the last decade. Likewise, although the study of political priming has a much longer history, early research on political priming only focused on the impact of television news on judgments of the U.S. president. Today, a much broader range of topics are studied and priming and accessibility effects continue to be found. Furthermore, although early work on violence priming focused on video games, research on priming and accessibility effects is found across media platforms. The work on the Proteus effect as an

example of priming is a promising line in theorizing. As this work shows, priming and accessibility effects are found across media technologies.

Notes

- 1 We will be using examples from network models of memory such as J. Anderson's (1983) ACT* model because that is the way accessibility and priming are often discussed in the communication literature. However, there are many different theoretical models of memory. For example, connections models assume a very different cognitive system, yet these models can also explain accessibility and priming (Sun, 2014). Although our examples use the language of network models, we are agnostic in this chapter as to which model of cognition is correct.
- 2 Arendt and Brantner (2015) argue that they were studying attribute agenda setting, which refers to the ability of the media to make particular attributes of a phenomenon salient. However, they used Payne, Cheng, Govorun, and Stewart's (2005) affective misattribution measure (AMP) to measure attribute agenda setting. The AMP is traditionally interpreted as a measure of automatically activated attitudes; so, we think this is a clearer interpretation of their results. Indeed, many of the more recent studies cited in this chapter rely on implicit measures of attitudes. An implicit measure involves measuring a variable without the participants' awareness. A number of implicit measures exist and a complete discussion of these measures is beyond the scope of this chapter (see Blanton & Jaccard, 2015). However, all of these measures are based on the assumption that they are measuring highly accessible attitudes (Ewoldsen et al., 2015).

Scholars often appear to assume implicit measures are measuring a different attitude than explicit measures. To be clear, based on one's theoretical perspective, it may make sense to talk about implicit vs. explicit attitudes (see for example, Arendt, 2013a). However, not all models assume implicit measures are measuring a different attitude (Ewoldsen et al., 2015).

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7

Social Cognitive Theory

Marina Krčmar

The Importance of Historical Context

When presenting this theory, context is crucial. Indeed, without it, Bandura's most basic claims seem rather obvious. However, the fact that the ideas seem obvious today speaks to the strength of the paradigm shift that they enabled when they were first introduced. In the mid-20th century, behaviorism held sway in psychology (e.g., Skinner, 1976). Behaviorism is a psychological approach, indeed some would call it a paradigm, based on the premise that human behavior arises predominantly from reflexive responses to certain stimuli in the environment, or as a result of past experiences and the relative rewards and punishments that an individual received as a consequence. In short, behaviorism argues that we learn by doing and through the associations we develop through those experiences. This process is referred to as classical conditioning; the rewarded response system is referred to as operant conditioning. Pavlov's dog, a reference adopted even in pop culture, arises from behaviorism.¹ In any case, behaviorism was (and remains) a paradigm that attempts to explain human behaviors from the simple (e.g., rats running a maze; Staats, 1996) to the complex (e.g., language; Skinner, 1957). However, behaviorism falls short in addressing more nuanced questions of motivation, efficacy, choice, and agency.

In this environment, general social learning theories initially emerged (Bandura & Walters, 1963). These theories focused on imitation and rewarded behaviors. Where behaviorism placed emphasis squarely on internal mental processes (i.e., paired associations), social learning theories moved the focus to environmental cues (Bandura, 1986). However, these general theories of social learning failed to explain why individuals imitated the behaviors of others when the imitator was not directly rewarded for the behavior or why novel behaviors were ever undertaken in the first place. As a result, Bandura (1986) began to focus on environmental cues and cognitive processes that guide us. In retrospect, Bandura's suggestion that environmental cues provide information for potential imitation, but that imitation also requires self-efficacy and motivation, seems obvious. At the time, though, it required a shift in thinking—in some cases, a dramatic one—to arrive at this current moment of understanding.

Whereas a bulk of the related research, especially in the area of media effects, has focused on behavioral outcomes of learning (i.e., modeling, imitation), *cognition* was from the beginning crucial to the theory (Bandura & Walters, 1963). This fact became more clear in 1986 when

Bandura introduced the full scope (and changed the name) of the theory, introducing concepts of self-regulation and self-reflection as important to the processes of learning. It was then that the importance of environment—more specifically, our cognitive situation and human agency in the environment—was identified as the factor that ultimately encourages or dampens learning likelihood.

Explicating the Theory

Social cognitive theory (SCT), in simplest terms, explains how humans can learn and be motivated to perform behaviors by observing others. But this does not mean that humans simply mimic others. SCT is based on an agentic perspective (Bandura, 1986, 2006), meaning that the theory views humans as having agency: We are proactive, self-regulating, self-organizing, and both purposefully and reflexively adaptive to changes in the environment. This understanding of agency is crucial. As will be discussed below, although our environment provides much needed input to aid in learning and behavioral processes, SCT emphasizes the vital aspect that information processing and human motivation play; that is, whereas factors external to us may influence our actions, the origins of our actions are internal. Humans are not mere imitators; we are not automatons.

Nevertheless, in addressing the general question “Why do humans act the way they do?”, social cognitive theory argues that personal (e.g., personality factors, affective sensitivities), environmental (e.g., media exposure, family), and behavioral determinants interact with one another transactionally, ultimately meaning that the “causes” for human behavior—as well as learning, decision-making, and other related outcomes—are interrelated and cannot be isolated from one another. Each is in a transactional relationship with the other. Of particular note to the current discussion is how these factors interact to lead to the acquisition of and motivation to enact behaviors that we witness being performed by others.

Bandura (2009) argued that four human capacities allow for learning to occur through imitating others: symbolization, self-regulation, self-reflection, and vicarious capability. That is, these four features of our advanced neural systems enable us to learn information and acquire behavioral skills both directly (by doing) and indirectly (through symbolic understanding). Further, we have agency to utilize these capacities (or not) in the service of these learning processes.

Symbolizing capability refers to the fact that individuals are affected both by direct experience but also indirectly through observation. Because we have the ability to create symbolic representations of observed events in our memory, we can use these representations to plan for and (re) enact those events. Second, humans have the capacity to self-regulate. By observing positive and negative consequences to our actions, we are able to regulate and modify our own behavior to maximize rewards and minimize negative outcomes. Third, with the self-reflective capability, humans can reflect on their actions and on the extent to which those actions are in line, for instance, with social morality or personally held value and goals. As a result, we can generate new ideas, adjust our thoughts, take additional actions, and continue or cease our behaviors accordingly. Lastly, humans have vicarious capabilities, which are ultimately crucial in terms of learning from media. Vicarious reinforcement (or learning) is the ability for human beings to harness their symbolizing, self-regulatory, and self-reflective capabilities to learn from watching others (i.e., observational learning), especially as it relates to the relative rewards and negative consequences that others receive from their own actions (Pajares, Prestin, Chen, & Nabi, 2009).

These four human capacities constitute what might be thought of as pre-conditions for the process of learning behaviors through observation and subsequently performing those behaviors.

That is, because humans can symbolize, self-regulate, self-reflect, and understand the world vicariously, they can then learn how, if, when, and why to model behaviors performed by others, both in the real world and through media. But in order for the modeling of observed behaviors to occur, four processes must be accomplished.

Attention

Attention to a modeled behavior is seen (and could be measured) as a necessary first step in the process of modeling. Simply put: If a behavior is not observed and attended to, then it cannot be imitated. However, attention should not be viewed as a simple, direct process. Behaviors differ in terms of relevance and function (among others) to individuals, which impact motivation to attend. Audience members differ in terms of preference, knowledge, and cognitive abilities. These and numerous other variables impact the attention process. Although few SCT studies directly test for attention (except perhaps through post hoc recognition and recall items), its importance to the learning process cannot be understated. For example, in examining learning from news, Chaffee and Schleuder (1986) found that significant increases in knowledge gain were associated with attention to news, even when controlling for exposure itself. Further, Slater (2007) argued that attention and effects are mutually reinforcing spirals, with greater attention resulting in greater effects, which in turn likely increases attention. In any case, attention is the essential first step in the process of modeling, according to SCT.

Retention

Once attention has occurred, modeling requires the retention of information in order for behavioral outcomes to become more likely. This process involves symbolically encoding and creating new (or augmenting existing) cognitive structures in memory for the behavior. Any number of factors can influence the retention process: audience member's existing skills or knowledge, the vividness of the portrayal (e.g., Crigler, Just, & Neuman, 1994), or even something as small as a character's facial responses (Kim, 2009). Thus, the precise nature of the portrayal, as well as characteristics of the audience, can influence whether a behavior observed in media is retained for future retrieval and imitation.

Motor Reproduction

Motor reproduction refers to the process through which a symbolic representation of an observed behavior is translated into action in seemingly appropriate contexts (i.e., the behavior is physically reproduced). Thus, motor reproduction requires physical capabilities. That is, we can only imitate those actions that we are capable of physically performing. Whereas the decision to actually engage in the observed action is based on many factors, including those mentioned here, simple motor ability is a necessary condition.

Motivation

An audience member can attend to a behavior, for instance, portrayed in a film, retain necessary information about that behavior, and be physically capable of reproducing that behavior,

but unless he or she wants to actually perform the behavior, modeling does not occur. Motivation (or the desire) to perform an action is the final stage in the observational learning/modeling process. It is also the stage where our self-reflective and self-regulating capacities come most into play. According to the theory, the motivation stage is influenced by perceptions of self-efficacy and the presence or absence of reinforcement to perform the behavior.

Self-efficacy can be understood as the self-perception that an individual has the ability to enact a behavior. In short, if someone does not think he or she is capable of doing something, he or she is unlikely to try; the converse is also true. In fact, Bandura (1997) argues that people's motivation to undertake a behavior is "based more on what they believe than on what is objectively true" (p. 2) about that action. Self-efficacy has been found to be crucial in determining behavioral outcomes. For example, efficacy regarding HIV testing was the strongest predictor for college students' behavior regarding testing (Lin, Roy, Dam, & Coman, 2017); similarly, efficacy was one of the strongest predictors of undertaking health protections regarding pollution (Lin & Bautista, 2016). In fact, across many studies examining the adoption of health behaviors, self-efficacy is found to be a consistent and strong predictor (Lo, Wei, & Su, 2013). It is thought to be influenced by four factors: mastery experience, vicarious experience, verbal persuasion, and physiological emotional states (Pajares, Prestin, Chen, & Nabi, 2009). Each of these can independently or in combination contribute to an individual's decision to undertake—or, more precisely, to feel a sense of efficacy about—a behavior. In short: Successfully modeled actions performed by people like us make us feel like we can do the same, as can verbal encouragement and our own internal sense of self-confidence.

Reinforcement can also contribute to our motivation to model an observed act. In the material world, behaviors we perform result in (varying degrees) of positive and negative outcomes. Positive outcomes reinforce behaviors, increasing the likelihood that we will perform them again in the future; negative outcomes discourage behaviors. With media content, though, *we* are not the ones performing behaviors and experiencing outcomes; the characters are. But through the process of vicarious reinforcement, our motivation to perform a behavior we witness can be influenced. More specifically, our motivation to act on a witnessed behavior can be motivated (or disinhibited) by our perceptions of the positive outcomes experienced by the model performing the behavior. We can also be inhibited or discouraged from performing a witnessed behavior by what we perceive are negative outcomes experienced by the model. Thus, in the modeling process, our motivation to perform a learned behavior can be indirectly influenced through the process of vicarious reinforcement.

The influence of vicarious reinforcement has been examined with many behavioral outcomes in the media effects literature. For example, in the mid-1990s, a consortium of researchers examining the presence of violence on American television conducted an exhaustive review of past research (most of which utilized an SCT perspective), identifying numerous content factors that have been shown to facilitate or hinder a viewer's motivation to model aggressive behaviors: attractiveness of the perpetrator, moral justification of the act, presence of humor, presence of pain and suffering, to name a few (Wilson et al., 1997). Obviously, rewarded behaviors are more likely and unrewarded or punished behaviors are less likely to be imitated (e.g., exercise, Fox & Bailenson, 2009; smoking cessation and drug abuse, Witte & Allen, 2000). Either due to the importance of it to the modeling process (and it is extremely important) or due to the ease with which it can be experimentally manipulated in a modeled event, vicarious reinforcement has been studied extensively by SCT scholars.

Media Effects and SCT

With its emphasis on environmental modeling and how that modeling can influence behaviors in both the short and long term, SCT is an obvious fit for researchers interested in exploring the potential effect of media content depictions on behavioral outcomes. In addition, media content, with its portrayal of various behaviors—some positive, some negative—enacted by attractive and likeable characters, is an obvious conceivable “environmental input” in the modeling equation. Whereas both the theory and the associated research is not without problems and limitations (as will be discussed later), the theory has laid the groundwork for a rich and varied body of work. It is certainly beyond the space limitations of this chapter to review all of it, but, in this section, we will consider areas of focus that have utilized SCT to look at both unintended effects such as aggressive outcomes and sexual risk-taking, as well as intended effects such as prosocial behavior.

Unintended Effects

Although few media studies consider and examine all of the steps in the process of observational learning (i.e., attention, retention, motor reproduction, motivation), many examine several of the steps (e.g., Austin & Meili, 1994; Nabi & Clark, 2008), while others consider only the manifest behavioral outcome of modeling or imitation. Most focus on a particular media content type (e.g., violence) and the associated unintended (and often antisocial) imitation or outcome (e.g., increases in aggression). In the following section, various content areas and their related effects are discussed; in some cases, additional variables beyond mere imitation (e.g., motivation) that might help support the processes addressed by SCT are discussed.

Aggression-Related Effects

The earliest SCT study that could be characterized as investigating a *media* effect was conducted by Bandura, Ross, and Ross (1963); it is one of the well-known Bobo doll experiments. Unlike earlier studies, which explored positive and negative repercussions of witnessing a live aggressive act performed by a model on the doll (see Bandura & Walters, 1963), this experiment had three to five-year-old children watch a recorded (i.e., film-mediated) aggressive action on the doll. Not only did the children who viewed the film subsequently display more aggression while at play than did those who had not seen the film, but they also, to a large degree, modeled their play—especially the use of a toy gun—after the aggressive actions viewed. This really was the first study of filmed media violence that utilized the nascent SCT. Since then, much research has been conducted that has examined the effects of media violence on aggression using SCT as a framework.

To provide just a few of the many examples, numerous studies using experimental designs (e.g., Glascock, 2015) or large-scale surveys (e.g., Martins & Wilson, 2012) have demonstrated an increase in verbal aggressiveness and social aggression following exposure to film and video violence, particularly among men and children (see Chapter 14 in this volume). Fikkers, Piotrowski, Lugtig, and Valkenburg (2016) attempted to assess whether, how, and for whom media violence exposure may affect aggression. Utilizing a sample of 943 children aged 10 to 14, they found an indirect effect of media violence on aggression via perceived peer approval of aggression. Similar work has found that media violence exposure can predict aggressive thoughts (e.g., Boyson & Smith, 2005).

In addition to violent linear narratives, research has also examined the effects of interactive violent media such as video games. Recent meta-analyses have consistently demonstrated an

increase in aggressive outcomes as a result of violent game play (e.g., Anderson et al., 2010; Greitemeyer & Mugge, 2014); not all of the studies cited in the meta-analyses utilized SCT, but many did. For example, Krcmar, Farrar, and McGloin (2010) utilized social cognitive theory to test the effect of game realism on character identification factors and on aggression. Results suggested that playing a more realistic video game resulted in more involvement and rumination, with those players subsequently observed to be more verbally and physically aggressive. Thus, SCT offers support and explanation for increases in aggression after exposure not only to television and film violence but video game violence as well.

SCT has also been used to frame research in and understand the process of selective exposure to violent media. For example, Eyal and Rubin (2003) found that trait viewer aggression predicted identification with aggressive characters. Given that identification with an aggressive model is one of the disinhibiting factors associated with imitation, the researchers suggested that by understanding the personological factors of the viewer (e.g., trait aggression), SCT allows for a better understanding of the reciprocal link between selective exposure to aggressive content and aggressive outcomes. Recall that this reciprocal effect is one of the primary arguments of SCT, because the theory emphasizes the transactional and bidirectional nature of the relationship between personal, environmental, and behavioral factors. Thus, it appears that SCT—although namely about the effects of media exposure—may also add to our understanding of why audiences consume content in the first place.

In addition to the largely unintended imitation effects that have been shown to occur in the area of media violence, other unintended effects have been noted. These include problematic health-related behaviors after exposure, including risky sexual behavior (see Chapter 15 in this volume) and gender stereotyping (see Chapter 16 in this volume).

Health-Related Effects

Risky sexual behaviors are among the most studied unintended, health-related effects of media exposure. For example, Farrar (2006) examined the consequences and context of sexual intercourse depictions, varying whether a condom was used as part of a scene in the narrative. Women who viewed programs featuring condoms reported more positive attitudes about condom use than women who did not, in support of SCT predictions. Similarly, Aubrey and Smith (2016) examined what is currently termed “hookup culture.” Using SCT as a framework and a panel-study design of first-year college students, the researchers found that exposure to sexually oriented television and magazines predicted subsequent endorsement of “hookup” attitudes and behavior, especially among young men.

Similar outcomes have been observed following exposure to portrayals of sexual risk-taking in video games (e.g., Farrar, Snyder, Barta, & Lin, 2007). Moreover, Farrar and her colleagues argue that, consistent with SCT, video games have several characteristics that make them powerful learning environments for potentially harmful behaviors. First, players are exposed to risky behaviors in many titles. When players assume control of the primary characters, they not only observe the actions but also personally experience subsequent rewards and consequences for actions “performed” by the characters (but typically controlled by the player). Thus, video game players are often simultaneously exposed to modeling of risky behaviors, provided an opportunity to rehearse them, and receive positive reinforcement for performing them. For these reasons, video games are seen by many scholars as particularly potent sources for behavioral imitation.

The extent to which risky behaviors modeled in media can result in the unintended consequences of risk-imitation behavior (especially in youth) has been studied in additional health

contexts as well (see Chapter 20 in this volume). For example, Slater and Hayes (2010) examined exposure to music video channels on television (e.g., MTV, VH-1) on smoking trajectories among a nationally representative sample of U.S. adolescents. They found that baseline MTV/VH-1 viewing predicted increasing trajectories of smoking, even after multiple controls were applied. In line with these findings, Gidwani, Sobol, Dejong, Perrin, and Gortmaker (2002) argued that the consistent relationship between youth media exposure and smoking behavior can be attributed to not only the portrayal of smoking in the media, but also the lack of negative consequences portrayed (again, consistent with SCT).

Stereotyping Effects

Lastly, gender and racial stereotyping has received attention in the extant literature because content analyses generally find that traditional gender norms and, in some cases, blatantly racist or sexist behavior is frequently modeled in media (e.g., Aubrey, 2004; Graves, 1999; Mastro & Stern, 2003). SCT would predict that exposure to these depictions should yield effects consistent with the content. This was precisely what Behm-Morawitz and Mastro (2008) reported. The researchers first conducted a content analysis of gender portrayals in teen movies and found that female characters were more likely than male characters to be portrayed as socially aggressive. They next surveyed college students about their teen movie-viewing habits, gender-related beliefs, and attitudes. As expected, the results suggested that viewing teen movies was associated with negative stereotypes about female gender roles.

Rousseau and Eggermont (2018) found a similar pattern of results in a cross-sectional study of 727 preadolescents. Exposure to sexually objectifying television was found to be positively related to preadolescents' endorsement of an objectified dating script. Further, the endorsement of an objectified dating script caused self-objectification, as well as contributing to objectifying notions about girls and women in general. This pattern clearly demonstrates modeling effects.

Intended Effects

In addition to unintended (and often negative) consequences of media exposure, SCT has been used to predict and explain intended, often positive consequences of exposure to media content, including prosocial children's media (e.g., Cingel & Krcmar, 2017), entertainment-education programming (e.g., Singhal & Rogers, 1999), and health messages embedded in narratives. Unlike unintended effects which might be seen as the collateral damage of entertainment media, intended effects are often designed—more or less effectively depending on the media content—to improve or enhance some positive outcome for viewers.

Prosocial Children's Media

Whereas media content targeting children that encourages various positive behaviors such as sharing or tolerance has been part of the television landscape since the early days of *Sesame Street* (Fisch & Truglio, 2001), recent efforts have attempted to influence an ever-widening array of social behaviors. More specifically, modeling of positive behaviors, with the specific intentions of improving beneficial outcomes in audiences, has resulted in the demonstration that SCT can be applied to prosocial depictions in traditional media (e.g., TV; Rosins, 2006), as well

as new media (e.g., Blascovich, 2001). This topic is covered in more detail in Chapter 19 in the current volume.

Entertainment-Education Efforts

One particular area that often utilizes SCT is entertainment-education. Entertainment-education is the use of traditional entertainment programs or series to impart a positive message, often relying upon the tenets of SCT, particularly modeling and vicarious reinforcement. In the current literature, these efforts are often also referred to as narrative persuasion (Slater & Rouner, 2002; see also Chapter 9 in this volume). Soap operas, with their wide appeal and breadth of topics potentially addressed, offered some of the earliest examples of programs that attempted to embed messages into their narratives with an aim to changing attitudes or behaviors via modeling. As early as the 1980s, the entertainment-education model was utilized with serial programs (both radio and television) to help enact social change in Mexico (Sabido, 1981). The method continues to be used, often in nations with emerging market economies, but increasingly more frequently in advanced ones as well (e.g., Das, Nobbe, & Oliver, 2017). India, for example, has a robust history of using entertainment-education strategies, which still continues in modern serial dramas (Khattri, 2011). Topics addressed in these programs have included HIV transmission prevention, literacy, gender equity, condom use, and drinking water safety. Essentially any message that is seen as having health or cultural worth can be worked into a story line and, depending on how it is presented, may offer social benefits. As a genre, serial dramas have been used with particular frequency for entertainment-education efforts because they can be cheaply produced, have large appeal and therefore reach, and often have characters with whom the audience can readily identify. Consistent with SCT, if the characters are admired, well liked, and attractive—as they often are—and if they enact positive and ultimately rewarded behaviors, the likelihood of imitation increases (Singhal & Rogers, 1999).

A classic example of this work was completed by Rogers and his colleagues (1999). The researchers studied a serial radio program that aired in Tanzania from 1993 through 1997. The drama—roughly translated as *Let's Be Modern*—targeted specific behaviors among predominantly poor women and sought to change attitudes towards marriage and family planning. Examining nearly 2,800 households, the researchers found that, compared to the control group, women in the test group increased their self-efficacy regarding family planning, experienced increases in their approval of using family planning to limit family size, and changed their beliefs about the best age for women to get married. More specifically, members of the test group were more likely (than those in the control group) to believe women should be older when marrying, a belief and outcome associated with overall better health for women.

Health-Related Messages

In general, health campaigns can be thought of as a kind of behavior-modeling content with the primary goal of developing beneficial physical and mental health outcomes (see Chapter 20 in this volume). Often with the aim of changing perceptions of self-efficacy about health prevention and management, these campaigns routinely utilize modeling and vicarious reinforcement to address specific health concerns. These campaigns, unlike their entertainment-education cousin, are more targeted to a specific health behavior and are not typically embedded in an entertainment narrative. For example, a health campaign might have a celebrity or other actor model a particular positive

behavior, such as breast self-examination (Anderson, 2000). In controlled experimental designs, this type of presentation often shows positive benefits for audience's perceived self-efficacy (e.g., Anderson, 1995) and behavioral intentions (Anderson & McMillion, 1995). Although some of the research in the area of health campaigns is framed in terms of SCT—such as Noar and colleagues' (2015) investigation of the effect of indoor tanning and skin cancer messages—other research is not, though it often uses and measures SCT-related variables such as modeling and vicarious reinforcement. Thus, health campaigns can be seen as a practical application of SCT.

SCT and New and Emerging Media

From the wildly successful ice-bucket challenge that helped raise more than \$100 million to support amyotrophic lateral sclerosis (ALS) funding (Sifferlin, 2014) to dangerous and unhealthy behaviors like self-harm (Dunlop, More, & Romer, 2011), online depictions provide additional source cues for modeling and vicarious reinforcement. In fact, user-generated content—the creation and distribution of which is facilitated by various new media technologies—may make imitation more likely due to the attractive and identification-encouraging nature of characters who are “just like me.” Much like traditional media content, newer media (e.g., social media, virtual reality, video games, online content in general) offer countless environments in which to test SCT. A few notable studies offer some context to the abilities and limitations of using the theory in new media research.

Initial studies examining exposure to the visual elements found on social media sites such as Facebook and Instagram, particularly videos and pictures, find that they have many of the same consequences as similar content delivered through traditional media. For example, Velasquez and LaRose (2015) examined political participation and political efficacy utilizing SCT as a framework and found a relationship between exposure to Facebook political posts and increased political efficacy. Other topics such as dieting behavior and body image have also been examined using social media as a context and SCT as a theoretical frame. In one example, Sarge and Knobloch-Westerwick (2013) reported that exposure to online weight-loss messages led to short and long-term improvements in users' self-efficacy to lose weight. Similarly, Klemans and colleagues (2018) found that viewing pictures on social media, especially ones that had been manipulated, caused increased negative body-image perceptions and increased desire to look more like the pictures among 144 adolescent girls, reflecting modeling and imitation outcome processes.

Thus, social media seem to function similarly to traditional media; in fact, some evidence suggests that the effects may be even stronger. Why might this be the case? Recall that Bandura (2009) suggests that identification with the actor of a modeled behavior is important to determining imitation outcomes. In the case of social media, the actors—that is, the persons modeling the behavior—are often either members of the user's *in vivo* social network or they are admired celebrities (especially in the case of Twitter and Instagram). In both cases, identification with the person modeling the behavior would likely be stronger than for an actor on television or in a film with whom the user may not identify. Thus, the *self-selecting* nature of social media audiences might actually increase modeling outcomes (though, to this author's knowledge, this particular proposition has yet to be empirically tested).

Similar modeling and imitation effects have also been found in video game and virtual reality environments. For example, Fox and Bailenson (2009) examined immersive virtual environment technologies (IVET), which enable novel ways of manipulating identification with a model by

creating a life-like virtual body of the participant. The researchers manipulated the virtual body to either look like the participant (virtual self) or not (virtual other). Participants who viewed a running virtual self subsequently exercised more than those exposed to a loitering virtual self or a running virtual other. Similarly, Downs and Oliver (2009) utilized an experimental design to study the effects of a golfing video game. Post-tests revealed that actual putting performance and golf efficacy were affected by video game play. Clearly, then, video and virtual environments can also have an effect on modeling. Furthermore, studies in new media seem to repeatedly point to the importance of identification with the person or avatar modeling a behavior, a perhaps under-attended to aspect of SCT.

Limitations and Future Directions for SCT

The use of SCT as a framework for such a large number of studies of so many varied behaviors across so many media contents and platforms may be a strength and a drawback. As a strength, the benefits of breadth are obvious. The theory can be applied to almost any media content or technology and can encompass any behavior, including those we might want to encourage and those we would rather discourage. In addition, the propositions offered in the theory are readily testable: modeling, attention, retention, motivation, and particularly vicarious reinforcement and identification with the model. Thus, creating a message or narrative that has the potential to result in the outcome intended seems a fairly straightforward undertaking.

However, this breadth can also be seen as a weakness to the theory. At its core, SCT offers a transactional model for behavior that is based on both cognitive processes and social/environmental inputs. Despite the fact that numerous variables have been identified as being potentially involved in these processes (e.g., Bandura, 2009), the theory itself is somewhat agnostic, or at least vague, on the exact mechanism(s) by which observed behaviors become modeled. Yes, reinforcement and identification with the model can both encourage modeling (Andsager, Bemker, Choi, & Torwel, 2006), but these are not mechanisms in the strictest (cognitive) sense of the word. Thus, additional clarification of the mechanisms involved in moving a witnessed behavior to an enacted one would improve the precision of the theory. In addition to the lack of specificity in the mechanism through which behaviors come to be enacted, SCT may also benefit from specifying greater boundary terms. That is, by specifying the questions of what SCT can, and perhaps more importantly cannot, be used to explain, we increase its testability and ultimately its (potential) explanatory power. In its current form, SCT is often viewed as a macro-theory that can encompass other, more precise process theories (see Krcmar, Ewoldsen, & Koerner, 2016).

In addition to lacking specificity in the theoretical mechanisms, a large body of literature associated with SCT has only focused on a few key elements of the theory (i.e., imitation, vicarious reinforcement, observer attributes such as demographics) to the neglect of other variables that, at least from the most recent research, seem to be extremely important. Specifically, identification with the model has emerged frequently as a potentially crucial variable in predicting effects (e.g., Bond & Drogos, 2014; Fox & Bailenson, 2009; Moyer-Gusé, 2008). However, it is unclear whether identification increases the likelihood of attending to, retaining, and/or providing motivation for the (re)production of an observed behavior; we only know that when identification is present, imitation is more likely. Thus, future research should consider the precise ways that new variables link to the existing theoretical model, rather than simply testing whether certain depictions increase the likelihood of the outcome. Indeed, whether identification encourages attention,

retention, or motivation is an empirical question, and one worth exploring in order to further clarify the theory. Thus, future research utilizing SCT should go to extensive lengths to measure or manipulate these individual steps in order to more precisely ascertain the way outcomes may come to pass.

Further, Nabi and Clark (2008) pointed out the limits of short-term vicarious reinforcement in encouraging behaviors when characters are part of a story narrative that already has a well-worn cognitive script. More specifically, viewers tend to expect good things to ultimately come to favorite characters and perhaps may ignore negative consequences for their negative behaviors.

If people bring to the viewing environment the story schema that liked characters will survive and thrive despite the adversity they face, then it is likely that, despite seeing an outcome as negative, they will not see its long-term consequences as such, which will likely undermine the impact of that negative consequence in the short run.

(p. 424)

In short, story schemas may be more powerful than the effects of vicarious reinforcement when audience members are familiar with a storyline or when their personal experiences with a behavior may overwhelm the effect of the narrative and its message. To date, the research examining SCT has not sufficiently addressed Nabi and Clark's (2008) contention. Future SCT research must recognize that audience perception variables are crucial and measure them accordingly. More than a mere manipulation check, measuring a perception of an experimentally manipulated depiction may offer important theoretical extensions or specificity parameters, as argued above.

Another important factor that must be identified is the extent to which SCT can explain short versus long-term effects. Further, if the theory can explain both, it may be important to test and ultimately expand on how short-term effects can become longer-term behaviors. Essentially, short-term cognitive processes (and the theories that explain them, such as priming; see Chapter 6 in this volume) may provide a framework for short-term effects, while other theories (e.g., schema theory) may offer an explanation for longer-term effects. Again, precision and limiting parameters in both SCT and the research utilizing it are needed.

In conclusion, SCT has framed, enabled, and encouraged a truly vast body of research on the effects of mass media. Ample and consistent evidence provides support for the theory as it relates to both the unintended and intended consequences of exposure to various media depictions of behaviors, and importantly the relative rewards and consequences shown to be associated with those behaviors. Observation can result in imitation, including both inhibitory and disinhibitory outcomes, when attention and retention are present on the part of the observer, with effects occurring more readily when the modeled behavior is shown rewarded or punished. More recent theorizing on how and why media affect behavior has perhaps offered greater specificity, with greater emphasis on theoretical mechanisms, but SCT remains an oft-cited, oft-utilized theory that encourages researchers to consider just what effect a given content, with a given set of contextual cues, may have on audiences. In this way, its breadth has allowed it to be readily utilized across the ever-changing media technology landscape. However, new research—particularly with new technologies—must be responsible for attending to the nuance inherent in the theory as it exists (Bandura, 2009), while considering greater specificity in tests and extensions of the theory going forward.

Note

- 1 Pavlov (1927) conducted the well-known experiment where a neutral stimulus (e.g., a bell) is consistently paired with a response-inducing stimulus (e.g., food). Over time, the dog “learns” to salivate to the bell alone, even in the absence of the food. Thus, the dog is thought to have learned through the process of conditioning.

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8

Currents in the Study of Persuasion

James Price Dillard

The study of persuasion is concerned with how messages that are intended to bring about a specific change in message recipients do or do not achieve that aim. This chapter provides a broad overview of scholarship meant to address that issue. Because persuasion research is so plentiful, and has been for so long, my account is necessarily selective. The material that did find its way into this chapter is organized into four sections: (a) theories of attitude and persuasion, (b) message design, (c) campaign processes, and (d) resistance to persuasion.

Theories of Attitude and Persuasion

The influence of the rhetorical tradition can be seen in the utility of four concepts articulated by Aristotle more than 2,000 years ago (Aristotle, 1991). Despite their age, *logos*, *pathos*, *ethos*, and *kairos* still provide a serviceable means of organizing contemporary theoretical perspectives.

Logos

Logos is the mode of persuasion characterized by its emphasis on logic and argument. One contemporary perspective that aligns with *logos* is the theory of reasoned action (Fishbein & Ajzen, 1975) and its progeny, the theory of planned behavior (Ajzen, 1991) and the integrative model of behavior (Fishbein, 2000). The most recent iteration of this framework asserts that behavior is determined by (a) beliefs about its consequences (which produce attitudes), (b) beliefs about what others do or think that the target should do (which produce perceived norms), and (c) beliefs about whether or not the target is able to execute the behavior in question (which produce control judgments). In each of these three domains, individuals reason from molecular beliefs to aggregate beliefs and, on the basis of those collective judgments, choose a course of action.

The reasoned action perspective is a theory of behavior change, not a theory of persuasion. But, its identification of the three bases of behavior has straightforward implications for message content, a thorough examination of which can be found in O'Keefe (2016). It is worth noting that members of the trio are not functionally the same. Behavior change follows from more favorable attitudes and more intense social pressure, but neither of these factors matter much unless the

target sees him or herself as capable of the behavior (Yzer, 2007). Hence, favorable control beliefs constitute a necessary condition for the effects of attitudes and norms on persuasion.

The elaboration likelihood model (ELM) (Petty & Wegener, 1999) and the heuristic-systematic model (HSM) (Chen & Chaiken, 1999) are similar enough that they are often lumped together as dual process models of attitude. They share the assumption that careful analytic thought, that is, systematic processing, is likely to produce more accurate attitudes than the simple, superficial thinking that is the hallmark of heuristic processing. Of course, due to limits in motivation and ability, people do not consistently engage in effortful reasoning.

Although both theories have made important contributions to our understanding of attitudes, two in particular are noteworthy. The *multiple roles postulate* of the ELM asserts that any given variable can function differently under different conditions. A variable can (a) affect the degree of elaboration, (b) serve as a peripheral cue, or (c) influence the valence of elaboration. Although the multiple roles postulate is silent regarding when a variable will serve in the roles, the postulate is nonetheless important because it accurately highlights the complexity of message processing.

From the HSM we have the *information sufficiency principle*, a simple but attractive concept that explains why message processing occurs and to what degree. It assumes two motives: People wish to minimize cognitive effort, but they also want to be correct in their judgment. The sufficiency threshold is the point at which one's desire for accuracy is balanced by the countervailing desire for cognitive economy. In other words, it is the point of good enough. Communication researchers have drawn on the sufficiency construct in many areas, but none more consistently than in models of information seeking (e.g., Eastin, Kahlor, Liang, & Ghanam, 2015; Griffin, Dunwoody, & Neuwirth, 1999).

Pathos

An alternative to logos is pathos, a mode of persuasion that emphasizes emotion. Although Aristotle and other rhetorical theorists provide general perspectives on emotional appeals, social scientific models tend to highlight single emotions (but see Nabi, 1999, for an important exception). One illustration of this point is the Extended Parallel Processing Model (EPPM) of fear appeals (Witte, 1992). This frequently cited framework can be viewed as the accumulation of earlier theories. An ironic feature of this accretion is that each wave of theoretical development casts fear as less and less relevant to understanding persuasion (Dillard, 1994). Whereas Hovland, Janis, and Kelley's (1953) drive model viewed fear as the central explanatory mechanism, Leventhal's (1970) parallel processing model made fear co-equal with cognition, and Rogers's (1975) protection motivation theory dispensed with fear altogether. The EPPM "put the fear back into fear appeals," but in a very limited manner. The model specifies that fear has no direct effect on persuasion. Rather, fear is responsible for instigating defensive reactions which, in turn, inhibit persuasion (Witte, 1992, Proposition 7).

Although EPPM has successfully stimulated research, its empirical backing appears uncertain. Popova's (2012) review of 81 tests of the theory's propositions found clear support for its prediction in only 23 cases, that is, 28%. Twenty (24%) were clearly non-supportive, with the remainder being characterized as mixed. Of course, this sort of vote counting procedure is subject to errors of inference that meta-analysis is designed to overcome. But, despite some prose to the contrary, the results of Witte and Allen's (2000) meta-analysis are not consistent with the central prediction of the theory (i.e., an interaction between threat and efficacy) (Mongeau, 2013). A discussion of the failure of existing theory to fit the cumulated data on threat appeals

can be found in Mongeau (2013). Recently, a series of studies has brought theory development full circle by resurrecting aspects of drive theory (Shen & Coles, 2015; Shen & Dillard, 2014). Whether or not this old/new approach will prove useful remains to be seen.

Ethos

Aristotle believed that a speaker's ethos was grounded in his essential goodness: Persuasion followed from a good man speaking well. Over two millennia later, Hovland et al. (1953) intuited that evaluations of that goodness hinged on two judgments: expertise and trustworthiness. A flurry of factor analytic studies, which began at about the same time as Hovland et al., confirmed that laypersons did indeed judge speakers on both of those dimensions and sometimes others, including dynamism (Berlo, Lemert, & Mertz, 1951) or sociability (McCroskey & Young, 1981). Throughout much of this latter period, media researchers were asking similar questions regarding the credibility of news organizations and other media, and arriving at similar answers (Tsfati, 2011). More recently, research has focused on the ethos of websites and the mechanisms that might underlie such judgments (Wang, Walther, Pingree, & Hawkins, 2008). A new twist on the old problem of evaluating the character of message sources can be seen in recent efforts to understand the problem of misinformation (Southwell, Thorson, & Shebl, 2018). To the extent that there is a general takeaway from the scholarship of ethos, it may be the importance of appreciating that source judgment is not a fixed thing. Rather, the character of a source is evaluated with respect to the wants of the audience. Individuals seeking to assess the accuracy of a belief may be drawn to dissimilar others, whereas persons who wish to have their values (re)affirmed prefer message sources that they see as similar to themselves (Goethals & Nelson, 1975).

Kairos

Kairos, the Greek word for critical moment, dictates that "what is said must be said at the right time" (Poulakis, 1983, p. 41). Accordingly, this mode of persuasion is defined in terms of its attention to the opportunities inherent in a particular time and place, an idea that is embraced by stage models of behavior change. This family of theories are premised on the idea that propensity for change is best conceived as a set of ordered categories (Weinstein, Rothman, & Sutton, 1998). Within each stage, people face common levers and barriers to change. Across the stages, the levers and barriers are different. Persuasion is maximized when the message is matched to the specifics of the stage.

The best-known member of the family is the transtheoretical model (TTM) (Prochaska, DiClemente, & Norcross, 1992). It consists of five stages: (a) *precontemplation*, in which audience members are unmotivated to change (often because they are unaware of the problem); (b) *contemplation*, in which they consider changing; (c) *preparation*, in which planning for change takes place; (d) *action*, in which there is an effort to implement change; and (e) *maintenance*, in which the targeted behavior change has been internalized. Movement across the stages is predicated on change in a total of ten different processes collected from theories of psychoanalysis, behaviorism, and cognitive therapy (hence the label *transtheoretical*). However, in line with the nature of kairos, only a subset is relevant to any given stage-to-stage transition.

Whether or not the data support the theory depends on who is asked. Prochaska and colleagues, who developed the theory, conclude that it is highly successful (Norcross, Krebs, &

Prochaska, 2011). Other writers judge the framework as logically flawed and find the empirical support for it “meagre and inconsistent” (Sutton, 2001, p. 175). Applications of the TTM to communication phenomena have yielded intriguing insights, but not clear or uniform support for the theory (e.g., Cho & Salmon, 2006; Cornacchione & Smith, 2012). It seems safe to conclude that the idea of partitioning audiences into stages is attractive and potentially powerful, though one that has not yet been fully realized.

Perhaps the most interesting empirical finding to emerge from the TTM research concerns *decisional balance*, a term meant to describe the comparison of change-related pros and cons. The (mostly cross-sectional) data consistently show that cons outweigh pros in the model’s early stages. This pattern reverses itself in the later stages with the crossover point usually occurring before the action stage. In one respect, this is obvious: Why would anyone embrace an action that had more negative than positive outcomes? But, the numerical estimates have implications for message design. There is a relatively strong effect for pros such that, from *precontemplation* to *action*, pros increase by 1 standard deviation unit. Across the same stages, there is a comparatively weak effect for cons such that they decrease by 0.5 standard deviations. This seems to suggest that persuasive appeals would do well to allocate arguments for change disproportionately giving greater weight to benefits than costs. Empirical evaluation of this speculation awaits the development of a convincing framework of stages and identification of the processes that underlie them.

Message Design

Content

Content is the substance of the message. It is reflected in the topic of an appeal, the arguments contained in the message, and, crucially, the advocacy—what the message instructs the recipient to do.

When a Girl Scout appears at your front door with boxes of cookies in hand, it is not difficult to anticipate her purpose. The rationale for a sale hinges largely on one argument: Help the Girl Scouts. But, the pitch itself could easily vary. Should she advocate for the purchase of one box, two boxes, three boxes ... or ten? The difference between what you were expecting and what she actually says has been studied as *discrepancy*. The question is whether large, medium, or small discrepancies maximize persuasion. As it turns out, the answer is surprisingly complicated. One investigation found a linear association between discrepancy and persuasion for a high credibility source, but a curvilinear association (inverted U) for a moderately credible source (Bochner & Insko, 1966). The sustained program of work carried out by Fink, Kaplowitz, and colleagues finds additional complexities in some studies, but ultimately concludes that the functional form of the relationship is a curve with a positive, but decelerating slope (Fink & Cai, 2013). Of considerable interest is their dynamic modeling of discrepancy functions, which show that larger discrepancies require more time for the cognitive system to return to equilibrium. In other words, persuasion is not instantaneous. It requires time to integrate the contents of a message with one’s pre-existing beliefs and attitudes. And the more discrepant the advocacy, the longer that process takes (up to about 2.5 minutes in Fink’s studies). One practical implication is that the extent to which a message apparently persuades might be influenced by the time that passes between message exposure and the measurement of persuasion. Assessing persuasive outcomes too soon may obscure the ultimate impact of an appeal.

Structure

Questions of structure focus on the ways in which message components can be arranged. For instance, a problem-solution format may be superior to an ordering in which the solution is presented prior to the problem. The literature is mixed on this particular question, but most of the studies are statistically underpowered and there is little in the way of theoretical guidance (e.g., Hall, Bishop, & Marteau, 2006). One issue in which the results are clear and sensible is the timing of source identification. Persuasion is maximized for high credibility sources when they are identified prior to the message, but for low credibility sources when they are identified after the message (Allen et al., 2002). Presumably, audience members focus more on message content when they lack source information, but skew their judgments of content toward their source evaluation when that information is available prior to message consumption. This finding has ramifications for journalistic policy: Some newspapers identify the source of editorials just prior to the text, whereas others locate that information following the content.

Style

Traditionally, the third aspect of message features is style, that is, how message content is presented. From an applied standpoint, one crucial reason to study style (and structure) is that message content may be fixed. For instance, public health campaigns can warn people of the risks of tobacco use, but there is little novel information on the topic and these campaigns are ethically constrained to present only truthful information.

Although there are many aspects to style, they can be grouped roughly into levels (Dillard, 2014). *Granular forms* are linguistic variations that exist at the level of words or phrases and sometimes sentences. For instance, messages that utilize self-referencing employ second-person pronouns (*You should consider ...*). If the message is to be coherent, this choice of perspective carries through the entire persuasive appeal. Indeed, inclusion of multiple forms—first-person, second-person, and third-person—would produce shifts in perspective that could damage message unity. But, notably, it is the same choice at every turn. For instance, the decision to write in active or passive voice is usually a whole-document decision (with persuasive consequences; Carpenter & Henningsen, 2011).

Another example of granular-level style can be found in research on agency assignment, which is the use of language to designate responsibility for an action to an entity. For example, if individuals are told that they can “catch” a virus, it implies that the responsibility lies with them. If they are informed, instead, that the virus can “infect” them, responsibility has been shifted to the virus (Bell, McGlone, & Dragojevic, 2014). Message recipients see the disease as more threatening when it is assigned agency.

Thematic variations reflect choices made at a higher level of abstraction. They draw on a much larger pool of lexical items and syntactic rules than granular features. Also, thematic variations tend not to be repeated in the same concrete form. Successful implementation of a theme requires variation in concrete language elements, but consistent adherence to a pivotal concept. Vividness would surely qualify as a pivotal concept that produces thematic variation, were it not conceptually incoherent (Dillard, 2014). Metaphor is a pivotal concept that yields thematic variation, but one with sound theoretical foundations and strong empirical support for its effectiveness (e.g., Thibodeau & Boroditsky, 2013). The challenge for researchers and practitioners of persuasion is that metaphor and other thematic variations require both skill and

creativity. This complexity works against the experimenter's desire for clean manipulations that deflect questions of internal validity. Indeed, the author Martin Amis writes that style "is not something grappled onto regular prose; it is intrinsic to perception" (Hughes, 2013, p. 2). On this view, content, structure, and style are indivisible.

Imagery

Perhaps because ancient orators lacked PowerPoint, they did not give much thought to the function of imagery in persuasion. For better or for worse, those circumstances no longer apply. Now, because newer (than print) technologies have made imagery an almost ubiquitous feature of human communication, research on the topic is growing exponentially. Even the most cursory examination of the research problem quickly reveals that the question of how imagery functions in persuasion is not one question, but many.

Consider, first, that the imagery may perform several different functions. Images can be explanatory, as when a bar chart accompanies text that describes a pattern of data. Images are also used symbolically, such as doves that stand for peace. In addition, images can illustrate aspects of the verbal component of a message, as when an image of nuts and bolts is shown alongside the verbal directions for assembling a toy. Images of people also convey emotions, which might stimulate parallel feelings in viewers.

One account of how images persuade is provided by Zillmann's (1999) exemplification theory, which posits that individuals form and maintain beliefs about phenomena based on samplings of direct or indirect experience. Exemplars are defined as informational units that are representative of some phenomena. For instance, a news story about a particular smoker may exemplify the category of persons who smoke. Exemplification theory proposes that this effect mediates the influence of imagery on persuasion.

A complementary framework can be found in dual coding theory, which posits the existence of two mental systems: the verbal and the nonverbal (Paivio, 2007). The function of both systems is to encode and store information gleaned from interaction with the environment. The verbal system achieves this aim by processing language and symbols. The nonverbal system is much broader in that it concerns itself with all non-symbolic types of information including auditory, haptic, gustatory, emotional, and visual. Thus, dual coding theory suggests two means by which imagery might influence belief change: either by emotional impact on the nonverbal system or by supplementing message content that is processed by the verbal system.

Research on the effects of imagery is now abundant and rapidly growing more so. King (2015) provides a thorough introduction to the topic, especially as images relate to judgments of risk.

Campaign Processes

Katz and Lazarsfeld (1955) are credited with making two important observations about mass media persuasion campaigns. One is that campaigns have the potential to *directly* change the opinions of audience members via exposure to persuasive appeals. Message recipients may then communicate with others via interpersonal channels, which also produces change. These *indirect* effects have long been acknowledged, but only recently have they become the focus of concerted research effort.

Direct Effects

After messages have been designed and pretested, they must be put into the field. And to do their work, individuals must be exposed to the messages, possibly multiple times. Hornik (2002) regards exposure as the single most important factor limiting campaign effects. It is expected that exposure/repetition will increase persuasion and, generally, this has proven to be true (e.g., Yzer, Siero, & Buunk, 2000). However, this observation overshadows the likelihood that repetition instigates countervailing processes. One process amplifies persuasion by increasing comprehension and familiarity and creating the impression that the claim is true (Arkes, Boehm, & Xu, 1991). The other reduces persuasion by strengthening perceived persuasive intent (Koch & Zerbach, 2013) and increasing tedium (So, Kim, & Cohen, 2017), both of which are likely to magnify reactance. Untangling the operation of these processes is a challenge that is as daunting as it will be valuable.

Indirect Effects

Much of the current energy devoted to the study of indirect campaign effects can be traced to Southwell and Yzer's (2007) paper, which identified the lacunae in the research literature. Since then dozens of studies have been conducted, most of which confirm the predicted two-step flow. For example, Hafstad and Aarø (1997) found that more than 40% of respondents who recalled exposure to an anti-smoking campaign engaged in discussion about it. However, there is some indication that campaign-induced talk is least likely among those most at risk (e.g., smokers receiving an anti-smoking message) (Dunlop, 2011).

Recently, data regarding the effects of discussion have been the subject of a meta-analysis by Jeong and Bae (2017). The main finding was that campaign-induced talk (vs. no talk) increases persuasion. The effect size, approximately $r = .07$ ($k = 124$, $N = 138,898$), may seem modest, but it probably underestimates the true effect size due to the authors' conservative methodological choices. Furthermore, it almost certainly obscures two important facts. One is that audience members' evaluation of the media messages determine their motivation to speak about the campaign. Individuals who judge the media messages favorably are more likely to discuss them (Dunlop, 2011; Frank et al., 2012). Second, what is said is important (Dunlop, 2011; Frank et al., 2012). Persons who see merit in the campaign speak favorably about it, whereas those who do not are disparaging. The nature of the talk (supportive vs. critical) determines whether audience members manifest persuasion or counter-persuasion (David, Cappella, & Fishbein, 2006).

Much remains to be done before it can be said that we have a passable understanding of campaign-induced interpersonal communication. One important question concerns how to motivate discussion. Although some previous campaigns have encouraged conversation (e.g., "Talk to your child about drugs"), very little is known about the impact of such directives. Further, it seems quite likely that instructing message recipients what to talk about or how to talk about it would produce stronger effects ("Talk to your child about the risks involved with drugs"), *if* such instructions were not seen as presumptuous or intrusive. Finally, perceptions of the valence of the conversation were certainly a good place to start in terms of mapping the contours of conversation. But, such measures hardly capture the complexity and nuance of real conversations. More objective and detailed methods are needed. Obvious candidates include the coding schemes developed for the study of interpersonal argumentation (e.g., Seibold, Lemus, & Kang, 2010).

Resistance to Persuasion

The notion of *defensive reactions* is often called upon to explain how or why individuals resist persuasion. What exactly are defensive reactions? There are many answers. Hovland et al. (1953) posited three separate forms: Individuals might (a) avoid the threatening message via inattention, (b) exhibit aggression toward the message source, or (c) attempt to evade future exposure to threatening messages through careful selection of situations or media. van't Riet and Ruiters (2013) identify four types of defensive reactions: avoidance, denial, reappraisal, and suppression. Before considering some general questions about defensive reactions, it is useful to consider two illustrative lines of research.

Motivated Reasoning

Kunda (1990) makes the point that all reasoning is motivated. However, we should not, therefore, conclude that all reasoning stems from a single motivation. In some instances, individuals process messages with the goal of arriving at an objectively accurate conclusion. But, in other circumstances they may seek an endpoint that aligns with a pre-existing position. For example, a Republican might see a policy sponsored by Republicans as effective, but evaluate the same policy as flawed were it sponsored by Democrats. This end of the motivation continuum is known as motivated reasoning. Some of the most interesting work on this phenomenon has been conducted in political communication.

Taber and Lodge (2006) suggest that motivated reasoning occurs via three distinct processes. One is the *attitude congruency bias*. In this, people who have a position on an issue tend to see supporting arguments as stronger than opposing arguments. *Disconfirmation bias* leads message processors to spend relatively more time and effort denigrating and counterarguing opposing arguments, whereas *confirmation bias* means that they are more likely to expose themselves to information that is consistent with their pre-existing position and, in parallel, avoid incompatible information. Importantly, these biases are most pronounced among citizens for whom the issues are most important and who possess comparatively greater political knowledge. It appears that this encourages a vicious circle in which extremity leads to greater extremity, with undesirable outcomes for democracy. Accordingly, recent work has focused on how to counteract these biases (Bolsen & Druckman, 2015).

Reactance

It is tempting to think of reactance as a particular form of defensive reaction; and there is merit to that position. But, Brehm's (1966) reactance theory is also unique in being a developed theory that encompasses several defensive reactions (e.g., denial and derogation), but specifies distinct instigating factors. The theory has four major components (Brehm, 1966). *Freedom*s are beliefs about the ways in which one can behave, evaluate, or feel. Anything that makes it more difficult to exercise a freedom will be perceived as a *threat*. Social influence attempts are viewed as threats because they direct individuals to perform or not a specific behavior. *Reactance* is "the motivational state that is hypothesized to occur when a freedom is eliminated or threatened" (Brehm & Brehm, 1981, p. 37). Experienced as the combination of anger and critical cognitions (Dillard & Shen, 2005; Rains, 2013), reactance is the key mediator and central explanatory mechanism of the theory. The fourth component is *restoration*. When an individual experiences reactance, he or she is motivated to reestablish that freedom (Quick & Stephenson, 2007). Direct restoration of the freedom involves

doing the forbidden act. In addition, freedoms may be restored indirectly by increasing the liking for the threatened choice, derogating the source of the threat, denying the existence of the threat, or by exercising a different freedom to gain a feeling of control.

The last decade has seen a resurgence of interest in reactance, especially among communication researchers (Rosenberg & Siegel, 2017). A particularly noteworthy feature of that work is its emphasis on identifying communicative methods for mitigating resistance to persuasion. One review identified several approaches that demonstrated their effectiveness (Quick, Shen, & Dillard, 2013): Choice-enhancing postscripts are brief messages appended to the main appeal that emphasize the recipients' freedom to choose (e.g., "But, of course, the choice is yours"); empathy-inducing messages encourage recipients to empathize during message processing; the narrative (as opposed to argument) form tells a story; novel appeals present information that is subjectively new to the target audience; inoculation messages provide forewarning of the experience of reactance (Richards, Banas, & Magid, 2017); bandwagon cues represent the number of readers/viewers that have commented on a message or website (Li & Sundar, 2018). Future efforts in this line of work will surely identify more methods for mitigating reactance as well as seeking to understand how they operate alone and in combination.

Questions about Defensive Reactions

As noted, there are many answers to the question of what are defensive reactions. Typically, writers come to these answers either by data or by contemplative analysis. One recent data-driven effort can be found in McQueen, Vernon, and Swank (2013), who favor a seven-factor scheme that includes informational and behavioral opting out, blunting, self-exemption, denial of immediacy, counterarguing, and risk normalization. Using the contemplative method, Franssen, Smit, and Verlegh (2015) have produced what is surely the most systematic analysis available. They outline four super-strategies—avoidance, contesting, biased processing, and empowerment—each of which contains several lower level variants. Despite these efforts, there is extensive heterogeneity in the defensive reactions literature. Movement toward a unified theory will require researchers to take a stand on a series of underlying questions:

What are defensive reactions defending against? Papers in the cognitive tradition generally assume that individuals may experience discomfort—perhaps dissonance—when confronted with information that is incompatible with their beliefs. Accordingly, they take steps to neutralize that information. Affectively oriented perspectives, most notably theories of threat appeals (Hovland et al., 1953; So, 2013), contend that the function of defensive reactions is to down-regulate fear. In principle, defensive reactions could perform both functions. For instance, a smoker might deny the risk of cancer from tobacco use, which would eliminate dissonance and reduce fear. Current efforts, however, tend to assume one or the other motivation.

Are defensive reactions adaptive or maladaptive? Leventhal (1970) may have been the first writer in the threat appeals tradition to introduce the language of coping. Adaptive coping means agreeing to do as instructed by the researcher or health professional, whereas virtually everything else is deemed maladaptive. Here again, the contrast with the emotion regulation literature is instructive. Regulation strategies may be judged to be effective or ineffective with regard to the individual's goals. As emotions are generally, but not universally, functional, it seems safe to assume the same about emotional regulation strategies. If we can avoid the paternalism inherent in judgments of adaptiveness, it may be possible to move toward an improved scientific analysis of defensive reactions.

Are message consumers active or passive? Persuasion research often draws on a military metaphor in which would-be persuaders attack individuals who must defend their positions. Because persuaders are active and defenders are reactive, we have the phrase *defensive reactions*. Interestingly, the emotion regulation literature takes the opposite view: “Emotion regulation begins with the *activation of a goal* to modify the emotion-generative process” (Gross, 2014, p. 6). Whether message recipients consciously call up the tools of resistance or respond reflexively (or both) is a question that begs for an answer.

When do defensive reactions occur? Consistent with many theories of emotion, Gross’s (2014) model of emotion regulation posits a sequence in which a change in situation demands attention, which is followed by appraisal and, finally, by an emotion. Emotion regulation occurs along this same time line either by preventing one of the antecedents to emotion or by modulating the emotion itself. Strategies for emotion regulation correspond with categorically distinct points along the emotional response continuum. This framework for understanding affect management lends a valuable temporal dimension to our consideration of defensive reactions.

Is there a hierarchy of defensive reactions? Messages are processed at different levels of abstraction (Greenwald & Leavitt, 1984). *Preattentive processing* is the mainly subconscious evaluation of stimuli in terms of relevance, interest, and novelty. It may prompt *focal attention*, a process that involves channel selection and semantic analysis. *Comprehension* occurs when individuals construct propositional representations of the message, which may be followed by *elaboration*. Each of these stages is thought to provide input to the next, higher level of processing. If we accept the Greenwald–Leavitt model or something like it, then defensive reactions can occur at each level of abstraction (Blumberg, 2000; Brown & Richardson, 2012). Theorizing a hierarchy may be helpful to understanding defensive reactions. One clear implication of the hierarchy is that no single methodological approach can provide a complete picture of the focal concept.

Are defensive reactions only psychological? The concept of defensive reactions is closely associated with psychological models of message processing. By implication, defensive reactions occur within the confines of the skull. Could there be other means by which individuals manage their emotions and keep dissonance at bay? Yes. One is behavioral. Individuals regulate their feelings using various behaviors, including exercise and recreational chemicals (Heiy & Cheavens, 2014) and performing the forbidden behavior (Brehm, 1966). A second alternative is social (Zaki & Williams, 2013). When distressed, individuals seek out the advice and comfort of others, who may assist them via distraction, bolstering, or reappraisal (Burlinson & Goldsmith, 1998).

A Final Thought

It seems apparent now that defensive reactions are *not* some special class of mechanisms that exist solely for the purpose of inhibiting persuasion. In reality, they are general purpose tools that are used to preserve cognitive or emotional balance when individuals seek those ends. The task ahead is identification of the conditions that prompt their use to such a degree that some individuals—researchers or persons on the other side of a partisan issue—label them as defensive (i.e., irrational).

Summary and Conclusions

The study of persuasion has occupied the attention of scholars for as long as they have existed. The ancients provided some profound insights into the question of what makes a message persuasive. And, in the intervening centuries, communication scientists have built on those

insights. I hope that this chapter provides enough of an overview that readers will be moved to engage with more of this conceptually elegant literature.

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9

Narrative Effects

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Television, film, and fiction publishing are multi-billion dollar industries. Individuals spend a substantial proportion of their media time engaged with narratives. In this chapter, we will highlight primary theories of narrative influence, as well as the unique effects of narrative communications.

Although a variety of definitions of narrative have been proposed, narrative is most commonly defined as a representation of events or a series of events that has an identifiable beginning, middle, and end, during which characters may encounter and then resolve a crisis or crises (e.g., Bruner, 1986). Dahlstrom (2014) notes that narratives typically have the elements of character (the story is about persons, or person-like entities such as animals), temporality (events occurring over time), and causality (events are linked in a cause-and-effect sequence).

Models of Narrative Effects

A handful of theoretical models have emerged to describe and predict the mechanisms and effects of narrative persuasion.

Transportation-Imagery Model

The Transportation-Imagery Model (TIM; Green & Brock, 2002) suggests that the extent to which a person becomes immersed or transported into the narrative world, combined with vivid mental imagery produced by the narrative, can foster belief change. Transported readers are less likely to counter-argue with assertions made in the narrative (Green, 2004; Green & Brock, 2000; Green, Garst, & Brock, 2004b). Although the model was originally tested with written stories (text), the TIM applies more broadly to all instances of narrative persuasion (including audio-visual narratives; Green, 2006; Green et al., 2008).

Mental imagery plays a central role in the TIM, primarily because imagery helps create an experience of narrative events similar to real-life experiences. Vivid imagery facilitates simulating or imagining story events, and this simulation experience can be particularly influential in shaping attitudes (Green, 2006; Green & Brock, 2000; Mazzocco & Brock, 2006). However, despite the primacy of imagery in this early theorizing, relatively little research has directly examined the role of

imagery. There is evidence, however, that an individual's imagery ability increases presence and enjoyment of a narrative text, but not in a narrative film (Weibel, Wissmath, & Mast, 2011), and that training in generating mental images increases the level of empathy readers feel with a story character (Johnson, Cushman, Borden, & McCune, 2013).

Finally, the TIM proposes that the quality of the narrative, readers' dispositional attributes, paratextual and other attributes of the narrative, and the narrative medium all influence the likelihood for readers to be influenced by narratives (see Green & Brock, 2002 for the model's specific postulates).

Extended Elaboration Likelihood Model

Another model of narrative persuasion, the Extended Elaboration Likelihood Model (Extended ELM, or E-ELM; Slater & Rouner, 2002), similarly posits that the attitudinal and behavioral effects of narratives are a function of one's immersive narrative experience and identification with story characters. The E-ELM extends Petty and Cacioppo's work on how recipients process and respond to persuasive messages (Petty & Cacioppo, 1986). While the ELM provides a theoretical foundation for the E-ELM, the original and extended models differ in many ways. For example, the E-ELM removed the distinction between central and peripheral routes of message processing that was described in the ELM. In essence, the E-ELM replaces variables such as issue involvement (personal relevance) with a persuasive topic with narrative absorption and character identification (Slater & Rouner, 2002). The construct of "absorption" is comparable to that of "transportation" (Green & Brock, 2002), both referring generally to the phenomenon of intense mental and emotional experience in a narrative (Slater & Rouner, 2002). The E-ELM suggests that the degree of storyline appeal, quality of production, unobtrusiveness of the persuasive subtexts, and homophily (similarity between character and audience) will lead to absorption and identification, which will affect responses to the persuasive content. These responses will shape attitudes, beliefs, and behaviors.

Mental Simulation

Mar and Oatley (2008) propose a different theoretical explanation for narrative effects specific to fictional narratives. According to this perspective, fiction is the simulation of social interactions (Oatley, 2016) and provides information that is abstracted, compressed, and simplified compared to real-world experience. However, narratives can provide a deep and immersive experience that feels real both cognitively and emotionally through the process of simulation. Through this abstraction, fictional narratives model social interactions for readers and allow them to acquire knowledge about the social world and their place within it. Engaging in these simulated narrative experiences can help readers to develop theory of mind and foster more empathy and improved social inference. Several studies in this line of research have demonstrated this positive association between fiction reading and empathy (e.g., Mar & Oatley, 2008; Mar, Oatley, & Peterson, 2009).

Model of Narrative Comprehension and Engagement

Busselle and Bilandzic (2008) offer an additional theoretical framework that uses a mental models approach for understanding how audiences comprehend and engage with narratives. According to Busselle and Bilandzic's (2008) model of narrative comprehension and engagement, readers create meaning from narratives by crafting mental representations of the events, or situation models,

which store the events, locations, characters, and other aspects of the story (Zwaan, Langston, & Graesser, 1995). By performing a so-called “deictic shift,” readers or viewers position themselves in the mental model and assume the temporal, spatial, and personal perspective implied by the story, which, among other things, paves the way for character identification. If the process of constructing mental models goes smoothly, readers or viewers perceive flow with making sense of the story, in which case transportation into the story emerges in the experience (Busselle & Bilandzic, 2008).

Narrative Aesthetic Absorption

Kuijpers and colleagues (2017) suggest that there are two types of absorption: one driven by the content of the story, and another driven by the aesthetics of the narrative. This model highlights the fact that formal and stylistic features of narratives may create their own type of absorption—an aesthetic appreciation of the beauty of the work.

Social Cognitive Theory

Finally, social cognitive theory (SCT; Bandura, 1986) has also been used to explain the effects of narratives, particularly in the entertainment-education domain (see Singhal, Cody, Rogers, & Sabido, 2003). SCT suggests that people can learn through observing the behaviors of others (including narrative characters) and seeing the consequences of those behaviors. SCT posits that the impact of learned behavior in narrative contexts is modified by one’s level of involvement with the narrative and narrative characters. A more detailed discussion of SCT can be found in Chapter 7 of this handbook.

Immersive Narrative Experiences: Approaches and Measurement

The general ability for narratives to engage readers within a story world is a central tenet of most theories of narrative persuasion. This immersive experience can take several forms.

Transportation (Green & Brock, 2000)

First, narrative transportation is a state of narrative immersion that describes the sensations of being “lost in a book” (Gerrig, 1993; Green & Brock, 2000). Transportation is a convergent mental process in which all of one’s mental processes (i.e., attention, emotion, and imagery) are concentrated on the events occurring in the narrative (Green & Brock, 2000). As a result, transported readers may lose track of time and fail to notice events occurring in their immediate environment.

High quality narratives are most likely to evoke transportation, but there are also dispositional differences in individuals’ likelihood to become transported (“transportability”: Dal Cin, Zanna, & Fong, 2004; Mazzocco, Green, Sasota, & Jones, 2010; “narrative engageability”: Bilandzic, Sukalla, Schnell, Hastall, & Busselle, 2019). Situational factors can also affect transportation. For example, positive or negative expectations can influence how much an individual is transported by a particular narrative, as well as the overall enjoyment of that narrative (Shedlosky-Shoemaker, Costabile, DeLuca, & Arkin, 2011). The setting in which an individual receives the narrative can also matter; a distracting environment leads to lower transportation and less message impact than a quiet, controlled setting (Zwarun & Hall, 2012). (For a review of experimental manipulations of transportation and related concepts, see Tukachinsky, 2014.)

Transportation is measured using the Transportation Scale (TS, Green & Brock, 2000; TS short form, Appel, Gnambs, Richter, & Green, 2015). This measure captures the dimensions of the transportation experience as originally described by Gerrig (1993), including emotional involvement, cognitive attention, suspense, lack of awareness of surroundings, and mental imagery (Green & Brock, 2000). Although most studies of transportation and related states have employed self-report measures, researchers are also exploring the physiological and neurological correlates of immersion (for an overview, see Jacobs & Willems, 2018).

Narrative Engagement (Busselle & Bilandzic, 2009)

Research by Busselle and Bilandzic (2009) distinguishes multiple dimensions of the experience of *narrative engagement*. The dimensions of narrative engagement include understanding the narrative, having attentional focus on the story, feeling emotion for and with narrative characters, and having the sensation of “being there” in a narrative world. The scale used to assess these four dimensions is Busselle and Bilandzic’s (2009) narrative engagement scale, which is grounded in the notion that narrative engagement involves the constructing of mental models of narrative events. This scale is highly correlated with measures of transportation, but differs in that it distinguishes the specific dimensions of the narrative experience, which can be used as stand-alone subscales in research.

Related Processes

Scholarship on narratives has introduced a variety of different concepts of immersive narrative experiences (for an overview, see Bilandzic & Busselle, 2017a). The experiences conceptually closest to transportation include presence (see Cummings & Bailenson, 2016 for an overview) and flow (Csikszentmihalyi, 1990). Presence, also referred to as telepresence, involves the feeling of existing in a mediated world such as virtual reality. This experience can include elements consistent with narrative immersion, such as attending only to the mediated environment and thus failing to have awareness of one’s real-world surroundings. However, presence differs from other forms of immersion because it also involves embodiment, or a state of consciousness in which one perceives one’s body to physically exist within a mediated world (Cummings & Bailenson, 2016). What distinguishes presence experiences from other experiences of narrative immersion is that transportation and engagement describe experiences specific to the context of narratives, whereas presence refers to the feeling of being in a mediated world.

Flow occurs when one’s ability to complete a task meets the level of task difficulty, and the person becomes fully absorbed in that activity. The mental state experienced by those in flow resembles that specific to narratives (e.g., time passes more quickly and all mental processes are concentrated on the activity), but can emerge in a number of different (non-narrative) activities (Csikszentmihalyi, 1990).

Effects on Attitudes and Behaviors

An important focus of narrative research in recent years has been the effects of narratives on attitudes and behaviors (for a review, see de Graaf, Sanders, & Hoeken, 2016; see also Shen, Sheer, & Li, 2015; van Laer, de Ruyter, Visconti, & Wetzels, 2014). Narrative-based change involves both the alteration of existing beliefs or attitudes to those more consistent with a narrative, as well as

the adoption of new beliefs or attitudes advocated by the story (Banerjee & Greene, 2013; Green, 2006). Two main mechanisms of narrative persuasion are also present in previous theorizing in rhetorical persuasion: First, recipients' cognitive resources are taken up by the narrative, reducing reactance or distrust and leaving them less capable of resisting story claims (Dal Cin et al., 2004; Moyer-Gusé, 2008). Viewers or readers, when transported into a story, tend not to generate negative thoughts about the message (Green & Brock, 2000). In addition, when narratives are crafted for purposes of entertainment, audiences do not want to interrupt the enjoyment they are experiencing from the story, thereby also reducing counter-arguing (Green, Brock, & Kaufman, 2004a; Slater & Rouner, 2002). Apart from reducing mental capacity available for critical scrutiny, transportation may also direct capacity back into the narrative and enable more elaboration and inference, reinforcing narrative effects (Slater & Rouner, 2002).

These processes are not only driven by transportation. First, identification with narrative characters is also important; a plethora of past work has demonstrated that identifying with the characters in a narrative is one mechanism that leads to attitude change (e.g., de Graaf, Hoeken, Sanders, & Beentjes, 2012; Hoeken & Fikkers, 2014). Second, when viewers or readers experience emotional shifts in response to the unfolding story (that is, emotional flow), attitude change is assumed to be more likely (Nabi, 2015; Nabi & Green, 2015). Third, research on consumer narratives has found that attitudes towards advertisements depend on a reader's transportation during the program in which the advertising appears. Messages that did not interrupt the participants' immersive experience with the narrative were viewed more favorably than messages that disrupt the narrative experience (Wang & Calder, 2006; see also Dunlop, Wakefield, & Kashima, 2010; Kalch & Bilandzic, 2017).

Beyond attitude and belief change, the persuasive capacity of a narrative also extends to influencing behavioral intention and observed behavior (e.g., Dal Cin, Gibson, Zanna, Shumate, & Fong, 2007; Dunlop et al., 2010). Again, identification with the character in the narrative is important; readers who identify with a character demonstrate behaviors similar to that character, whereas readers who feel dissimilar to a character may demonstrate contrasting behaviors (Appel, 2011). Engagement with a narrative is also important to behavior change. In a study by H. S. Kim, Bigman, Leader, Lerman, and Cappella (2012), smokers who read a news article that featured an exemplification of successful smoking cessation (e.g., reading a woman's testimony about quitting smoking) experienced greater narrative engagement compared to those who read an article without an exemplar, and as a result were more likely to report greater intention to quit smoking (see also Green & Clark, 2013; Leung, Parker, & Courtis, 2015). Narratives can also lead to greater intention to engage in preventive health behaviors, including various types of cancer screenings and using sun protection (Myrick & Oliver, 2015; for further review, see Hinyard & Kreuter, 2007; Kreuter et al., 2007).

Most of the research on narrative-based attitude, belief, and behavior change has focused on the immediate effects of narrative persuasion. More recently, research has shifted to explore some of the more long-term effects of persuasive narratives (such as attitude change maintained over time, e.g., Frank, Murphy, Chatterjee, Moran, & Baezconde-Garbanati, 2015; Hormes, Rozin, Green, & Fincher, 2013; and sleeper effects, e.g., Appel & Richter, 2007, 2010). These studies have demonstrated the robust ability of narratives to impact attitudes, beliefs, and behaviors, even in the long term. Thus, narratives seem to have both short and long-term effects on attitudes and behaviors.

Narratives have also been found to be successful in their persuasive abilities in a variety of formats, including print (Green et al., 2008; Mazzocco et al., 2010), radio (Costabile & Terman,

2013; Zheng, 2014), and film (Igartua & Barrios, 2012; Zwarun & Hall, 2012). Notably, specific characteristics about these media sources can impact their persuasive potential. For example, films with music added to them have been found to be more persuasive than films that omitted a background score (Costabile & Terman, 2013).

Whereas some research suggests that individuals can become equally transported or immersed into factual and fictional narratives (e.g. Green & Brock, 2000), other work has found fictional narratives to be more emotionally involving than factual narratives (e.g., Appel & Mal-*e*čkar, 2012; Pouliot & Cowen, 2007) and involve more processes related to emotion regulation and imagining future possibilities than reading stories framed as fact (Altmann, Bohrn, Lubrich, Menninghaus, & Jacobs, 2014). Indeed, advocates for fictional literature specify that fiction has unique transportative abilities that can lead to increased empathy and social knowledge (Mar & Oatley, 2008; see also Green et al., 2004). Thus, it is likely the case that fictional narratives have characteristics that promote attitude and behavior change in consumers.

However, framing a narrative as either fact or fiction does not seem to have an impact on the narrative's persuasive capacity. Several studies have shown that stories framed as fiction are just as persuasive as stories framed as fact (Green & Brock, 2000; Green, Garst, Brock, & Chung, 2006). Framing a story as fact or fiction does not seem to influence how immersed a reader will be in the narrative, nor does it impact how much of the story an individual will recall (Hartung, Withers, Hagoort, & Willems, 2017; but see Zwaan, 1994). In other words, while researchers have posited that narratives are often crafted with different characteristics in order to fit a factual or fictional lens, research has also demonstrated that labeling an identical narrative as either "fact" or "fiction" does not seem to differently affect attitudes or behaviors. Thus, those seeking to create persuasive narratives should keep in mind the characteristics that impact the quality of their narrative (e.g., transportative capacity, emotional involvement, perceived realism), rather than focusing on the framing of the narrative as factual or fictional.

Although a significant body of work has demonstrated the strengths of narratives, there is mixed evidence for whether narratives or non-narratives are best for affecting attitudes and behaviors. Some work has shown that narratives are more effective than non-narratives in increasing beneficial health attitudes and behaviors (Lemal & Van Den Bulck, 2010; Murphy, Frank, Chatterjee, & Baezconde-Garbanati, 2013). Furthermore, narratives may be more effective at impacting the attitudes of individuals who are resistant to change. Narratives, as compared to non-narratives, are viewed as having less persuasive intention, which may help with decreasing resistance to persuasive messages and therefore increasing the likelihood of attitude change (Moyer-Gusé & Nabi, 2010).

However, other work has evidenced that non-narratives may be a more effective tool for attitude and behavior change than narratives. Non-narrative messages about organ donation have been shown to be viewed as more credible and appropriate than narrative messages and therefore lead to greater attitude change among consumers (Kopfmann, Smith, Ah Yun, & Hodges, 1998). Non-narrative messages have also been demonstrated to be more effective than narrative messages in reducing use of tanning beds (Greene & Brinn, 2003).

Work by J. Kim and Nan (2016) found mixed evidence for the effectiveness of narrative and non-narrative messages; in cases of present-oriented messages, narrative messages led to greater health behavior intentions and attitude change. However, attitude and behavior change did not differ between narrative and non-narrative conditions for future-oriented messages. Still other work has found no difference between narrative versus non-narrative messages in attitude

formation (Steinhardt & Shapiro, 2015). This inconsistent pattern of results may be due to differential mechanisms that have yet to be understood.

Narrative-Specific Effects

Green and Brock (2000) identify two phenomena that may additionally facilitate effects of narratives: First, narrative experience resembles direct personal experience, as the audience perceives the events as if they were part of the action themselves. Second, narratives create strong emotions towards the characters. Both of these phenomena hinge on story characteristics, for example, the presence of characters for whom audiences care, and the vivid representation of events that have consequences for characters. These phenomena may represent a foundation for effects that are specific for narratives and go beyond traditional concepts like attitudes and beliefs. We distinguish four types of such “narrative-specific effects” and will detail them below.

Imagining and Understanding the Human Mind

Narratives are fundamentally linked with an understanding of the human mind and social experience. Narratives allow for the simulation of social experience (Mar & Oatley, 2008), which relies on social abilities (such as empathy) and may also help expand social skills.

Identification and Experience-Taking

Individuals may interact with story characters in a variety of ways; they may like a protagonist, experience wishful identification (wanting to be like the character; e.g., Hoffner, 1996), or engage in parasocial relationships (a one-sided feeling of friendship with a character; Giles, 2002). Identification occurs when readers experience the narrative through the perspective of the story character (Busselle & Bilandzic, 2008; Cohen, 2001) and adopt the goals and motivations of the character. Experience-taking (Kaufman & Libby, 2012) is a similar concept. Experience-taking occurs when readers imagine the events of a narrative from the point of view of a character and simulate that character’s subjective experience (e.g., the character’s thoughts, emotions, behaviors, goals, and traits).

Narratives and Theory of Mind/Social Skills

A growing body of research has also explored the question of whether reading narratives (specifically, fiction or literature) can improve individuals’ social skills, particularly their theory of mind or understanding of others’ thoughts and feelings. Research on the relationship between reading fiction and social cognition suggests that lifetime exposure to fiction is associated with (small) increases in social-cognitive skills (see Mumper & Gerrig, 2017, for a meta-analysis).

Social and Moral Judgment

It is in the very nature of stories to present conflicts that, in the course of the unfolding events, are resolved. Often, these conflicts are moral issues and questions of right and wrong behavior; negotiating and finding a resolution is an important part of the plot. Accordingly, much of cognitive and emotional responding to stories consists of moral evaluation, be it quick and

automatic, or slow and deliberative (Lewis, Tamborini, & Weber, 2014; Raney, 2004). Stories not only enable and demand moral activity on the part of the audience, they also serve as a safe environment to try out moral decisions and strengthen moral positions and values in a “moral laboratory” (Hakemulder, 2000). Narratives are especially effective in supporting moral thinking, as transportation creates immediacy with the characters and the plot, and enables perspective taking. Consequently, narratives uniquely expand one’s possibilities to experience moral situations and fully grasp the implications of moral dilemmas and actions as if readers or viewers were having the moral issue in their own lives.

In order to process narratives, viewers or readers need to make use of their own moral faculty—their intuitive and rational knowledge on morality, their ability to recognize moral issues, and their ability for moral reflection and reasoning. This process involves the activation of morally relevant mental structures, and, at the same time, may change these structures. One approach that deals with these issues is the model of intuitive morality and exemplars (MIME, Tamborini, 2011). It focuses on moral modules (or domains) that contain a core set of values; they are used to make fast and automatic evaluations of events and persons in one’s (media) environment (Tamborini, 2011). The five domains—care, fairness, loyalty, authority, purity—are based on evolutionary development (and advantage) and are culturally universal. Studies demonstrate that these moral domains emphasized in a film may increase the accessibility of the domains in viewers after one exposure (Tamborini, Prabhu, Lewis, Grizzard, & Eden, 2018) and increase the relevance and agreement to moral domains after repeated exposures to a video series (Eden et al., 2014).

Other approaches emphasize that moral knowledge is organized in schemata, and that these schemata are both used for processing stories and are created or modified by them; the presence and activation of moral schemata allow persons to recognize moral issues in social situations (moral sensitivity, Jordan, 2007). Glover, Garmon, and Hull (2011) provide evidence that viewers who have more sophisticated moral schemas also recognize more moral issues in a fictional television series. Bilandzic and Schnell (2018) found positive relationships between the propensity of being engaged in a narrative (trait narrative engageability) and moral sensitivity.

Going beyond mere sensitivity, several studies have looked at the ability of narratives to evoke moral reflection. For example, Krijnen and Verboord (2016) found that moral reflection about 15 different moral themes typically present in television content was increased by both viewing information and fiction. However, the content of moral reflection was different: While viewing information stimulated reflecting on the ethics of justice, fiction viewing favored reflection on the ethics of care. Transported viewers also engaged in more complex moral rumination (the individual involvement with a moral issue presented in narrative; Eden, Daalmans, Van Ommen, & Weljers, 2017). Similarly, Schnell and Bilandzic (2017) found that narrative engageability as a trait was positively related to the postconventional reasoning schema (morality is judged by an open and complex deliberation of moral issues) and negatively related to the maintaining norms schema (morality is judged according to established rules and regulations).

Transcending One’s Horizons

Narratives may affect the way individuals view themselves, at least temporarily (Sestir & Green, 2010; Slater, Johnson, Cohen, Comello, & Ewoldsen, 2014). Specifically, individuals may take on the characteristics of a media character. This process may happen at a relatively unconscious level, when the traits of a character become activated in a viewer’s mind, or it may happen at

a conscious level, when individuals choose to model themselves after a media hero. Identification with a character can modify this effect; readers who identify with a character demonstrate behaviors similar to that character, while readers who feel dissimilar to a character demonstrate contrasting behaviors (Appel, 2011).

A recent framework that has explored this perspective is the TEBOTS (Temporarily Expanding the Boundaries of the Self; Slater et al., 2014) model. This model suggests that narratives help individuals address two challenges: the task of self-regulation, and the limitations of one's own personal identity. Narratives also allow individuals to explore other identities—to vicariously experience other lifestyles, parts of the world, careers, or relationships.

Meaningful Media Experiences

Media entertainment can serve to deepen one's understanding of the meaning of life and its true values (eudaimonic motivations, Oliver, 2008; Oliver & Raney, 2011, and Chapter 17 of this volume). Narratives have outstanding potential to convey appreciation or meaningful experiences, as they show characters going through and mastering conflicts as well as blows of fate. Stories enable audience members to have a realm of intense experiences that otherwise take a whole life to achieve—a phenomenon expressed in the concept of “mediated wisdom of experience” (Slater, Oliver, Appel, Tchernev, & Silver, 2018).

Recently, Oliver et al. (2018) distinguished between two types of meaningful experiences. One type is an inward-oriented experience, where viewers perceive complex affective responses and mixed affect, engage in higher levels of cognitive processing, and ultimately fulfill intrinsic needs with the media consumption. The other type is an outward-focused experience that goes beyond the individual. It makes viewers aware of the beauty and tragedy of the human condition and connects him or her with the world; in this sense, such media experience is “self-transcendent” (Oliver et al., 2018).

Narratives can also generate meaningful experiences by resonating with the readers' own life and by evoking autobiographical memories (“reminders,” e.g., Larsen & Seilman, 1988; McDonald, Sarge, Lin, Collier, & Potocki, 2015). Bilandzic (2006) argues that personal experience with situations and events presented in a story may induce an intense mode of processing, which may be even strengthened by transportation (for a similar concept see Hamby, Brinberg, & Daniloski, 2017). Dill-Shackleford, Vinney, and Hopper-Losenicky (2016) also suggest that personal and narrative processing are intertwined: They propose a concept of “dual empathy” where readers or viewers simultaneously feel empathy for the narrative's character but also for themselves because the narrative triggers autobiographical memories and thoughts.

Conclusion/Discussion

Narratives can be powerful in bringing about changes in the audience. They serve a similar function as rhetoric or argument-focused texts in that they can affect beliefs, attitudes, and behaviors. In addition, however, narratives have a unique potential to offer insight into the functioning of social situations and the human mind and into social expectations of right and wrong behavior. They can stimulate meaningful experiences, connecting a reader or viewer to something greater than themselves. Although narrative persuasion has focused on positive and prosocial effects, the same power is at work for negative, antisocial effects. An example that does not belong to the field of narrative effects but nonetheless deals with effects of stories is

cultivation (see Chapter 5 of this volume). This research field demonstrates the social biases and false expectations that audiences gradually acquire through repeated and heavy television viewing (Morgan & Shanahan, 2010).

The mechanisms of narrative effects are an important issue. Immersive narrative experience is the mechanism that has received the most scholarly attention. It is an indicator of intensive processing, which, by occupying cognitive resources, reduces counterarguing. Although transportation and narrative engagement are states, individual propensities exist that create an individual style of situational engagement. Accordingly, transportation has also been conceptualized as a unidimensional trait, transportability (Dal Cin et al., 2004), or as a multidimensional trait, narrative engageability (Bilandzic et al., 2019). In some cases, using trait rather than state engagement is necessary. For example, state engagement with long-term, cumulative exposures to narratives cannot easily be measured, and thus trait engagement can be used as a proxy for repeated engaged exposures (Bilandzic & Busselle, 2008). Another useful application of trait engagement concerns experiments with multiple exposures for which separate measures of state engagement would be a burden for respondents.

A different focal point of narrative effects research is the question of how to compare experiences with narrative and non-narrative texts, as well as narrative texts that emphasize different style elements (intense emotions, dominant visuals, quick succession of events). For example, a narrative may consist of a fast-paced plot, in which case respondents will perceive scale items about emoting with characters as irrelevant. Also, minimal narratives that consist of a few sentences will make some dimensions of the usual scales seem inappropriate (e.g., narrative presence). Similarly, using the transportation scale on non-narrative texts may lead to problematic reactions in the respondents. In all of these cases, the measures may become invalid for one side of the comparison. Thus, researchers have proposed several alternatives that can be used more flexibly. For example, Lewis and Cohen's (2016) "expository message engagement" is a measure paralleling transportation for non-narrative texts, expressing understanding and attentional focus on the message. Comparisons are enabled by the universal concept and measure of flow in reading (Bilandzic & Busselle, 2017b), which can be used for both narrative and non-narrative texts, as well as texts with different narrative forms. Bilandzic and Busselle (2017b) presented evidence that a measure of flow for reading highly correlates with narrative engagement; also, flow is related in a similar way to enjoyment and appreciation as narrative engagement.

Another upcoming domain is the development afforded by newer communication technologies, that is, the consideration of user-generated and interactive narratives. User-generated narratives abound in social media applications, giving civil society members, students, minority groups, patients, and extremists the opportunity to tell their story. These stories differ greatly from professionally produced narratives in that they are radically personal, come from actual persons (rather than authors speaking through fictional characters), and may be extremely minimal and short in the sense that they present only one event or a short glimpse of a person's inner world. They also may be stretched out over several posts and interwoven with comments from others. While effects of user-generated stories have been investigated, a systematic comparison of each story type's specific potential is yet missing.

Similarly, interactive narratives present a special case in need of scholarly attention. They allow individuals to provide input to the story, and through their choices, determine the direction of the plot and outcomes of the narrative (Green & Jenkins, 2014). Although interactive narratives have been used for decades (e.g., the popular "choose your own adventure" series; participatory theater), technological advances are making it increasingly easy to create and

experience interactive stories. Research on interactive narrative is relatively new; however, there is an increasing body of work on serious games, some of which include narrative elements.

While stories will continue to evolve with technological affordances as well as audience practices, they will remain humankind's favored means of expression, as they present what interests us most—other humans, their fates, and feelings.

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10

Media Choice and Selective Exposure

Silvia Knobloch-Westerwick, Axel Westerwick, and Daniel J. Sude

In an era of virtually inexhaustible choices of media channels and messages, the question of what motivates individuals to attend to a particular outlet or type of content becomes especially pressing. At least in developed countries, people are often inundated by a multitude of sources around the clock. As several chapters in this volume report, a plethora of research has established that media exposure shapes recipients' views of the world, others, and themselves, with both short and long-term effects. Alongside emotional and attitudinal impacts, media exposure affects behaviors. Yet a pivotal threshold, *before* media exposure can impact recipients, is selection. With ample messages available, most mediated communication is a matter of choice. Typically, individuals choose what messages they attend to and thus engage in selective exposure. This chapter will clarify what drives such selective exposure.

First, we will review technological changes that shape media choice environments and then differentiate layers involved in media choice. Terminology connected to selective exposure will be established next. The research review will differentiate three traditions before focusing on specific concepts and evidence. Finally, we offer some concluding remarks and future research suggestions.

Technology Shaping Media Choice Environments

An unprecedented increase of media channels occurred with the introduction of cable and satellite television. Zapping between TV channels became a focus of research in the 1980s (e.g., Becker & Schönbach, 1989). Abundant channels and remote controls not only allowed people to avoid commercials but also to choose from a much greater variety of content. Moreover, recording media content facilitated time-shifting in consumption of programming, as well as skipping segments.

The internet era then led to a skyrocketing increase of available media content. Easy online content generation and dissemination now make an enormous variety of sources accessible, while search engines and filtering technologies (e.g., newsfeeds) help to focus users' attention. Sophisticated algorithms provide content suggestions with the presumably best fit to the entered search terms; they influence consumers' exposure to online content significantly but may present an incomplete, biased picture of a given topic. Additionally, modern websites guide

consumers' selections by using cookies to store browsing history and user preferences for content customization and personalization (Kang & Sundar, 2016). With the appearance of social media, user generated content increased dramatically, starting with blogs and wikis, followed by Myspace, Facebook, YouTube, Twitter, Instagram, and the like. Through the mix of user-generated content and messages from media organizations, the internet today provides fewer orientation points for the user regarding who is actually responsible for content and how content may have been altered. Understanding how users choose mediated content is more pressing than ever in light of these technological changes.

To illustrate how accessing different media leads to abundant multi-layered choices, it is helpful to specify how content selection happens on different layers. On the top layer, consumers choose from channels like TV, radio, internet, magazines, or newspapers. They can even use several at the same time, by just shifting their attention. On the next layer, users exert choices within a medium, for example, by surfing different websites, switching TV or radio channels, or browsing different newspapers. On the third level, they can select from different offerings on the same website, pick out particular TV shows, or read just one specific newspaper article or a specific newspaper section. On the lowest level, users may select within a particular article or show, for instance by reading select paragraphs of some of the articles in a newspaper or watching select scenes of a TV show.

A key technological development that significantly changes media content use and selection is that internet technologies integrate almost all of the content that the other outlets traditionally provided through separate media. Through digitization of TV and radio—as well as online versions of newspapers, books, journals, videos, and music—most content is increasingly disseminated through the internet (Lugmayr & Dal Zotto, 2016). Thus, content selection and consumption are increasingly influenced by online display features like consumer ratings, likes, reviews, and tailored ads, intertwined with the content, as well as big-data algorithms for customization and personalization.

Terminology of Selective Exposure and Media Choice

As numerous terms have been used regarding media choice phenomena, we first want to clarify some terminology. Historically, the term *selective exposure* was first used by Lazarsfeld, Berelson, and Gaudet (1948) to describe that, before an election, media users exhibit a preference for messages and outlets that convey a stance in line with their own political views. Yet its contemporary use is much broader: Selective exposure relates to individuals' selections of mediated content and can be conceptualized on an aggregate or an individual level; it denotes “any systematic bias in audience composition for a given medium or message, as well as any systematic bias in selected messages that diverges from the composition of accessible messages” (Knobloch-Westerwick, 2015a, p. 3).

For example, when Kris spends 60 minutes on TV while having access to ten channels, she is unlikely to spread this time equally across channels and may spend 50 minutes with one of them. This example illustrates a bias in selected messages: Kris may spend the hour mostly with a news or a comedy channel. Users almost always exhibit systematic bias in selecting media messages. Such individual selective exposure decisions result in systematic biases in audience composition on the aggregate level; for instance, men may be more likely than women to tune into sports channels, which is exhibited in a systematic bias in audience composition when sports channels viewers are predominantly male. Why such tendencies exist is at the heart of selective exposure research.

There are numerous ways and units of expressing selective exposure patterns—for instance, time portions, choice frequencies, or choice proportions—and the most suitable way of capturing the phenomenon depends on the theory and hypotheses under consideration. Investigations may look at specific *choices* of mediated messages observed in a given situation, as opposed to generalized *preferences* for types of messages. An example of a media choice would be that Morgan chose to watch the movie *Annie* yesterday, whereas a preference is a pattern of several choices wherein Morgan usually prefers to watch musical movies when encountering them as an option. Yet a preference is not equivalent to a *habit*: Morgan watches the news every day, such that these daily choices accumulate to a habit. But her preference for musical movies might only play out when she sits down a few times a year to watch a movie through an on-demand service.

Related to the notions of choice versus preference, an investigation may examine what *situational* circumstances render a particular media choice more likely or, on the other hand, what *dispositional* factors (i.e., traits) foster particular media exposure choices. Either way, any investigation of selective media exposure will rely on some *content* characterization of media channels or messages (e.g., choosing sitcom vs. drama, or a violent vs. a non-violent video game, or classical vs. popular music). It is important to note that many studies of actual selective media exposure are simultaneously interested in situations, dispositions, and content; for instance, exploring if people who are generally more aggressive (*disposition*) are more likely to choose violent videos (*content*) after being provoked (*situation*), or whether men are more likely than women (*disposition* per gender) to choose negative online news (*content*) when they think they will get to retaliate against a provoker (*situation*) (Knobloch-Westerwick & Alter, 2006; O’Neal & Taylor, 1989).

All these elaborations serve to answer the question we posed initially: What drives selective exposure? In conceptual terms, scholars seek to understand motivations underlying media choices. The term *motivation* denotes an internal process within an individual that causes goal-directed behaviors, such as selecting a media message as a behavior to accomplish a certain goal. Related terms are *needs* that bring media use about or *gratifications* that individuals seek to derive from media use (Palmgreen & Rayburn, 1982); in fact, the terminology is closely intertwined with different theoretical perspectives and methodological traditions, as the next section will clarify.

Research Traditions Regarding Selective Media Exposure

Uses and Gratifications (U&G) Approach

Herzog (1944) conducted the first study on what drives media users to attend to mediated messages. It took decades, however, until an elaborate research paradigm emerged with the uses and gratifications (U&G) approach. For instance, Katz and Foulkes (1962, p. 377) noted “there is a great need to know what the people do with the media,” taking a contrasting view to the then-predominant media effects research, and highlighted selective exposure as a pivotal phenomenon because “viewers, listeners and readers ultimately determine the content of the media by their choices of what they will read, view, or hear.” In the 1970s and 1980s, the U&G approach flourished. Scholars generally agreed on the importance of disentangling the so-called *needs* that the audience members aimed to fulfill with media use, and what *gratifications* they sought through media exposure. These terms are closely connected with research characterized

by the following: Survey respondents rated statements meant to capture why they attended to particular messages, programs, or channels. For example, Rubin (1983) asked participants to indicate the reasons they watched television with statements such as “Because it relaxes me” and “Because it helps me learn things about myself and others” in a survey, based on a five-point scale ranging from “not at all” to “exactly.” As typical for the U&G approach, Rubin (1983) then extracted viewing motives such as *habit*, *pass time*, and *escape* among others via factor analysis.

This research approach connects with a key proposition of the U&G approach: Media users are thought to be aware of what motivates their use (Blumler & Katz, 1974), which justifies self-report survey questions. Undoubtedly, the U&G approach inspired a large body of research with hundreds of studies (Sundar & Limperos, 2013). However, certain criticisms may explain why its influence diminished: The self-report measures used to capture media use motivations rely on a level of introspection that has often been questioned (e.g., Zillmann, 1985). Take, for example, a teenager who chooses to watch a war tragedy that makes him cry. When presented with prompts such as “to pass time” or to “learn new information,” the teen might indicate a high level of agreement with these suggested gratifications. But possibly, he picked the movie—consciously or not—to see soldiers in deplorable circumstances, hoping to feel better about his own minor strains. Also, U&G studies relied on cross-sectional, correlational designs that cannot establish causality. They usually did not include media exposure measures and merely used self-reports on motivations, disregarding actual behavior. These methodological aspects distinguish this tradition from the approaches explained next.

Dynamic-Transactional Models

In contrast to the U&G tradition, approaches under the umbrella of dynamic-transactional models do not rely on self-reported media use *motivations* but capture media *exposure* in some fashion to infer motivations and use panel survey designs. A dynamic-transactional view was first introduced by Früh and Schönbach (1982) who drew on media exposure measures to represent use motivations in media effects analyses. In their DTA (dynamic-transactional approach), inter-transactions denote imagined or actual interactions between communicator and recipient, which can influence both parties. Indeed, in the current era where users generate much of the content available online, the inter-transactions may be more important than in the 1980s when the model was developed, because user-generated content necessitates the conceptualization of these specific transactions even more so than the traditional mass media context. Furthermore, intra-transactions pertain to the interplay of psychological characteristics of users (i.e., activation level, affect, attention, interest, knowledge), which also *change* as a result of receiving media messages.

The DTA differs from broader media effects models, as well as from the uses and gratifications view, in that neither media nor users’ motives are considered the key cause of effects. Whereas traditional media effects models postulated that media exposure causes effects (e.g., McQuail, 1994) and the uses and gratifications approach (e.g., Blumler & Katz, 1974) emphasized that users’ motivations bring about media effects, the DTA married these two positions and suggested that both media and users’ characteristics and motives instigate media effects in a dynamic, fluctuating interchange. Yet the DTA did not detail more specific motivations for selective exposure.

Recent models of selective media use and subsequent effects reiterate central propositions of the DTA. Slater’s (2007) reinforcing spirals model (RSM) also emphasizes the dynamic nature

of processes in which attitudes are created and maintained through media use. The term *attitudes* is used in a broad sense and includes durable perceptions of one's own lifestyle, social identity, religion, but also more transient attitudes about policies or specific behaviors. "The RSM views selective exposure to attitude-consistent content and media effects as two components of a larger dynamic process by which such social identities, attitudes, and behaviors are maintained," wrote Slater (2015, p. 371), noting further that "the process of media selection and effects of exposure to selected media is dynamic and ongoing" (p. 372).

The RSM originated in panel survey studies with adolescents and thus highlights the role of selective media use for socialization of (identity-relevant) attitudes and later maintenance thereof. Although data reviewed by Slater (2015) suggest connections in line with the RSM's view of a dynamic interplay of media choices and effects, the predicted two-way effects over time did not always emerge, given that there is a certain stability in attitudes that make the demonstration of influences challenging. Per its name, the RSM largely postulates the *reinforcement* of attitudes through selective media use, once attitudes have formed in the socialization process. In this regard, the model aligns with classic views that media are selectively attended such that existing attitudes are generally reinforced (Klapper, 1960). The first presentation of the model implied downward spiraling reinforcement of negative effects (i.e., teens with aggressive tendencies seek out violent video games and become increasingly aggressive over time as a result). In a later iteration, Slater (2015) highlighted that the suggested processes usually work toward a homeostasis.

Another recent model that highlights dynamic, two-way influences between selective media use and effects over time is Valkenburg and Peter's (2013) differential susceptibility to media effects model (DSMM). It postulates that media effects are contingent on dispositional, developmental, and social conditions. The authors suggested that cognition, affect, and excitation mediate media effects, similar to steps described in the DTA by Früh and Schönbach (1982). Overall, strong parallels exist between DSMM and DTA, as Valkenburg and Peter (2013) write, "the differential-susceptibility variables have two roles; they act as predictors of media use and as moderators of the effect of media use on media response states" (p. 231), and "media effects are transactional; they not only influence media use, but also the media response states, and differential-susceptibility variables" (p. 235).

A review of these models suggests a consensus that numerous recipient characteristics and contexts—cognitive, physiological, dispositional, developmental, and social aspects—influence what media content is selected. Moreover, the outlined models in unison imply that media exposure subsequently influences these characteristics, which brings about dynamic transactions of media selection and effects over time. The DTA, RSM, and DSMM are all characterized by a rather generalized take on media exposure patterns and rely on panel designs and self-reports for supporting evidence, from which user motivations were inferred. In contrast, the next perspective has a much more situation-specific approach that uses observational measures and (quasi-)experimental designs.

Selective Exposure Paradigm

Whereas the research traditions outlined above remained relatively broad, either with inventories of possible media use motivations (for U&G) or generic predictions of reinforcement motivations or vulnerability to media effects (for dynamic-transactional models), the research perspective described in the present section has yielded more specific postulations. Studies rooted in the selective exposure paradigm built on psychological concepts and methods to

conceptualize this problem. Zillmann and Bryant (1985) were front-runners in this development, both with their own studies (e.g., Bryant & Zillmann, 1984) and in an edited volume on selective exposure from 1985. Zillmann's mood management theory (1988) was rooted in psychological work on cognitive dissonance (see below) and arousal regulation, but became the first influential account of how individuals select media messages that provided specific, testable hypotheses and that was situated in communication science. Additional theorizing to explain and predict how media users choose messages have since emerged, whereas the advent of computerized research methods and online media led selective exposure research to increasingly use software to unobtrusively log specific media users' choice behaviors and to enable sophisticated (quasi-)experimental procedures (review by Knobloch-Westerwick, 2015a).

Although survey methods are still commonly used (e.g., Skovsgaard, Shehata, & Strömbäck, 2016) and provide helpful insights, methodological concerns regarding self-reports led scientists to pursue a different paradigm. In this vein, numerous researchers used observational measures of media exposure (e.g., Kim, 2009; see review by Knobloch-Westerwick, 2015a), which is characteristic of the selective exposure paradigm. This advancement is important in light of ample evidence that individuals' recollection of self-reported media use is scant and questionable (e.g., Jerit et al., 2016; Prior, 2009). While scholars continue to debate how to best capture media use in surveys (de Vreese & Neijens, 2016), validation studies find that self-report measures of selective exposure do not correlate with observational data, or do so only weakly (Tsfati, 2016). Sometimes media use diaries, momentary assessments, or web browsing trackers serve to capture media use (Scherer, Bickham, Shrier, & Rich, 2015). But a particularly fruitful line of research has relied on tracking specific media exposure instances in relatively controlled contexts that feature messages that represent content categories of theoretical relevance. For instance, studies by Kim (2009), Iyengar and Hahn (2009), Graf and Aday (2008), Jang (2014) and Knobloch-Westerwick (2007) all tracked what messages media users selectively attended to from arrays of messages that took pro and con stances on political issues. This set only illustrates the numerous studies that have used behavioral media exposure measures, which all relied on computerized methods. The basic approach of providing research participants with an array of messages to then record their selections goes back to much earlier work that allowed participants to pick out printed messages (e.g., Biswas, Riffe, & Zillmann, 1994; Freedman, 1965) or tracked TV remote control use (Bryant & Zillmann, 1984). The theoretical accounts for what drives selective exposure compiled in the next section were primarily derived from this approach.

Theoretical Accounts for Selective Media Exposure

Interests and Issue Publics

Obviously, individuals' interests foster selective exposure to related messages (Bolsen & Leeper, 2013; Kim, 2009; Skovsgaard et al., 2016). The term *issue publics* is often used to describe the phenomenon that sections of a larger audience hold interest in an issue and thus more often choose related information and become more knowledgeable (e.g., Iyengar, 1990). However, the notion of interest in itself does not clarify what factors instigate a motivation to seek out information on a particular issue. Three aspects were suggested to explain from where interest stems (Knobloch-Westerwick, 2014). First, self-interest can attract one to a topic. Naturally, students are more interested in higher education issues, given that they may be affected themselves. Second, affiliation with particular groups—even without being a member of that

group—can induce interest. Third, values can instigate particular interests; for instance, a retiree may not be remotely affected by abortion laws but still follow the topic due to religious beliefs.

Cognitive Dissonance Theory

The phenomenon of political attitudes and partisanship shaping selective exposure to politically aligned messages was first discussed by Lazarsfeld and colleagues (1948), which inspired Festinger's (1957) theory of cognitive dissonance. Accordingly, individuals experience tension and discomfort if they encounter information that challenges their preexisting views or behaviors. As a result, individuals are thought to avoid such messages—a phenomenon commonly labeled *confirmation bias*. In the past 15 years, empirical research has frequently corroborated this predicted selection pattern that information aligned with preexisting views or behaviors is preferred over challenging information (Knobloch-Westerwick, 2015a). However, investigations in the past century yielded inconsistent findings (Donsbach, 2009). Even though Festinger's propositions were widely thought to be plausible and restated in many textbooks, they were not always supported in early research. But contemporary computerized methods of unobtrusively observing media choices have yielded coherent support for Festinger's predictions (Knobloch-Westerwick, 2015a). In addition to more precise measurement, it is also possible that the context of online media, in which many of the recent studies were conducted, is conducive to a stronger confirmation bias than traditional media contexts. Politically motivated selective exposure continues to inspire a flourishing line of research.

Informational Utility (IU)

Aside from just preserving existing beliefs by preferring consistent messages, a motivation to select information that helps to adapt to the environment has long been suggested. For instance, an influential review by Sears and Freedman (1967) questioned whether dissonance avoidance shapes information choices and proposed that informational utility (IU) may override this avoidance. The concept of IU was further elaborated by Atkin (1973), but without empirical evidence. A more detailed discussion of what IU means, along with empirical evidence in cross-cultural investigations, was provided by Knobloch-Westerwick and colleagues (summarized by Knobloch-Westerwick, 2008; more recently, Johnson & Knobloch-Westerwick, 2017). Per this model, the extent to which a message is perceived to have IU depends on four dimensions (explained below), which are thought to contribute to this perception cumulatively. Importantly, greater perceived IU is thought to predict greater selective exposure; for instance, related items should be more likely to be chosen for consumption or attended to longer. Naturally, these message characteristics can shape selective exposure best if they are signaled prominently upfront (i.e., in the headline of a message).

First, the greater the *magnitude* of consequences described in the message, the greater the perceived IU. For example, news about a comprehensive tax reform should be perceived as more useful than news about small adjustments in tax law. Second, the *likelihood* of being affected by the reported event influences the perceived IU, with greater likelihood linked to greater IU. For the tax news example, individuals below the tax liability income threshold will attach low or no IU to the related news, as they are not directly affected by the change in law. Third, *immediacy*—how soon or distant in time the consequences of a reported event will materialize—shapes IU, such that reports of events with soon-anticipated consequences will be perceived as more useful. Thus, hearing about a tax reform that goes into effect soon should be associated with greater IU. Fourth, *efficacy*, the

extent to which recipients perceive that they can influence consequences of a reported event, also contributes to perceived IU, as greater potential for own impact makes the information more useful. Hence, if the message induces a sense that recipients can take political action to influence the tax reform or to adapt to upcoming tax requirements, the message will be perceived as more useful. These predictions garnered support in several studies in the U.S. and Germany. Importantly, they were found to apply to both positive and negative events. Thus, regardless of whether recipients hope for tax benefits or fear tax disadvantages, they should perceive IU per the outlined dimensions.

Mood Management Theory (MMT) and Mood Adjustment Approach

The next theoretical approach is not concerned with how media users might utilize messages selectively to adjust to the environment and instead looks at how they might use them to regulate inner states. Zillmann (1988) proposed that a key motivation driving media selection is the optimization of moods. Mood management theory (MMT) does not focus on cognitions and instead emphasizes mood states, as defined by arousal levels and perceived valence of one's own mood state, as key concepts to predict what choices media users make. In a nutshell, it proposes audience members select any kind of media message—music, movies, news, documentaries, etc.—with the goal of enhancing their moods. More specifically, selective media use serves to regulate arousal levels, such that users will select exciting messages to overcome states of boredom and calming messages to overcome stress (Bryant & Zillmann, 1984). Also, media users seek out messages that enhance the hedonic valence of mood. Moreover, if in a negative mood, media users avoid messages that would remind them of the source of the negative mood. For example, after failing an exam, a student might avoid a campus comedy, as it would remind her of the setback. MMT was the first theory with specific predictions on media choices that garnered solid empirical support. Its predictions were found applicable for selective exposure to TV, websites, news articles, and music, among others (Knobloch-Westerwick, 2006). Numerous experimental, quasi-experimental, field, and diary studies applied and corroborated its claims.

Nonetheless, MMT faced challenges. Its postulation that media users seek out messages that enhance the valence of mood is challenged by the massive amounts of negative news and violent entertainment, which appear well suited to ruin moods. How could the theory account for the wide popularity of news about deplorable events, of music about heartbreak, and fictional accounts of violent conflict? This popularity can only be explained from an MMT perspective by drawing on additional considerations. For example, negative events can increase excitement and in turn lead to more intense enjoyment of a movie's happy-ending. Furthermore, seeing others suffer heartbreak or violence could instigate self-serving social comparisons that enhance moods after all. In other words, observing others in deplorable life circumstances might make onlookers feel better about themselves. For example, elderly TV viewers preferred watching a documentary about a lonely old man, likely because they felt better off than the portrayed individual (Mares & Cantor, 1992). Indeed, when applying MMT to social media posts, Johnson and Knobloch-Westerwick (2014) observed that people in negative moods viewed negatively valenced posts that allowed for downward social comparison longer than positively valenced posts about others' successes. Hence, downward social comparisons—whether a media user might derive a sense of superiority—can explain, based on MMT, why individuals select messages that portray others negatively.

An additional challenge to MMT stemmed from observations that men and women did not show consistent media choice patterns (e.g., Biswas et al., 1994). The notions that social

expectations and the drive to not just optimize moods but also adapt to anticipated requirements instigated the mood adjustment approach (Knobloch, 2003; Knobloch-Westerwick, 2007). Per this view, media users utilize media to shape their moods to match anticipated situations. For example, Kevin might feel sluggish before his planned workout but could pick fast-paced music to motivate himself for his run. In that case, the media message was not chosen based on Kevin's mood-improvement and maintenance goals (per MMT), but instead mood adjustment to anticipated circumstances guided his selection. Coming back to gender differences, stereotyped expectations for how individuals should act and feel differ by gender: After a provocation, a man might be expected to retaliate and stand his ground, whereas a woman might be expected to withdraw—and media choices may help individuals to comply with such social expectations. Indeed, this view of mood adjustment found empirical support (Knobloch-Westerwick & Alter, 2006), wherein men preferred negative content to sustain anger against a provoker, whereas women preferred positive content to dissipate anger, but only for participants who anticipated an opportunity to retaliate against the provoker. The trajectory of MMT and mood adjustment evolved further based on such consideration of social contexts and situational anticipations, combined with self-related affect, as the next section shows.

Selective Exposure of Self- and Affect-Management (SESAM) Model

The Selective Exposure Self- and Affect-Management (SESAM) model (Knobloch-Westerwick, 2015b) proposes that people select messages to activate and regulate certain working self-concepts, as well as affective and cognitive states and their associated behaviors. The SESAM builds on the dynamic self-concept (Markus & Wurf, 1987): People have dynamically changing, malleable self-concepts, which are shaped by both circumstances and choice. Working self-concepts are those aspects of the self that are accessible in the moment. Going beyond the MMT and adjustment perspective, the SESAM model suggests that people selectively attend to messages to activate particular self-concepts (and not just affective states) in their working self.

Thinking about oneself in a particular way, facilitated by selective media use, can be sought out for many reasons, for example, because the particular self-facet induces pride or a sense of belonging. Nicole may read *Forbes Magazine* because it activates her positive self-concept of an accomplished entrepreneur. Becca, an Ohio State University alumnae, watches games played by her alma mater's football team—the “Buckeyes”—to activate her “Buckeye” self and feel connected with the university community. Even if Nicole's company is not doing well, and even if Becca's preferred team loses, they feel good about the related aspects of themselves and seek to activate them in their working selves. Their selective exposure is then driven by self-consistency motivations (which probably underlie most habitual media use) to uphold a sense of stability and identity despite fluid self-perceptions.

Per the SESAM, selective media use facilitates behavior regulation, when media users activate a self-facet through media exposure to accomplish a goal related to external rewards. For instance, Jerry may read *Men's Health* to activate his sense of being athletic to get motivated to work out. If Jerry feels he falls short in his level of physical fitness, but activates his athletic self nonetheless through media use, he encourages himself toward physical activity and better health. The selective exposure is then driven by a self-improvement motivation, often addressed by upward social comparisons with media portrayals who may be doing better in a relevant dimension (i.e., greater physical fitness). The SESAM model thus conceptualizes the possibility that media use can facilitate change and is not only a tool for reinforcing the status quo.

Additionally, the SESAM proposes that self-enhancement motivation can drive selective exposure, when users seek out portrayals of others or outgroups that provide an opportunity for downward comparisons. For instance, after receiving negative test feedback, social media users prefer viewing posts depicting others' failures (compared to users who received positive feedback) (Johnson & Knobloch-Westerwick, 2014). Several studies yielded that groups that are subject to negative stereotyping (e.g., ageism, racial bias) exhibited a preference for negative portrayals of outgroups (young people, whites) and derived a self-esteem boost from that selective exposure (Knobloch-Westerwick, 2015a; Knobloch-Westerwick & Hastall, 2010).

Importantly, ongoing affective experience, which is part of the working self-concept and often a result of self-discrepancies, may prompt each of these motivations of self-consistency, self-improvement, and self-enhancement. When attainability of a desirable future self is perceived to be high, self-improvement motivation is more likely (Knobloch-Westerwick & Romero, 2011); if it is low, people may rather engage in self-enhancement without aspiring to change. Self-discrepancies wherein the *actual* self differs from an *ideal* self or from an *ought* self (i.e., who others expect us to be) can trigger affect, per the SESAM. Moreover, the most basic social comparison motive Festinger (1954) proposed, namely self-evaluation, will also drive selective exposure: To gain an understanding of one's own standing or performance regarding a particular self-aspect, people compare themselves with others, oftentimes with similar others, and selective media exposure certainly provides ample opportunity for doing so. For example, when teens want to get an idea of how popular they are, they might consider the number of "friends" they have on a particular social media platform. This observation will likely trigger some self-evaluation and an affective response.

Self-regulation through selective media use can have lasting effects, as prolonged selective exposure research demonstrated (Knobloch-Westerwick, Robinson, Willis, & Luong, in press). As media messages are selected, aspects of the self-concept are rendered more salient and become more chronically accessible. The SESAM has been successfully applied in a variety of contexts: selective viewing of political ads (Marquart, Matthes, & Rapp, 2016) and controversial political messages (e.g., Dvir-Gvirsman, 2017; Knobloch-Westerwick & Meng, 2011), selective media use when anticipating challenging tasks (e.g., Luong & Knobloch-Westerwick, 2017), selective exposure to race portrayals (e.g., Knobloch-Westerwick, 2015b), music videos (Karsay & Matthes, in press), gendered role-portrayals (Knobloch-Westerwick et al., in press), and health communication (e.g., Knobloch-Westerwick, Johnson, & Westerwick, 2013). The SESAM also has been used to interpret selective media use regarding ideal-body internalization (Rousseau & Eggermont, 2018) and multi-tasking (van der Schuur, Baumgartner, Sumter, & Valkenburg, 2018). The role of self-discrepancies, related to affect per SESAM, was corroborated by Johnson and Ranzini (2018). With regard to specific mechanisms through which impacts of selective media exposure on recipients occur, the SESAM emphasizes social comparisons. Further social factors on selective exposure will be discussed in the next section.

Social Factors in Selective Exposure

While the SESAM considers social comparisons and anticipations, a wider array of research on social factors' impacts on selective exposure has been conducted. Yet no single organizing theory of social influence on selective exposure exists. Researchers have suggested various distinct social goals influencing media consumption, including affiliation, persuasion, impression

management, and distinctiveness (e.g., Berger & Heath, 2007; Leary & Kowalski, 1990). Although similarity and self-consistency frequently play an important role for selective exposure, sometimes media portrayals that are dissimilar to the self may be sought out for self-improvement or self-enhancement. We will discuss social impacts on selective exposure in more detail in this section.

The overarching notion that media users will prefer messages they associate with anticipated conversations and desirable shared knowledge per affiliation goals has received empirical support (e.g., Chaffee & McLeod, 1973). For example, Smith, Fabrigar, Powell, and Estrada (2007) found a distinct preference for attitude-consistent information when participants expected to talk with others who agree with them about a controversial issue. In experiments looking at the selection of less controversial information, people selected more information when anticipating any social interaction (e.g., Atkin, 1972; Dillman-Carpentier, 2009). The new media environment allows for mass-sharing without actual conversation via profiles, “liking,” and so on, providing a new context in which to study affiliation goals. There is evidence that popularity cues can drive entertainment and news media-consumption per a bandwagon effect (e.g., Fu, 2012; Salganik, Dodds, & Watts, 2006).

Importantly, the exact nature of the anticipated social interaction can shape selective exposure in distinct ways. For instance, people intuitively understand that it is important to express socially acceptable moods in interactions and that the quality of social interactions depends on how well affective states match. Media use can facilitate functioning accordingly: Anticipating interaction with a stranger was shown to prompt news reading that reflected attempts to neutralize the mood induced beforehand, because participants preferred news stories with an emotional tone that contrasted their mood; the anticipated mood of the partner in the upcoming interaction also mattered (Erber, Wegner, & Therriault, 1996). Other examples of how an anticipated interaction may matter can be found in early challenges to the confirmation bias (Freedman, 1965). Anticipating a need to defend one’s views to others increased attitude-discrepant information selection. Selective exposure shows different patterns depending on whether the individual anticipates communicating with like-minded or different-minded others, which suggests that intentions to persuade others may shape selective exposure.

Possibly the most overarching social influence on selective exposure, evident in many studies, is the importance of similarity between media user and featured characters or sources. Specifically, news consumers prefer portrayals of same-ethnicity (Knobloch-Westerwick, Appiah, & Alter, 2008), same-gender, and same-age characters (Knobloch-Westerwick & Hastall, 2006). Overall, it appears that audience members prefer sources and portrayals that signal similarity with themselves; the increasing prevalence of user-generated content may strengthen this tendency.

However, people strike a balance between similarity and uniqueness (e.g., Chan, Berger, & Van Boven, 2012). For example, overly popular news or entertainment may be disdained in favor of moderately popular messages (e.g., Berger & Heath, 2007; Knobloch-Westerwick, Sharma, Hansen, & Alter, 2005; Messing & Westwood, 2014), in line with theories on impression management (Leary & Kowalski, 1990) and optimal distinctiveness (Brewer, 1991). Moreover, media users may seek out portrayals dissimilar to themselves, for self-improvement or self-enhancement, per the SESAM model.

This brief sketch has outlined the complex ways that various influences shape selective exposure. Message characteristics, anticipations of social interactions and comparisons, currently accessible self-categorizations and self-perceptions, and technological circumstances all affect

media choices. More research is needed to disentangle and theorize these processes, especially as user-generated content further complicates them.

Conclusion and Future Directions

Over decades of research, communication science is becoming increasingly specific in conceptualizing and predicting what drives selective exposure to mediated messages. Contemporary approaches all view media effects as contingent upon individuals' message selections, because media use occurs predominantly in a selective fashion in high-choice media environments. They further suggest that media effects evolve in dynamic, transactional ways, wherein the user brings motivations to the media use situation and is in turn influenced by media. Differences exist in how specific postulations are and whether overarching patterns or situational behaviors are emphasized in research, along with different research designs and methods. Factors known to shape selective exposure include issue interests, confirmation bias, mood management, informational utility, selective exposure, self and affect management via social comparisons, in addition to social factors. Due to space restrictions, the scope and level of detail of this review necessarily has limitations; for instance, approaches focusing on selective use of health messages were neglected.

Interesting new research goes beyond antecedents of selective exposure and has begun to address how such exposure influences media users (Knobloch-Westerwick, 2015b). For example, political attitude polarization due to a confirmation bias garnered numerous studies; recent investigations also show that selective exposure shapes public opinion perceptions, as well as gender role and life role salience (Dvir-Gvirsman, Garrett, & Tsifti, 2018; Knobloch-Westerwick et al., in press; Sude, Knobloch-Westerwick, Robinson, & Westerwick, in press).

The societal relevance of selective exposure is bound to remain crucial, which calls for more research. After all, media effects can only come about when media users choose to attend to a message. With the increasing number of channels, outlets, and sources, audiences become more segmented and fragmented, possibly also more disconnected. The increase in outlets does not necessarily mean that the content becomes more diverse as well. Certainly, when only three commercial TV channels were on air, and viewers often chose to simply attend to the least annoying programming available, audiences were more likely to consume the exact same message simultaneously with others and to encounter new and unexpected things that could broaden their horizon. With hundreds of TV channels available now, viewers will less frequently feel that the public is largely attending to the same content. Also, when algorithms customize and pre-select content for individual users based on their prior usage and big data patterns, do media users have more or fewer choices? Although they can choose what media options are presented to them, they may encounter and know fewer choices that are truly different from their habitual media diet.

More research inspiration stems from the rise of social media and user-generated content: How do content generation and social and technological online cues affect selective media use and effects? This rise could imply that users generally become more self-aware and self-centered, in which case the focus on the media user's self (per SESAM) becomes even more compelling. In media contexts that allow for self-expression through a plethora of affordances to post, share, comment, like, personalize, and customize, media users likely connect mediated content to self-perceptions more often than in traditional settings (Johnson & Ranzini, 2018; Kang & Sundar, 2016). Possibly, high-choice media, along with more self-expression affordances, drive people into self-focused niches of media use and content generation, undermining social connectedness. We don't know yet.

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11

Media and Emotion

Robin L. Nabi

Emotions are central to the human experience. Yet, given the historical bias toward cognition in the study of media effects, emotions have served as a focus of only a small proportion of the extant research. Fortunately, this trend has been changing, and in more recent years, rapidly increasing attention has been paid to the role of emotions in the selection, processing, and influence of media content. The purpose of this chapter is to overview the ways in which emotion has been integrated into media effects research and how future research might benefit from more systematic inclusion of emotion-related constructs.

This chapter begins by defining the construct of emotion, followed by an examination of the theoretical frameworks and research paths that have considered emotion as (a) an impetus for message selection, (b) an outcome of message exposure, and (c) a mechanism by which other media effects (e.g., persuasive influence) emerge. In light of existing limitations in the body of scholarship at present, the chapter concludes by highlighting fruitful directions for future research, with a particular eye towards the role of newer communication technologies.

Defining Emotion

Although a clear definition of emotion has proven elusive (Izard, 2007), in general emotions are viewed as internal, mental states representing evaluative, valenced reactions to events, agents, or objects that vary in intensity (e.g., Ortony, Clore, & Collins, 1988). They are generally short-lived, intense, and directed at some external stimuli. This is in contrast to moods, which are untargeted and more enduring experiences (see Fiske & Taylor, 1991, for a review). Although different scholars emphasize different physiological, subjective, or motivational factors, general consensus suggests that emotions consist of five components: (1) cognitive appraisal or evaluation of a situation; (2) the physiological component of arousal; (3) a subjective feeling state; (4) a motivational component, including behavior intentions or action readiness; and (5) motor expression (Scherer, 1984).

Two basic models of emotion underlie the majority of the extant media research: dimensional and discrete. Dimensional views focus on emotion as a motivational state characterized primarily by two broad affective dimensions: arousal and valence (e.g., Russell, 1980). Related research focuses on how the degree of positive or negative feeling evoked by a stimulus affects various physiological,

cognitive, and behavioral outcomes. Discrete emotion perspectives, on the other hand, focus on the arousal and effects of individual emotional states, like fear, anger, and hope. The discrete perspective holds that particular patterns of thoughts, or cognitive appraisals, are associated with unique emotional states (e.g., Frijda, 1986; Izard, 1977; Lazarus, 1991; Plutchik, 1980). Each emotion state is associated with physiological changes and action tendencies (e.g., flight for fear, attack for anger) that influence perceptions, cognitions, and behaviors in ways consistent with each particular emotion's adaptive goal (e.g., protection, retribution). This chapter focuses primarily on discrete emotions, though it incorporates other perspectives on emotion as warranted.

Emotion as the Impetus for Media Selection

One of the more long-standing and important questions posed by media effects scholars is: Why do audiences select the media messages that they do? Given the centrality of emotion in determining action and the propensity of media to provide emotional experiences, it is unsurprising that one of the most well developed lines of emotion and media research focuses on the role of affect in selecting media content. Zillmann's (1988, 2000) seminal work on mood management theory (MMT) asserts that people, driven by hedonistic desires, strive to both alter negative moods as well as maintain and prolong positive ones. Consequently, they will arrange their environments (consciously or not) to adjust various moods using any type of communication available, including a host of media options. He notes four message features that might impact mood-based message selection: excitatory potential, absorption potential, semantic affinity, and hedonic valence. For each, the underlying principle is the same: If a message reflects one or more features that might perpetuate the negative state, the message is likely to be avoided in favor of one that would interrupt the negative state.

Much research supports mood management theory's predictions (see Chapter 10 in this volume). However, its boundaries have been challenged by the consideration of affective motivations not linked to hedonic pleasure. Most notably, Knobloch's (2003) mood adjustment theory asserts that when anticipating a future activity, people might use media to achieve the mood they believe will be most conducive to completing that task (i.e., mood optimization). Further, Oliver (2008) argued that media consumers are at times driven not by hedonism, but by eudaimonia, or happiness rooted in greater insight and connection to the human experience. This motivation, she argues, explains viewers' desires to consume more poignant or tragic fare. Further still, Nabi, Finnerty, Domschke, and Hull (2006) examined media preference driven by discrete emotions—regret in particular—finding results counter to MMT predictions. This and other related findings suggest that discrete emotions may function differently than moods in the media-selection process, facilitating coping (rather than simple regulation) needs.

By expanding the vision of what emotional needs drive media selection, this tradition of media research has been rejuvenated. Indeed, Knobloch-Westerwick's (2015) Selective Exposure Self- and Affect-Management (SESAM) model affords affect a central role in the selection process, highlighting how affect and the working self interrelate to influence motivation for selective exposure.

In sum, it is unquestionable that moods and emotions impact media message selection, and given the necessity of message exposure to media effects, it is critical that we more fully explore emotion's role in selection processes. Future research would do well to conceptually distinguish moods from emotions and to consider how a range of different discrete emotions (e.g., fear, anger, jealousy, grief, hope, pride) result in the selection of different forms of content such that regulation, optimization, and coping needs are met.

Emotion as Outcome of Media Exposure

In addition to examining emotions as predictors of media exposure, media effects scholars have also focused on the emotional experiences that *result* from message exposure. Such research addresses both specific emotions (fear especially), as well as more general affective experiences, including enjoyment and self-transcendence.

Fright Responses to the Media

The most long-standing line of media research with emotional response as the central focus involves children's fright reactions to media fare (see Cantor, 2009; Wilson & Drogos, 2009, for reviews). In essence, this body of research (a) documents that children experience fear in response to the media content they consume, whether intentionally selected or not; (b) addresses the conditions under which such reactions emerge; and (c) explores the lingering effects of such fright, including anxiety and sleep disturbance. Specific content that frightens children of different ages (e.g., monsters vs. abstract threats), the individual differences that moderate fright reactions (e.g., empathy, gender), and the effectiveness of coping strategies to manage potentially fright-inducing media exposure have all been explored. To explain why people have emotional responses to what are not immediate threats to the viewer, Cantor draws from the notion of stimulus generalization, arguing that because what we see in the media approximates reality, we respond to the media content as though it is real. Although some media consumers enjoy the experience of being frightened, the negative effects of exposure to fright-inducing media (e.g., anxiety, sleep disturbances) have served as the primary impetus for this line of inquiry.

Media Enjoyment

More generally, the ongoing inquiry into issues related to media enjoyment fits nicely within the category of media-generated affective response as the outcome of media exposure. Although media enjoyment has been conceptualized in a variety of ways (see Oliver & Nabi, 2004, for a series of articles on this issue, and Tamborini, Bowman, Eden, Grizzard, & Organ, 2010), and likely derives from a collection of affective, cognitive, and even behavioral elements, it has primarily been considered an affectively driven construct that largely represents the degree of liking for media fare (Raney & Bryant, 2002). Given the importance of message liking to continued exposure, understanding why people enjoy what they do is an important issue to address.

Apart from the examination of personality traits in media enjoyment (see Krucmar, 2009; Weaver, 2000), the most systematic, theoretically driven line of research in this domain focuses on the disposition theory of drama, which in essence suggests that viewers' enjoyment of media content is based on their affective dispositions, or feelings, towards media characters, and the outcomes the characters experience (e.g., Raney & Bryant, 2002; Zillmann, 1980, 1991). More specifically, viewers enjoy seeing good things happen to liked characters, and bad things happen to disliked characters. It is less enjoyable, however, to watch bad things happen to good guys, and good things happen to bad guys (see Raney, 2003). The role of moral judgments and empathy have traditionally been considered integral to this process, though there have been evolutions in thinking about exactly how such judgments relate. For example, Raney (2004) introduced the role of schemas in setting expectations for various characters, suggesting that the type of character (protagonist or antagonist) may influence character liking first and assessment

of behavior morality second. More recently, Tamborini et al. (2010) highlighted the role of need satisfaction as a key predictor of media enjoyment. Drawing from self-determination theory, Tamborini and colleagues provide evidence that media that fulfill the psychological needs of autonomy, competence, and relatedness explain about half the variance in video game enjoyment. In sum, understanding the relationships among a range of variables, including moral judgments, psychological needs, and affective response, and how they ultimately contribute to media enjoyment is still a very active and ongoing conversation.

Meaningful/Self-Transcendent Media Experiences

Given media effects research has focused overwhelmingly on the negative consequences of media exposure, it is unsurprising that researchers have tended to focus on negative emotional responses to media content. Yet, on the heels of the positive psychology movement, media scholars have recently begun to explore a wider range of emotional states under the umbrella of meaningful media experiences, which are marked by more complex or mixed affective responses, such as feelings of poignancy or of being touched or moved (Oliver, 2008; see also Chapter 17 in this volume).

Particularly salient is the recent work focusing on self-transcendent emotions, such as elevation, gratitude, and admiration, which capture feelings associated with reduced attention to the self and one's own goals and a reorientation to something larger than one's own concerns (Haidt & Morris, 2009). Given that such states can associate with positive outcomes, including doing good deeds and greater focus on relationships (Haidt & Morris, 2009), there has been burgeoning interest in the capacity of media to elicit such states. As Oliver and her colleagues (2018) argue, self-transcendent media experiences arise when media consumers become aware of a shared humanity and "the potential for moral beauty, humility, courage, and hope" (p. 384). As such, they may experience elevation above their individual concerns, increased interconnectedness, and thus increased appreciation for the larger environment, including other people, natural wonders, and moral virtues. As this line of research is still in its infancy, investigations into the message features and experiences that generate feelings of self-transcendence and their subsequent social, psychological, and physical impacts offer an exciting avenue for future research.

Intensity of Emotional Response to Media Content

In addition to research that focuses on affective responses to the media, two additional theories help to explain, at a very general level, the intensity of the emotional reactions people have to the media they consume: excitation transfer theory and desensitization. Excitation transfer theory (Zillmann, 1983) highlights the role of physiology in emotional experiences, asserting that if one is aroused physiologically, one's emotional response to subsequent events, including media exposure, is likely to be more intensely experienced. Thus, if one feels fright watching a film protagonist running for her life, one will feel even more relief than one would have otherwise once she has reached safety (Oliver, 1994; Zillmann, 1980).

Desensitization, on the other hand, focuses on the dampening of the intensity of emotional experience. Drawing from the therapeutic technique designed to help people overcome phobias (e.g., fear of flying), media desensitization suggests that repeated exposure to messages that typically evoke an emotionally based physiological response (e.g., those that contain violence) lose their capacity to do so (e.g., Carnagey, Anderson, & Bushman, 2007;

Cline, Croft, & Courrier, 1973). Although a strict interpretation of desensitization focuses on physiological response (see also excitatory habituation, Zillmann & Bryant, 1984), research has expanded to consider self-reported arousal, emotional responses, and cognitive reactions (e.g., Mullin & Linz, 1995). The concern associated with desensitization, of course, is that this emotional dampening will transfer to the real world such that people will also have reduced emotional reactions to situations that might benefit from action (e.g., offering aid to someone in need) or may minimize the disincentive to engage in antisocial behavior (e.g., aggression).

Ultimately, both excitation transfer and desensitization have implications for the intensity of emotional arousal, though the specifics in terms of the scope of these effects are remarkably unexplored. For example, we know little about whether these processes work equally well for various negative or positive emotions. Can one be desensitized to fear appeals? To “feel-good” movies? Does excitation transfer work equally well for humor compared to fright? How might these processes be harnessed to positive effect? To the extent emotional intensity has implications for outcomes like attention, encoding, recall, and behavior (see below), a more complete understanding of these processes would be of great value.

Emotion as the Mechanism of Effect

Emotions as outcomes of media exposure—which emotions are elicited and under what circumstances—are intriguing in their own right. But the influence of that emotional arousal on subsequent outcomes, such as message engagement, attitude formation, and behavior in a host of contexts, is paramount as these effects form the fabric of our personal experiences and our social interactions. Although space precludes an extensive discussion of these issues, four such effects that represent steps along the influence continuum are highlighted here: message processing, persuasion, aggressive behavior, and message sharing.

Emotion and Message Processing

Lang’s (2000) limited capacity model of motivated mediated message processing (LC4MP) represents an especially well-developed conceptualization of the influence of emotion and message engagement. The LC4MP essentially asserts that media consumers have limited capacity to allocate cognitive resources to the messages they choose to process. Yet these resources must be spread among the processing tasks of attention, encoding, storage, and retrieval. How those resources are allocated is argued to be driven by the message’s characteristics, signal properties, and motivational relevance (see Lang, 2000, for a detailed model description; see also Chapter 13 in this volume). Lang further argues that the motivational activation underlying and enabling emotional experiences influence the distribution of cognitive resources. More specifically, aversive (or avoid) system activation leads to negative emotional experience, and appetitive (or approach) system activation leads to positive emotional experiences. As the level of appetitive system activation increases, relatively more resources are expected to be allocated to encoding and storage of message information. As the level of aversive system activation increases, an increase, followed by a slight decrease, in allocation to encoding is expected.

The LC4MP serves as a useful guide for understanding the message features that stimulate the motivational systems that, in turn, impact the information attention, encoding, storage, and

retrieval that underlie media messages' effects on knowledge structures and decision-making. Thus, the LC4MP is poised as a foundational model in emotion and media effects. Although squarely rooted in the dimensional perspective of emotion, it would be of great interest to expand its scope to consider how discrete emotions, like fear, anger, and sadness, influence resource allocations, especially given such emotions vary in their approach and avoidant tendencies.

Emotion and Persuasion

The study of emotional persuasive appeals is arguably the most well-known and well-researched area of emotion as a mechanism of media effects. Although the persuasive influence of a range of emotions has been examined in the extant literature (e.g., guilt, anger, amusement, hope, pride), the overwhelming majority of this research has focused on fear arousal and its effects on both message processing and persuasion-related outcomes (e.g., attitudes, behavioral intentions, and behaviors).

Fear Appeal Research

The fear appeal literature has cycled through several theoretical perspectives over the past 60 years (see Myrick & Nabi, 2017, for a detailed discussion), including (a) the drive model, that conceptualized fear resembles a drive state, motivating people to adopt recommendations expected to alleviate the unpleasant state (e.g., Hovland, Janis, & Kelley, 1953); (b) the parallel processing model (PPM; Leventhal, 1970), which separated the motivational from the cognitive approach to processing fear appeals, suggesting that those who respond to fear appeals by focusing on the threat (cognition) would engage in adaptive responses, whereas those responding with fear (emotion) would engage in maladaptive responses; (c) the expectancy-value based protection motivation theory (PMT; Rogers, 1975, 1983), distinguished by its focus on four categories of thought generated in response to fear appeals—judgments of threat severity, threat susceptibility, response efficacy, and self-efficacy—and how they might combine to predict message acceptance; and (d) the extended parallel process model (EPPM; Witte, 1992), which integrated the PPM and PMT, predicting that if perceived efficacy outweighs perceived threat, danger control and adaptive change will ensue. If, however, perceived threat outweighs perceived efficacy, then fear control and maladaptive behaviors are expected.

Although meta-analytic research has concluded that the cognitions identified in the PMT, and later the EPPM, are important to fear appeal effectiveness, no model of fear appeals has been endorsed as accurately capturing the process of fear's effects on decision-making (see Tannenbaum et al., 2015; Witte & Allen, 2000). Regardless, evidence does support a positive linear relationship between fear and attitude, behavioral intention, and behavior change. Thus, to the extent message features evoke perceptions of susceptibility and severity, as well as response and self-efficacy, fear may moderate persuasive outcomes, though important questions about the interrelationships among these constructs remain unanswered.

Recently, scholars have adopted a more nuanced approach to the study of fear appeals. Most notable, research examining the individual's experience of fear throughout message exposure (vs. focusing on fear assessment after message exposure) suggests that an inverted-U pattern of fear response may be a valid predictor of a fear appeal's persuasiveness (Meczowski, Dillard, & Shen, 2016). Further, the recently advanced emotional flow perspective (Nabi, 2015) suggests that fear appeals likely evoke emotions not only in response to threatening information (i.e., fear) but also in response to efficacy information (e.g., hope). As

such, the sequencing of emotional experiences may help to explain the conditions under which fear appeals are more likely to be effective (see Nabi & Myrick, 2019, for supportive evidence). These lines of research make it clear that the study of fear appeals is still evolving in interesting and illuminating ways.

Beyond Fear Appeals

Importantly, interest in understanding the effects of emotions other than fear in the processing of persuasive messages is on the rise, guided by recently proposed models attempting to examine those processes (see Nabi, 2007, 2017). For example, the cognitive functional model (CFM; Nabi, 1999) aims to explain how message-relevant negative emotions (e.g., fear, anger, sadness, guilt, disgust) affect the direction and stability of persuasive outcome based on three constructs: emotion-driven motivated attention, motivated processing, and expectation of message reassurance. Further, models focusing on the persuasive effect of particular emotional experiences, including anger (the anger activism model; Turner, 2007) and hope (persuasive hope theory; Chadwick, 2015), have emerged in recent years, both of which highlight efficacy as a critical component to the success of anger and hope appeals respectively.

More generally, Nabi (2003, 2007) has proposed the emotions-as-frames model (EFM), conceptualizing emotions as frames (or lenses) through which incoming stimuli are interpreted. The EFM begins by noting that message features contribute to the evocation of various discrete emotions. These emotional experiences, moderated by individual differences (e.g., schema development, coping style), are predicted to influence both information accessibility and information seeking, which ultimately combine to generate emotion-consistent decisions and action. With growing evidence of the link between message framing and emotional arousal, Nabi argues that this perspective may illuminate our understanding of the potentially central role emotions may play in how a range of media messages—not just those designed to persuade—might impact attitudes and behaviors. Ultimately, as much attention as has been paid to the study of emotion and persuasion to this point, much remains to be discovered in terms of the influence of individual emotions, as well as emotions in combination, on message processing and outcomes, and how to best structure messages to capitalize on emotions' drive to action.

Emotion and Aggressive Behavior

Although it is important to examine the effects of media messages on emotional arousal and, in turn, mental processes, most people interested in media effects are especially concerned with audience behavior. Indeed, one of the earliest lines of research in this domain stemmed from concern over the potentially violence-inducing effects of film and comic book consumption. Scholarly interest in the area of media violence has yet to wane, with meta-analyses revealing a small but significant association between media exposure and anti-social behavior (e.g., Anderson & Bushman, 2001; see also Chapter 14 in this volume).

As this research program has matured, attention to the processes through which such effects emerge has developed. Most notable is the General Aggression Model (GAM; Anderson & Bushman, 2002), which suggests that aggression is a function of the learning, activation, and application of aggression-related knowledge structures. Thus, exposure to violent media content can promote short-term aggressive behavior by priming aggressive cognitions, increasing arousal, and generating an aggressive (i.e., angry) affective state. Further, the GAM suggests that

over time each exposure to media violence is another opportunity to learn that aggression is an appropriate way to deal with life's obstacles.

Clearly, emotions (e.g., anger, shame) play a central role in explaining the link between media exposure and aggressive behavior (see also Baumeister & Bushman, 2007). If we assume that other behavioral responses to media messages operate similarly, and recognizing that emotions function to motivate behavior (e.g., Izard, 1977; Lazarus, 1991), then it is reasonable to imagine that any research on the behavioral outcomes resulting from media exposure (e.g., voting, consumer, or health behaviors) should consider the emotions underlying those effects.

Emotion and Message Sharing

A less developed, but increasingly relevant, way in which emotions mediate responses to media consumption is through the social sharing that occurs as a result of exposure to emotionally charged media content. Although the social sharing of information obtained through the media is at the foundation of one of the earlier models of media effects (i.e., two-step flow model of communication; Katz & Lazarsfeld, 1955), the role of emotion was not of concern at that time. Yet a growing body of literature on the social sharing of emotions indicates that people have an instinctive need to disclose to others when they experience emotionally charged events, which has been widely documented across cultures, gender, and age groups (Rimé, 1995). Further, the more intense the emotional experience or the greater the emotional disruption, the more likely it is to be socially shared (Rimé, Mesquita, Philippot, & Boca, 1991; Rimé et al., 1994) and shared repeatedly over an extended period of time (Harber & Cohen, 2005; Rimé, 1995). The emotional broadcaster theory (EBT) of emotional disclosure suggests that this intrapsychic need to share emotional experiences results in both emotion and information traveling across social networks, and research documents that the extent to which stories travel reflects the degree to which the original teller was affected by the experience shared (Harber & Cohen, 2005).

Given the emotional nature of much media content, it is only logical to imagine that media messages may be the source of much social sharing. Although surprisingly little research speaks directly to this issue, growing evidence exists in multiple media contexts that the emotionality of media messages, including shocking news stories (e.g., Kubey & Peluso, 1990), health messages (e.g., Dunlop, Wakefield, & Kashima, 2009), and viral videos (Berger & Milkman, 2012), is associated with their diffusing through social networks. In essence, these bodies of literature suggest that emotional intensity (rather than valence) is a key predictor of whether media messages are shared, along with the elements of novelty and surprise. In light of technological innovations that allow for the mass sharing of media messages to one's social network via social media sites, the opportunity for the rapid diffusion of emotionally charged media messages is at a level heretofore unprecedented. Further, and of critical importance, to the extent such sharing influences audience behaviors, from health behavior change to political action, the study of emotion's role in message sharing holds tremendous social significance.

Limitations and Future Research Directions

Despite mounting evidence that emotions are not only important, but arguably central, to a host of media effects, there are still numerous ways in which research could expand to fill the

many gaps that still exist in our understanding of how emotions relate to media consumption and, in turn, audiences' lived experiences. This section highlights just a few of the more promising research directions, including emotion's role in the theorizing of past media effects, media's association with emotional well-being, and the intersection of emotion and new media.

Role of Emotion in Existing Media Effects Paradigms

Given media effects research tends to be rooted in psychological approaches and in light of the cognitive revolution experienced by the discipline of psychology in the 1960s and 1970s, it is not surprising that the dominant theories of media effects that have driven the vast majority of research since the 1970s have emphasized cognition as a primary explanatory mechanism. In light of the "discovery" of the importance of emotion in all aspects of message engagement, it is appropriate for media effects scholars to revisit these theories to consider the role emotion may be playing in their process of effects.

For example, cultivation theory, one of the most frequently referenced media effects theories, addresses the relationship between TV content and viewers' beliefs about social reality. Specifically, cultivation theory asserts that, compared to light TV viewers, heavy viewers perceive their social environment as more similar to the world as portrayed on TV than it really is, and a significant body of evidence supports this hypothesis (e.g., Morgan, 2009; see also Chapter 5 in this volume). Although such research acknowledges that exposure to violence can generate fear of victimization, cultivation research is extremely limited in its consideration of emotion generally. By considering how media diets result in the cultivation of emotions other than fear—like anger or gratitude, for example—or how emotional portrayals might be particularly influential in cultivating a range of content-related beliefs, this long-standing thread of media effects research could be greatly enriched.

As a second example, Bandura's social cognitive theory (SCT) revolves primarily around the functions and processes of observational learning (Bandura, 1986; see also Chapter 7 in this volume, and Pajares, Prestin, Chen, & Nabi, 2009). That is, by observing others' behaviors, including those of media figures, one may develop rules to guide subsequent actions. As observational learning occurs via symbolic representations, the effects are potentially long-lasting, and self-efficacy is believed to be central to behavioral performance. SCT focuses primarily on the cognitive elements of outcome expectancies and self-efficacy. However, one can easily imagine the role of emotion in these processes. For example, emotional experiences (e.g., regret, pride) might be conceptualized as relevant outcomes (i.e., positive or negative cues) that influence behavior. Also, how one *feels* about performing the behavior—not just whether one *thinks* one can perform it—may be relevant. That is, if one believes one can begin a program of exercise, but does not feel excited about that prospect, one may be less likely to do it, despite having high self-efficacy. Thus, integrating emotion into SCT-based research could be both illuminating and useful.

The integration of emotion into existing theory has already begun in the context of social comparison theory (Festinger, 1954), which asserts that people are driven to evaluate their own opinions and abilities, and when objective assessment is not possible, people compare themselves to others who are both similar on ability-related (though sometimes unrelated) attributes and are close (but not too close) in ability or opinion. Discrepancy on the target dimension then sets both the standard and the motivation for achievement. Recently, the role of emotion as a mediator of social comparison processes has been asserted, with the idea being that it is not the discrepancy per se but how one *feels* about the discrepancy that influences what

behaviors might result. For example, Nabi and Keblusek (2014) examined the emotions media consumers typically reported feeling while watching cosmetic surgery makeover programs and found that different emotional reactions (envy, hope, happiness) positively associated with social comparison. However, only envy mediated the relationship between social comparison and desire for plastic surgery. Exploring the conditions under which different emotions affect the outcome of social comparison processes stimulated by media exposure would be a most welcome avenue for future research.

In sum, a host of media effects theories purport to explain how media affect beliefs, attitudes, and behaviors. However, they underplay the critical role of emotions in motivating the translation of thoughts into action. Were research to better incorporate emotion constructs, the explanatory power of these (and other) models and theories would surely improve.

Role of Emotion in Explaining Media Effects-Related Behaviors

Media effects research might be further illuminated not simply by focusing on how emotion influences the process of effects, but also how it might more directly associate with behaviors of interest. For example, one popular and enduring line of media research involves the effects of media exposure on viewers' body image (Levine & Harrison, 2009). Most research attempts to explain the role of media in disordered eating behaviors by focusing on socialization, modeling, or social comparison processes. However, absent from this discussion is the recognition that eating (or not eating) may be tightly linked to emotional experience. The notions of "comfort food" or drowning one's sorrows in a tub of ice cream capture this association well. Thus, any consideration of media's role in influencing disordered eating or other behaviors associated with body dysmorphia would be well-served by considering how media messages contribute to the link between emotion and food consumption. Similarly, the positive emotions associated with sexual behavior or the anger associated with violent behavior cannot readily be disassociated. Future research would do well to assess not simply the emotions evoked by media messages that, in turn, link to certain behaviors but also the emotions associated with the behaviors themselves to gain a more complete view of the media exposure-emotion-behavior dynamic.

Media and Emotional Well-Being

A newer area of emotion and media inquiry follows the trend of positive psychology by investigating the role of media use in well-being (see Reinecke & Oliver, 2017, for a volume focused on this issue). Despite previous research on constructs like mood management and enjoyment, only recently have scholars begun to explore how media use, ranging from television to serious games to mobile apps, relates to the construct of psychological well-being and more specifically to its underlying components of recovery (or recuperating from stress) and vitality (or feelings of "aliveness" and energy). Contemporary research has begun to explore how media use might aid in the recovery process through the replenishment of depleted physical, cognitive, and emotional resources, with findings suggesting that consuming hedonic entertainment influences relaxation and psychological detachment (e.g., Reinecke, 2009; Rieger, Reinecke, Frischlich, & Bente, 2014). Given recovery has been linked to improved well-being, energy, positive affect, and cognitive performance as well as decreased fatigue and burnout, and given the destructive psychological and physical effects of emotional dysregulation (e.g., Gross, 2013), understanding with more precision how media use may improve, or compromise, emotional well-being,

especially via the emotions they promote, may be one of the most important lines of media research of this and future generations (see Nabi & Prestin, 2017).

Emotion and the New Media Environment

In light of the rapid development of new technologies through which media are created and displayed, it is essential to consider emotion's role in these phenomena. Indeed there are numerous possibilities. First, given the wealth of information available online, examining the role of emotion in information seeking and content selection is fundamental (e.g., Myrick, 2017; Valentino, Hutchings, Banks, & Davis, 2008).

Second, as noted earlier, new technologies afford the opportunity for social sharing: not simply sharing emotionally evocative stories but sharing personal insights and life events, particularly through social media. How emotions influence what is shared via social media, by whom, and to what effect (on both self and others) have become questions of great social interest (see Tettegah, 2016, for a broad overview). Research on such issues is developing rapidly, though no clear syntheses have emerged as yet. However, a particularly compelling question is: How does the use of social media influence emotions which, in turn, influence psychological health? Do Facebook posts expressing anxiety actually generate supportive comments that build closer relationships, and thus enhance subjective well-being? Does reading posts boasting of others' accomplishments produce feelings of envy, and in turn create distance with online friends, thus diminishing well-being? As users learn about events in their friends' lives—relationship break-ups, engagements, illnesses, and so on—not only are emotions likely to shift (e.g., Muise, Christofides, & Desmarais, 2009), but behaviors consistent with those emotions (e.g., offering or seeking social support) are likely to shift as well, which may have important implications for psychological well-being worthy of investigation.

Third, given the explosion of user-generated content on the internet, it behooves us to consider how the emotions that people experience are expressed via the content they generate. For example, it is likely that blogging could serve as a relatively productive way to vent anger and frustration or generate feelings of well-being via social connection (e.g., McDaniel, Coyne, & Holmes, 2012), whereas excitement to express creativity may lead to the creation and posting of videos on YouTube. Such activities may contribute to feelings of self-actualization (Shao, 2009) and, in turn, life satisfaction. Indeed given that mastery within leisure experiences is central to the leisure activity–subjective well-being link (Kuykendall, Tay, & Ng, 2015), the creation of media content may serve as a leisure activity that exceeds the potential of mere consumption to influence subjective and psychological well-being.

Conclusion

As social psychological research evolved from behaviorism to cognitivism, it was generally accepted that what we think drives our actions. Given increasing recognition of the centrality of emotion to the human experience, it is perhaps more fair to say that it is emotion, in conjunction with thought, that leads to action. Further, without emotional impetus, the thoughts we do have are less likely to translate into behavior. Clearly, this is a highly dynamic process in which cognitions, emotions, and behaviors influence one another over time, but in essence, this conceptualization indicates that to understand media effects processes and outcomes, we must more carefully examine the many ways in which emotions may be relevant. This

includes considering emotions not just as simple outcomes of media exposure but looking at a range of emotional experiences as the stimulus for and moderators of a far broader range of outcomes than we have considered to this point. To do so will surely improve our ability to understand and explain the diverse and exciting ways media impact our personal, social, and emotional lives.

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12

Media, Identity, and the Self

Jonathan Cohen, Markus Appel, and Michael D. Slater

Few social phenomena are more important, or complex, than the process through which we come to form our identity. Virtually every action we take, and every interaction we are involved in, is shaped by how we understand and experience ourselves. A comprehensive examination of the question of media, self, and identity is far larger than can be encompassed in a single chapter. Indeed, it would require a volume of its own. A fuller account would involve in-depth discussions of the role of media in child development and adolescent socialization, in cognitive and social cognitive processes by which media content may influence aspects of self and identity, in the sociology of group membership and identity, and in shaping political identities and healthy lifestyles.

Our focus in this chapter is on a key element in understanding the relationship of media, self, and identity: the individual's experience of identity while using media (and mediated narratives and social media, in particular). Understanding this phenomenon is central to an understanding of how media shapes human experience, values, behaviors, and thus society as a whole. We believe, too, that considering the relationship between mediated experience and the experience of self provides valuable insights into understanding the human experience of identity and self.

Self and Identity

The terms “self” and “identity” are broadly conceived as the feelings, thoughts, beliefs, and perceptions that individuals have about themselves. Current theory and research on media and the self owes much to fundamental early research in psychology (Cooley, 1902; James, 1890/1981). Since the beginning, theory has emphasized the multi-faceted and multi-dimensional nature of the self. In his highly influential work, William James (1890/1981) distinguished between the *I* (the aspect of the self that knows about the self) and the empirical self or *me* (all aspects of the self that can be the object of self-perception, see also Comello, 2009). The latter is further distinguished into the material self (the things an individual calls his or her own, such as one's body, one's family, or one's work), the social self (perceptions by others), and the spiritual self (in which “spiritual” is used in a broad sense, incorporating all psychological aspects that an individual perceives to be the case about him or herself, such as self-related feelings, interests, or attitudes). In that sense, much of the research presented in this chapter deals with the social

self or the spiritual/psychological self. However, new and future technologies may be able to influence the perception of our material self, such as our body ownership. For example, research in the field of virtual reality (VR; see Chapter 26 in this volume) has shown that mediated experiences can temporarily obfuscate the distinction between our own physical body and an avatar body in a VR world (e.g., Slater, Spanlang, Sanchez-Vives, & Blanke, 2010).

Of particular interest to theory and research on media effects is the psychological perception of the self rather than the “true” attributes of a person. Research on self-esteem, for example, deals with a person’s subjective evaluation of his or her worth as a person, self-respect, and self-acceptance (Orth & Robins, 2014), which may substantially diverge from the person’s actual talents and abilities or their achievement as perceived by others.

Psychological approaches to identity and the self differ as to how malleable the self is perceived to be in response to the potentially self-relevant information encountered on an everyday basis, including mediated information. At one end of the malleability spectrum, research on personality has emphasized the relative stability of traits such as extraversion or openness. Such traits are considered to be a function of an individual’s genetic makeup to a substantial degree (e.g., Dawes et al., 2014; Vukasović & Bratko, 2015). At the other end, self-presentation theory (Goffman, 1959) has emphasized the flexibility of the self. Based on the metaphor of life as theater play, individuals are seen as actors who portray different roles for different audiences. Thus, the self-concept is conceived to be extremely flexible, largely depending on situations and changing completely with the role played and the reactions of the interaction partners. Contemporary psychological approaches suggest that one’s self-concept consists of rather stable components but that situational factors determine which aspects of the self are activated in a given moment. These salient characteristics of the self represent the *working self-concept* (Markus & Kunda, 1986) or the *active self* of an individual (Wheeler, DeMarree, & Petty, 2007). When thinking about how media may affect individuals and their sense of self, the question of the malleability of the self is crucial. This framework highlights the need to distinguish media effects that are conceptualized as a long-lasting influence on basic tenets of the self from media effects that focus on the short-term activation of self-related thoughts and feelings.

Thoughts and feelings about the self (and the questions asked by researchers) often refer to the *actual* or *real self*, the (temporal) status quo. However, the self also encompasses thoughts and feelings about potential selves. This includes the *ideal self* (i.e., who we want to be) and the *ought self* (i.e., who we think others expect us to be; see Strauman, 1996). According to self-discrepancy theory (Higgins, 1987), perceived discrepancies between the actual and ideal selves increase the likelihood of negative affect, while discrepancies between actual and ought selves increase the likelihood of social anxiety. Potential future selves or *possible selves* are another aspect of the self that goes beyond the status quo (Comello, 2009; Markus & Nurius, 1986). Possible selves are a motivational force that may affect behavior by providing personal and concrete goals (e.g., Oyserman, Bybee, & Terry, 2006). Engaging with media characters can contribute to developing possible selves, as we will outline in later parts of this chapter.

The theory of objective self-awareness (Duval & Wicklund, 1972) highlights that one’s self (the *me* in James’s terms) is only sometimes at the center of attention (*objective self-awareness*), whereas in most instances we act without monitoring ourselves (*subjective self-awareness*). Whenever individuals become self-aware, norms held in a society—but also personal goals and aspirations and potential discrepancies between these goals and one’s status quo—are likely to become salient. This motivates activities that are in line with these goals. Moreover, particularly

if goal attainment is not easily achievable, activities that shift the focus of attention away from the self are common. Media use can be one of these distractive activities, as shown in research on escapist TV use (Moskalenko & Heine, 2003).

The state of self-awareness has often been induced in the lab by seating participants in front of a mirror, resulting in diminished self-esteem. However, according to Gonzales and Hancock (2011), one's social media profile might also be a source of self-awareness. In contrast to a mirror, though, engaging with one's own Facebook profile increased self-esteem in their study. Social media profiles represent the key aspects of one's self, including one's social connections. Toma and Hancock (2013) demonstrated that engaging with one's Facebook profile can be a potent source of self-affirmation, as social media profiles raise the awareness of values, meaningful relationships, and other essential aspects of the self-concept. Furthermore, unlike a mirror, social media profiles are a form of self-presentation that are edited versions of the self that allow people to put their best self forward.

From early on, research on self and identity has emphasized the social aspect of the self. To answer questions about who we are, others' reactions to one's actions are of key importance (*looking glass self*, Cooley, 1902). When people around an individual praise his or her manual work, for example, the individual tends to associate high manual craftsmanship to the sense of the self. And, of course, others may provide information for social comparison (see Festinger, 1954). Judgments about the self are often made with one or more targets of comparison in mind (e.g., my siblings; Jay-Z; Chris on Instagram; supermodels), gauging the similarities and differences on a salient dimension. These dimensions are often associated with a notion of desirability (e.g., intelligence or attractiveness). A comparison with a target can therefore be that of an upward social comparison (e.g., a rich person on the dimension of wealth) or a downward social comparison (e.g., a poor person). And the consequences can be that of evaluating oneself in line with (i.e., assimilation) or in contrast to the target. With other things being equal, individuals tend to engage in upward rather than downward social comparison when given the choice, as indicated by a meta-analysis of experiments from social psychology (Gerber, Wheeler, & Suls, 2018). The same meta-analysis further shows that the dominant response to social comparison is that of contrast; that is, to perceive oneself to be dissimilar to the target (e.g., the supermodel). It seems that humans have a general tendency to look upward, which often leads to self-deflation (see more on social comparison processes below).

An important dimension of the social self is the perception of belonging to a larger group of individuals. When asked about who we are, we might respond with our nationality ("I am Israeli/American/German"), an affiliation to a political party, a sports franchise, a religious group, and so on. Social identity theory (e.g., Tajfel & Turner, 1979) explains the relationships between the self, groups, and society. It suggests that the social categories an individual identifies with provide a crucial framework to define one's self. Individuals have multiple distinct category memberships at the same time and therefore multiple social identities, as these group identities are typically linked to different attributes and behaviors. In a given situation, an individual's experience and behavior depends on the salience of the social identity that is active.

Self, Identity, and Mediated Relationships

As we as individuals mature and engage in more complex and diverse social interactions, we experiment with various possible selves and shape our identity based on how we experience

ourselves in different social environments (Erikson, 1968). In as much as media are an important part of our social environment, media exposure and mediated interactions are important to shaping our identity, as well as to helping us maintain and reinforce preferred social identities in the face of competing influences and environmental threats (Slater, 2007, 2015).

Furthermore, the proliferation of social media has made media technologies and platforms more central to social interaction. Even communication between close family members and friends are now often mediated, and public interactions also generally take place through our phones, computers, social networks, and other platforms. Our increasing exposure to information via the internet exposes us to a plethora of new ideas, new behaviors, and new fashions. Such information serves as social cues that help form and manage our social identity. For example, rather than having to imagine how friends, family, and peers will react to a new look, behavior, or attitude, we can now post a story or selfie online and get immediate responses from a wide array of social contacts. Thus, the social interactions that inform our identity are wider-ranging, more frequent, and more immediate than they once were, making mediated experience a more central influence on our self and identity.

One way that media play a role in shaping our identity is in allowing us to interact with media characters. Such interactions and relationships with characters can help shape identity by providing opportunities for social comparison (e.g., Nabi & Keblusek, 2014). Social comparisons help people understand who they are relative to others in terms of important attributes (e.g., looks, status, and achievements) and thus shape their sense of actual self, possible self, and ideal self. A second way media may affect identity is through identification, whereby audiences often take on the identity of characters and come to see things through the perspective of characters. Identifying with characters allows readers and viewers to experience themselves in roles they would not otherwise experience. Third, media also provide audiences with opportunities to vicariously learn ideas, behaviors, and attitudes that become part of their identity (e.g., Slater & Hayes, 2010). Finally, media characters may also serve as imaginary or parasocial interaction partners whose imagined responses may shape the self (e.g., Papa et al., 2000; Slater, Ewoldsen, & Woods, 2017).

Perhaps the most obvious way that media characters impact our sense of self is through modeling and imitation (Bandura, 2009; see also Chapter 7 of this volume). Because humans are able to learn symbolically, media characters present a wide variety of learning opportunities. In particular, viewers can observe mediated characters model attitudes and behaviors, including how to enact these behaviors skillfully and effectively; viewers can also observe these characters rewarded (Bandura, 2009). Learning through observation of vicarious rewards is central to social learning. When the model is reasonably similar to the observer, such observation is likely to increase the observer's self-efficacy or belief that they, too, are capable of enacting the behavior (Bandura, 2009).

But media not only provide us with models or information that shape our identity; they also are venues for expression of social identity. Writing fan fiction, being active followers of fan Facebook pages, or following celebrities on Twitter are ways to express aspects of identity and membership in communities of interest. Yet another way media can be used to express identity is through media choice (Knobloch-Westerwick & Hastall, 2010). For example, audience members in the U.S. may express their political identity by watching the right-leaning Fox News or the left-leaning MSNBC, or their fashion savvy by being avid viewers of *Project Runway*. Finally, participatory media such as social networks where people can post content that expresses some part of their identity, or comment sections where people can express themselves, provide opportunities for

people to express themselves and receive feedback from others. In these and other ways, media platforms serve both as sources of information and feedback that is relevant to developing and maintaining identity, and provide a means of expressing or confirming one's social identities.

Social Comparison

An important way that media exposure affects the self is by providing ample, and constantly novel, opportunities for social comparison. Perhaps the most researched topic in terms of media effects on the self relates to body image. Grabe, Ward, and Hyde (2008) conducted a meta-analysis of research on media effects on self-objectification, preoccupation with the body, internalization of thin ideals, and eating behaviors related to body image. The strongest effects of media exposure were found on internalization of thin ideals or the adoption of socio-cultural appearance ideals as a personal goal and standard. This suggests that the effects of media on the goals we set for ourselves, and how we judge ourselves in light of those goals, are strong relative to effects on behaviors or attitudes.

Studies with a focus on social media consistently show a positive relationship between global social media use (e.g., time spent) and the internalization of a thin body ideal, as indicated by a recent meta-analysis (Mingoia, Hutchinson, Wilson, & Gleaves, 2017; the average association amounted to $r = .18$ [.12; .23]). With respect to the processes potentially underlying this relationship, Vogel, Rose, Roberts, and Eckles (2014) found that frequent Facebook use was related to lower self-esteem and that exposure to others' Facebook profiles that instigated upward social comparisons lowered state self-esteem, whereas profiles containing downward social comparisons did not.

Two other recent meta-analyses summarized the evidence of cross-sectional studies on the relationship between global social media use (e.g., time spent or log-in frequency) and self-esteem. Both meta-analyses identified a significant-though-small negative relationship (Huang, 2017: $r = -.04$ [-.08; -.00]; Liu & Baumeister, 2016: $r = -.09$ [-.14; -.03]). Thus, it seems that using social media can be both a source of self-affirmation (e.g., Toma & Hancock, 2013) and a source of upward social comparison yielding lowered self-esteem. As a case in point, correlational studies suggest that intention to blog is related to greater psychological distress (Baker & Moore, 2008), whereas actual blogging is related to increased perceived well-being. This seeming contradiction points to the possibility that passive engagement in social media may have deleterious effects on the self, whereas more active participation (e.g., posting) may have positive effects (Verduyn et al., 2015).

In sum, research suggests that both traditional mass media exposure as well as engagement with social media serve as opportunities to learn about and reflect on ourselves, experiment with our identities, and express ourselves in various ways. What content we are exposed to and create and how we use media may be critical in determining whether such effects will be positive or negative. What is perhaps less clear—and a question to be explored in the coming years—is whether and how traditional social connections differ from various mediated platforms as forums for the work of forming and maintaining self-identity.

Identification

Identification (Cohen, 2001) refers to an imaginative process that includes, among other dimensions, taking the perspective of a narrative character. This, however, does not necessarily mean

that one fully loses oneself in the experience of being the character. Rather, identification is a merging of the character and audience member's self rather than a replacing of the audience's self with that of the character. For example, identification may occur in situations where audience members know more or less than a character, but, through identification, audiences are still able to see narrative events, understand them, and experience them through the perspective of the character. Under such conditions, identification may not mean that the perspective is identical to that of the character, but there can still be a deep appreciation for the character's feelings, goals, and understanding. Much like viewing an event through a GoPro camera attached to someone else, audience members are able to gain an intimate understanding of events but at the same time maintain their own sense of self.

Identification is one way that stories mentally transport us out of our immediate environment and into a world inhabited by characters and where the story takes place (Cohen, 2001). When stories are well constructed, narrative characters feel real to us, and we can come to care deeply about what they do and what happens to them. Though perhaps the most obvious question regarding identification is its impact on the way we experience entertainment (e.g., enjoyment and interpretation) and whether it enhances the impact of narratives (e.g., persuasion, behavior), it is also interesting to think about the effects of identifying with a character on how we think and feel about our own selves. It is not hard to imagine that feeling intimately, if vicariously, involved in events that are beyond the scope of our immediate experience can change how we view ourselves and our environment.

Audience members often identify with characters and come to adopt their goals and perspective on events and to empathize with their emotions. Interestingly, people do not necessarily identify more strongly with characters that are demographically similar to them (Cohen, Weimann-Saks, & Mazor-Tregerman, 2017), suggesting that identification is not limited in scope and can be an effective way to explore widely alternative selves. In seeing the world through the eyes of a character, we can gain a better understanding of how others see the world and what they experience. Studies have demonstrated several ways that media characters can impact audience members.

Tal-Or and Tsfati (2016) found that Jewish students who identified with an Arab character had reduced stereotypes about Arabs, more willingness to interact with Arabs, and more positive attitudes about the Arab-Israeli conflict. Similarly, Chung and Slater (2013) found that identification with a drug-addicted single mother in a Hollywood movie decreased social distance with respect to persons with a history of drug addiction. In another study, findings indicated that identifying with a disabled protagonist who tells a story about a job interview with an abled interviewer impacted attitudes about laws regarding employment of disabled people (de Graaf, Hoeken, Sanders, & Beentjes, 2012).

Furthermore, identifying with a character may result in adopting certain traits of characters. For example, Appel (2011) found that participants who were exposed to a "stupid" character in a narrative underperformed on a subsequent exam, suggesting that traits of characters were assimilated into the self. Sestir and Green (2010) provide experimental evidence that identification with a character activates (in the short term) those traits in audience members that are also relevant to the character. Under high-identification conditions, viewers were able to more quickly identify traits that they shared with the character as descriptive of themselves as compared to viewers in a low-identification condition or compared to traits not relevant to the character. This suggests that media characters activate traits in the self that, over time, should strengthen those traits. Identification, then, has the ability to impact identity by allowing us to see things from new perspectives.

As Mar and Oatley (2008) explain, experiencing stories simulates social experiences in our mind. Such simulations help us understand others (Kidd & Castano, 2013) and, through that experience, understand ourselves with greater clarity. Gabriel and her colleagues supported this argument regarding characters that were liked by audiences (e.g., Derrick, Gabriel, & Tippin, 2008; Young, Gabriel, & Sechrist, 2012). These authors found that just thinking about a favorite character was enough to enhance one's self-esteem and satisfaction with one's body image (Young et al., 2012). Taken together, research has shown that identifying with media characters tends to promote the assimilation of characters' traits into the self and impacts our self-perception.

Another way that identification may affect the self is through vicarious experimentation. Because continuity is a key principle of the self (Breakwell, 2010), a significant change in attitudes or behaviors presents a challenge to the self (Murtagh, Gatersleben, & Uzzell, 2012). In other words, changing attitudes or behaviors requires giving up a part of how we see ourselves and adopting a change in our sense of self. And because identity is a system of interrelated perceptions, traits, beliefs, and affiliations, changing a central part of one's identity may threaten one's sense of self more generally. Identifying with characters may allow an audience member to "see myself in a new light" (Kearney & O'Sullivan, 2003, p. 146), which can be a crucial step to behavior change. From the perspective of vicarious experimentation, then, one advantage of identification as a tool for change is that it allows one to imagine alternative selves without the social and psychological risks that are involved in changing a central behavior or attitude. For example, if Jane sees herself as a lazy couch potato who enjoys watching TV and playing video games but starts feeling that she needs to adopt a healthier lifestyle, she may have a hard time imagining herself as someone who would get up early to run. Consequently, she is unlikely to start running on a regular basis. The need to change one's identity (from couch potato to runner) is an important obstacle to behavior change. Identifying with a runner character in a movie may help Jane imagine herself as a runner and thus make it more likely that she will try running.

Furthermore, because identity is social and we tend to surround ourselves with similar others, changing one's identity also requires a social adjustment. Jane may need to distance herself somewhat from her TV-watching friends and meet some new runner friends if she is to become a runner for the long term. Indeed, the recent popularity of running groups suggests that social support is important to help integrate running into runners' identity (Stevens et al., 2017). Similarly, Falomir and Invernizzi (1999) found that smoker identity was an important predictor of intention to quit smoking and of resistance to anti-smoking messages, even among adolescents who had not smoked for very long. Thus, a significant change of behavior may require an adjustment of both one's personal identity and of one's social networks. Identification with a character that embodies this new identity may help facilitate the process of change, since one can vicariously experience a supportive social network that may ease the transition to a new or expanded social network. Similarly, participating in social networks online, via blogs, groups, or following people on Twitter may all provide a way to experiment with alternative social identities consistent with new patterns of behavior.

Importantly, this notion of vicarious experimentation is distinct from, though related to, social learning. Social learning, as discussed previously, involves observing reinforcements experienced by a model and learning from that observed reinforcement. Identification processes suggest that one actually "tries on" (or vicariously experiences) reinforcements, including, in some cases, being part of a supportive social network. Rather than learning new behaviors and

attitudes through observation, vicarious experimentation focuses on the importance of imaging and trying on new identities related to new behaviors.

Parasocial Relationships

Parasocial relationships refer to imagined relationships and a sense of intimacy that audiences develop with media personae through repeated exposure and imagined interaction (Horton & Wohl, 1956). Since the social groups we belong to compose a crucial part of our identity, and our friends serve as an important source of feedback that shapes our identity, it is likely that favorite television shows and characters serve an important role in identity formation and maintenance. It also makes sense that the less one feels part of social groups (e.g., work, friends), the more television plays a central role with respect to self and identity. Derrick et al. (2008) found that thinking of a parasocial relationship partner improved self-esteem among low-self-esteem adults. They found that participants tended to develop parasocial relationships with characters who were close to their ideal selves (rather than their actual selves) and that being reminded of these characters made them feel closer to their own ideal selves. Derrick, Gabriel, and Hugenberg (2009) also found that thinking of favorite television programs served to inhibit drops in self-esteem and negative feelings among lonely people or people who feel a need to belong.

A recent development in the study of parasocial relationships is the focus on retrospective imaginative involvement (RII; Slater et al., 2017). For the most part, the study of parasocial relationships has focused on how these relationships play out during exposure to media content (i.e., parasocial experience, see Hartmann & Goldhoorn, 2011) or on the overall attachment to personae and the effects of these relationships. However, the psychological processes that determine the impact of media content are not limited to the duration of exposure. As Slater and colleagues (2017) note, we often think about books, films, or TV shows for a long time after we finish reading or watching them; we hum the soundtrack, discuss the content with friends, and post about it on our social media. After exposure, we may continue to imaginatively engage with a story or a character. For example, we may imagine characters in other situations or making other decisions than those they made in the narrative, or we may imagine ourselves as the character. Such retrospective imaginative involvement in media content is likely to have long-term impact on identity, as these imaginative relationships may influence our perceived social group membership, desirable personal and social attributes, and our personal values. Exploration of such effects is ripe for further empirical exploration.

Temporarily Expanded Boundaries of the Self: Narratives and the Limitations of Personal and Social Identity

We have described many ways in which development and reinforcement of social identity intersect with media use. Now, we examine a related but distinct aspect of the identity–media relationship: how media content—notably narrative content—may provide a means for managing the inherent stresses and demands of identity maintenance.

Demands and Constraints of Individual Identity

Maintaining the combination of personal qualities and social roles we call one's identity is a lot of work, taxing people both cognitively and emotionally (e.g., Preston & Wegner, 2005). Various

aspects of personal and social identity, both actual and aspirational, can be in conflict (Higgins, 1989; Marks & MacDermid, 1996). People employ a variety of strategies to protect self-concept, including attributing success to intrinsic and failure to extrinsic factors, and maintaining sometimes unrealistic optimism about personal outcomes (e.g., Campbell & Sedikides, 1999; Cooper, 2007; Weinstein, 1980). Much of our ongoing mental activity, including daydreaming and other forms of ruminative thought, serves to sustain—for better or for worse—key elements of our self-concept (Martin & Tesser, 1989).

Moreover, there are good reasons for suggesting that being an individual self is not only demanding but is also constraining of and frustrating to fundamental needs (see Slater, Johnson, Cohen, Comello, & Ewoldsen, 2014, for a more detailed discussion). James (1890/1981; see also Comello, 2009) points out that in becoming who we are socially and personally, we forego many of the other possible selves we might have been, perhaps leading to some sense of regret and loss.

Self-determination theory (SDT; Deci & Ryan, 1990) proposed that people have inherent needs for competence and agency, choice and autonomy, and connectedness to and affiliation with others. If we as human beings have these inherent needs, they can only be imperfectly satisfied. Often enough, one may be frustrated with what one can do, with one's freedom of choice, or with one's social and personal relationships. Even if each of these goes as well as can be hoped in life, as James (1890/1981) suggests, one set of competencies precludes developing others; one set of relationships may displace other possible relationships. However autonomous and free one believes oneself to be, one has little choice about the inherent capacities of one's body and mind, limited choices about where one lives one's life, and even less choice about when in history one lives.

People have many ways of temporarily experiencing freedom from some of the inherent limitations of individual selfhood. Alcohol and drugs may provide a temporary and illusory sense of expanded capacity or diminish the perceptual boundaries of self and other. Ideology and religion may permit a sense of merging of self with a group and surrender to a set of overarching values. Artistic expression and aesthetic experience have a quality that transcends the typical concerns of individual life. Mysticism and spirituality have, as their explicit objective, merger of the subjective experience of individuality with universality (Huxley, 1945; James, 1911). We argue that stories, too, help meet, at least temporarily, this deep human yearning to step beyond the constraints of the individual self.¹

Stories and Expanded Boundaries of the Self

The Temporarily Expanded Boundaries of the Self or TEBOTS model (Slater et al., 2014) proposes that one of the inherent appeals of stories to human beings is the temporary expansion of the subjective experience of the self that results from immersion in stories. One way to understand this idea is to consider the distinction that William James makes between the *I* and the *me* (see Comello, 2009 for a more extended discussion). The *me* is our constructed set of social and personal identities: profession, gender, religion, family roles, skills, and so on. The *I* is our ontological self, our experience of being itself, which precedes these roles and identities.

TEBOTS suggests that, when immersed in a story, we maintain our ontological experience of *I*, while our *me* is temporarily supplanted (or at least supplemented) by the personal and social roles of those we identify with in the story (Cohen, 2001). In that way, our subjective experience of our capacities, competence, and agency can be expanded to incorporate the magic of

a Harry Potter or Hermione Granger, the powers of a superhero, or the agonizing limitations on freedoms, capacities, and relationships of a slave in the antebellum American south. Stories provide not only an expanded experience of agency or lack thereof but freedom from limitation to any given social role or circumstance, time, or place. Similarly, we may have in this imaginative world friendships, intimate relationships, or enmities with an endless variety of persons with whom we have parasocial or imaginative interactions or relationships (Annese, 2004; Giles, 2002; Slater et al., 2017).

Several key hypotheses have been derived from the TEBOTS model and tested empirically. Social identity theory (Turner, 1987) highlights the way outgroup members are seen as less differentiated and less fully human than ingroup members. Therefore, identification with an erstwhile outgroup member in a narrative should increase differentiation and experience of the humanness of that stigmatized other. This in turn, the TEBOTS model suggests, should reduce social distance. This hypothesis was supported in an experiment in which a movie protagonist, a single mother, was manipulated to be a drug addict in one condition but not in the other (Chung & Slater, 2013).

Another hypothesis is that when one's social or personal self is under threat or stress, stories should be enjoyed more, as expansion of the boundaries of self should be particularly desirable, regardless of how positive or negative the story is (so that effects are not attributable to mood management; see Knobloch, 2003; Zillmann, 2000). Johnson, Ewoldsen, and Slater (2015) manipulated stress through a self-control depletion manipulation. As predicted, in the self-control depletion condition, stories were enjoyed more regardless of positive or negative story valence. The inverse of this hypothesis was also tested, suggesting that persons whose sense of personal identity is enhanced should enjoy stories less. Johnson, Slater, Silver, and Ewoldsen (2016) used an affirmation manipulation to increase positive self-concept. Again, the hypothesis was supported: Those in the affirmation condition reported less enjoyment of the stories, again regardless of story valence.

The Self, Identity, and Eudaimonia: Mediated Wisdom of Experience

The TEBOTS model is explicitly about the attraction of stories, as long as the story is capable of inducing immersion and engagement with story characters. TEBOTS does not address the possible impacts of stories and possible differential effects of distinct types of stories. In particular, the possibility that eudaimonic stories—stories that are deeply moving and touch upon key elements of human experience (Oliver & Bartsch, 2011; Oliver & Raney, 2011; see also Chapter 17 in this volume)—may have some kind of significant impact on audience members is especially tantalizing.

Two of the authors of this chapter, along with one of this book's co-editors, Mary Beth Oliver, have explored this possibility. Socio-emotional selectivity theory (SST; Carstensen, 2006) suggests that people grow in terms of what they value and their willingness to plan for the future as they age. Experience brings awareness of the finiteness of the lifespan and one's closeness to one's future self; even among younger people, poignant transitions such as graduation can have a similar effect (Ersner-Hershfield, 2009).

The Mediated Wisdom of Experience perspective (MWOE: Slater, Oliver, & Appel, 2016; Slater, Oliver, Appel, Tchernev, & Silver, 2018) argues that eudaimonic narratives in particular should operate similarly on their audiences. To view or read a eudaimonic narrative, typically, is to vicariously experience change, loss, the preciousness and fragility of life and relationships, and the inevitable movement of the lifespan. In other words, as a reader or viewer, one

experiences some taste of these verities of life without a full lifetime of personal experience. In fact, the framing of the eudaimonic narrative is likely to emphasize the potential meaning and purpose of life in a way that may or may not happen in the lived circumstances of a given lifetime.

This model was tested first using four short paired videos, each pair of different genres but similar topics and production approach (ads, news stories, etc.), selected to be high or low in eudaimonic qualities (Slater et al., 2016). The primary dependent variable of interest was delay discounting. Delay discounting (Kirby & Maraković, 1996) is typically viewed as a dispositional variable representing the additional reward someone requires to postpone a benefit. A typical item might ask, “Would you prefer receiving \$55 right now or \$60 in two weeks?” As predicted, the eudaimonic video clips decreased delay discounting—that is, people were more willing to accept delayed rewards. Also as predicted, this effect was in part mediated by poignancy—the extent to which the audience members experienced mixed happiness and sadness, a mixed emotion believed to be associated with perception of life’s complexity—in response to the video clips.

A subsequent study (Slater et al., 2018) extended these findings by using tighter and more ecologically valid experimental manipulations, testing a mediator (closeness to future self) more directly associated with SST, and adding a dependent variable, acceptance of the prospect of death, as a way to assess impact on maturity of responses and to develop findings that suggested eudaimonic videos could buffer the effects of mortality salience (Rieger et al., 2015). Three Hollywood movies were edited to show scenes higher in eudaimonic content versus more action-oriented scenes from the same movie that were less clearly eudaimonic. Again, the eudaimonic versions of the videos increased willingness to accept delayed rewards (i.e., reduced delay discounting) and, extending the Rieger et al. (2015) findings, increased self-reported death acceptance. Poignancy in this case did not significantly mediate these effects. However, a measure of closeness to future self did serve as such a mediator, consistent with a socio-emotional selectivity theory perspective.

Finally, it may be useful to further distinguish the TEBOTS and MWOE theoretical domains. TEBOTS focuses on the drive to expand the possibilities of our experiences of social and personal identity. In contrast, MWOE suggests that in eudaimonic stories there is typically recognition that the many things we value about *me*, our social and personal identities—love of family members, our capacities, etc.—are transient and are lost in the course of time. But in the recognition of their transience, there may also be, at least implicitly, an experience of the *I* that persists apart from these social and personal identities. This *I* may grow and deepen in understanding and appreciation of what life is, and in acceptance of the passage of time and the inevitabilities that passage brings. The impact of eudaimonic narratives on the salience of the experience of *I* apart from transient social identities, and whether this impact may be the result of certain types of eudaimonic narratives, are promising prospects for future research.

Summary and Conclusion

Looking back over the foregoing chapter, it is evident that identity plays a role in each phase of the media-effects process. Our identity can be thought of as an independent variable affecting how we interact with media, including what media we select and attend to and how we interpret what we encounter. Social and personal identity variables can moderate how media exposures affect attitudes and behaviors, and can also serve as dependent or mediating variables. We argue there are few things more important to a human being

than their personal and social identity. To the extent that media may influence one's experience of identity, this area of research represents a media-effects question of fundamental interest. As the way people define their personal and social identity profoundly influences their behavior (consider a jihadi, for example), these processes are also of significant social concern.

In this chapter, we have reviewed concepts and theories of self and identity insofar as they bear on mediated experience. In particular, we reviewed how the boundaries of identity are blurred at least temporarily, and potentially reshaped, by mediated experiences such as identification or parasocial relationships with persons portrayed in media or via choice of social networks in social media. In so doing, we highlighted ways in which the experience of personal and social identity can be at least temporarily malleable, and thus perhaps subject to evolution and change, for better or for worse.

In sum, the experiences of the self are the most intimate dimensions of each person's experience and provide the filters through which life is experienced; few things are more important to explore than how we come to understand and experience ourselves. As media scholars, it is important that we consider the various roles media play in shaping the various dimensions of the self and how these effects are, in turn, implicated in attitudes, beliefs, and behaviors. Media research that focuses on the self is likely to become even more central as research evolves from a mass media model to a model in which the individual is more central as both producer and consumer, in which social networks exist via the media and in which presentation of self and identity is executed largely via the media. The study of media and the self thus promises to be a fruitful avenue for continued scholarship. We hope this chapter, by considering some fundamental issues regarding the nature of self and identity while attending to media content (particularly narrative content), serves as a useful foundation for such future research.

Note

- 1 This argument may be new to the social science literature but it goes back historically. Abhivanagupta, the 10th century Indian mystic, philosopher, and aesthetic theorist, suggested that the love of drama has its roots in the momentary freedom audience members gain from the experience of their own limited, egoic self (Mishra, 2006).

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13

Media Psychophysiology and Neuroscience

Bringing Brain Science into Media Processes and Effects Research

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Welcome to a new age of studying the human brain “on” media! Media researchers now enthusiastically embrace theories and methods from brain science to examine how media effects emerge from embodied mental processes. This enthusiasm is seen in recent special editions of journals (Afifi & Floyd, 2015; Weber, 2015), handbooks from the International Communication Association (ICA; e.g., Floyd & Weber, in press), the significant presence of related research at major communication conferences (e.g., the ICA’s Communication Science and Biology Interest Group), as well as advertised tenure-track faculty openings. We are now past the stage where the use of physiological indicators of brain activity in media research was viewed as novel by some and with suspicion by others. Various forms of brain science are now seen as some of the most promising approaches to shedding light on the complex and dynamic ways that media effects occur. Physiological indicators of brain activity are not only a permanent fixture in the media researcher’s toolkit (Potter & Bolls, 2012), but neuroscience—the formal discipline of brain science—is becoming firmly established as one of the disciplines providing the intellectual roots for communication science. It is an exciting time for new and more experienced researchers to learn how brain science can be applied to studying media processes and effects.

This chapter overviews how media psychophysiology and neuroscience offer researchers a valuable framework for investigating media processes and effects. We avoid a detailed technical discussion of psychophysiology and neuroscience in favor of a more conceptual overview of how the framework presented here can be applied. We also attempt to introduce a vast amount of available resources to help interested scholars.

The chapter begins with a discussion of how a framework for the application of brain science in media research emerged from principles of psychophysiology and neuroscience. Next, we review common physiological indicators used in media research labs and recent studies using these measures. We conclude with a look to the future and consider specific ways that this framework can advance knowledge of media processes and effects.

The Media Psychophysiology and Neuroscience Paradigm

The previous edition of this book (Bryant & Oliver, 2009) included a chapter authored by three of us (Lang, Potter, & Bolls, 2009). That chapter introduced psychophysiology as a new paradigm for studying how individuals cognitively and emotionally process media. Psychophysiology, at that time, was familiar to a relatively small group of researchers studying media processes and effects. That has changed. Familiarity with psychophysiology has grown, but we must avoid forgetting the important role an historical paradigm change played in this growth to avoid repeating past mistakes. This change occurred when media researchers embraced the psychophysiological paradigm. Our review of this history focuses on four major phases.

Phase 1: the Beginning of Psychology and Early Inspiration for Brain Science

The first era of formal social science research in psychology included a theoretical focus on brain physiology and mental processes. For example, a consideration of brain activity as fundamental to human nature can be seen in the development of the earliest theories of emotion. Those earliest theories wrestled with the relationship between physiological responses and mental experiences, with three predominant views emerging: physiological responses as primary drivers of emotion (James, 1894), conscious experiences of emotion eliciting specific physiological responses (Cannon, 1931), and emotion unfolding from the interaction of physiological activity and mental experiences (Schachter & Singer, 1962). During this time, Elizabeth Duffy (1957) also identified arousal as a drive fueling human behavior, and Donald Hebb (1955) identified brain systems underlying arousal. However, this work lost prominence in psychology when the field enthusiastically embraced behaviorism.

Nevertheless, interest in physiological responses as the drivers of emotion trickled into media effects research in the early 20th century, by way of a relatively unknown experiment that was part of the famous Payne Fund studies (Dysinger & Ruckmick, 1933). The researchers studied arousal in response to movies by recording the skin conductance of viewers. This study is unfamiliar to most because it was overshadowed by the work of many media effects researchers who joined psychology in embracing behaviorism.

Phase 2: the Age of Behaviorism in Psychology and Media Effects Research

Three of the most famous researchers in psychology—John Watson, B. F. Skinner, and Ivan Pavlov—are known for ushering in the age of behaviorism (Hergenhahn & Henley, 2013). Watson's behaviorist view of psychological research left no doubt concerning the legitimate focus of psychology (Watson, 1913). His view completely dismissed the notion that mental processes can be validly studied. Pavlov and Skinner are known for their pioneering research on learning and conditioning grounded in behaviorism (Skinner, 1938). Their studies represent the purest form of behavioristic research rooted in what has been termed the stimulus-response paradigm (Potter & Bolls, 2012).

Media effects research emerged under the stimulus-response paradigm; most histories identify behaviorism as the scientific foundation for the field (Delia, 1987; Dennis & Wartella, 1996). It was during the age of behaviorism that Albert Bandura conducted his famous Bobo doll studies on the effects of exposure to media violence (e.g., Bandura, Ross, & Ross, 1963;

see also Chapters 7 and 14 in this volume). Behavioral effects of media are still as crucial to understand today as they were at that time. But behaviorism left researchers with a significant blind spot: a lack of scientific understanding of what creates behavioral responses to meaningful stimuli like media content. This limitation led to the first of two major paradigm shifts discussed herein. The first paradigm change is associated with the “cognitive revolution” in psychology and resulted in the adoption of the information processing paradigm (Potter & Bolls, 2012).

Phase 3: the Cognitive Revolution Spreads through Psychology and Media Effects Research

Thanks to the cognitive revolution in psychology, it is now commonly accepted that understanding behavioral responses to stimuli (including those tied to media exposure) requires observing what occurs in the minds and bodies of individuals between exposure to a stimulus and the response. Potter and Bolls (2012) labeled this mental activity *intervening processes*. Thus, the paradigm shift from behaviorism to information processing can better be thought of as the shift from a stimulus-response paradigm to a stimulus-intervening processes-response paradigm.

Under behaviorism, intervening processes were thought to be hidden within the “black box” of the human mind, which could not be validly observed. The cognitive revolution in psychology focused on bursting open this supposed “black box” and systematically studying how cognitive processes unfold as individuals take in, process, and respond to information in the environment. This approach came to be known as *information processing* (for an excellent review of this intellectual history, see Lachman, Lachman, & Butterfield, 1979).

Media researchers working in the late 1970s and 1980s adopted the information-processing paradigm, calling for research to investigate related mental processes and effects (Chaffee, 1977; Geiger & Newhagen, 1993). It was during this phase that psychophysiological measurement reentered media effects research (e.g., Zillmann & Bryant, 1974), with physiological activity examined as a response to media content. However, research conducted through this lens produced inconsistent results (Potter & Bolls, 2012). We have since come to understand that physiological systems do not respond in a unitary correlated linear fashion (Stern, Ray, & Quigley, 2001). Our increasing knowledge of these systems led to a second significant paradigm shift, when the psychophysiological paradigm was adopted by the researchers in the late 1980s (Lang et al., 2009).

Phase 4: the Psychophysiological Paradigm Emerges

The emergence of psychophysiology in psychology began before the cognitive revolution with the work of researchers in the 1960s who renewed interest in physiological activity as an explanation of human nature and experience (Berntson & Cacioppo, 2000). This work laid the foundation for physiological activity to remain a permanent focus of psychological science. It also enabled the birth of the Society for Psychophysiological Research and the formation of the psychophysiological paradigm (Cacioppo, Tassinery, & Berntson, 2007). Development of this new paradigm led to the third phase of psychophysiological measurement in media processes and effects research (Potter & Bolls, 2012). With the shift, media researchers moved away from viewing physiological activity as a response to media content. Instead, they came to view specific patterns of physiological activity as indicators of embodied mental processes.

The psychophysiological paradigm is the foundation for the *media psychophysiology and neuroscience* we reference in the title of this chapter. The term *media psychophysiology* was introduced by Potter and Bolls (2012) and generally refers to the application of psychophysiological science in media processes and effects research. The discipline of neuroscience is one of the disciplines psychophysiology draws from. Neuroscience, however, is more focused on directly recording brain activity through physiological indicators of central nervous system activity. Neuroscience also requires different analytical tools and techniques (for more on the application of neuroscience in media research, see Weber, Sherry, & Mathiak, 2008). The assumptions of the psychophysiological paradigm apply to both areas. We discuss three of the most fundamental assumptions below (for more detail, see Cacioppo et al., 2007, an essential resource for those wishing to adopt these approaches).

The Human Mind Is Embodied

First, the psychophysiological paradigm assumes that all forms of human mental activity exist in the brain and are observable through specific patterns of nervous system activity that echo through the brain and body. These patterns can be complex, can unfold on various temporal and spatial scales, and may require further refined measurement techniques, but these patterns as an index of mental activity do exist.

Embodied Mental Activity Unfolds across Time

Second, psychophysiological measures indicate variation in mental processes across time as an individual perceives and responds to a stimulus. Instant-by-instant changes in physiological activity that reflect mental processes have extremely important psychological meaning. In other words, dependent on how a physiological response varies over time, the same physiological indicator can have different meanings and interpretations. For instance, different patterns of heart rate deceleration and acceleration across time can indicate either an orienting or startle response to a stimulus.

The Purpose of Physiology Is to Sustain Life, Not Index Mental Processes

Third, physiological indicators of mental processes generate a very small signal. This makes the application of physiological indicators of mental activity in research a challenging proposition that requires detailed training in the approach. Researchers who deploy psychophysiological indicators to study mental activity must validly record small levels of variation in nervous system signals that actually reflect variation in mental processes and are distinct from noise.

Measurement Science in Media Psychophysiology and Neuroscience

Measurement science in psychophysiology focuses on validating how specific patterns of nervous system activity can be mapped onto specific mental processes. This effort is consistent with the formal definition of psychophysiology, which can be summarized as the scientific study of psychological phenomena as revealed through physiological activity of the functioning nervous system (Cacioppo et al., 2007). Two domains of measurement science in psychophysiology exist: the *physiological* domain consisting of nervous system activity, and the *psychological*

domain consisting of mental processes. Researchers face the difficult challenge of validating complex patterns of activity in the physiological domain as psychophysiological indicators of specific mental processes. This challenge is compounded by the fact that physiological responses can often be mapped to different mental processes. The introduction of neuroscience further complicates the picture, as researchers attempt to draw conclusions about mental processes from specific patterns of brain activity while recognizing the complexity of the human brain (Weber, Mangus, & Huskey, 2015; Weber et al., 2008).

The brain is made up of a mind-boggling collection of networks consisting of neurons, one of the most basic biological units of the nervous system. Most areas of the brain are interconnected, meaning that most networks of neurons are connected to many other networks of neurons. All of this can make the task of mapping specific patterns of brain activity to specific mental processes an incredibly difficult task for measurement science in psychophysiology. A healthy respect for this challenge, as well as for the complexity of mapping relationships between nervous system activity and specific mental processes, is crucial for valid and valuable media psychophysiology and neuroscience research. The availability of resources and technological development has made it easier for interested researchers to conduct experiments using physiological measures. Researchers must be vigilant to avoid oversimplifying the process and inadvertently sacrificing the validity of the experiments they conduct.

A final point about measurement science in psychophysiology, especially as it applies to media research, is that researchers should maintain a proper perspective on the relationships between psychophysiological indicators and other measures of responses to stimuli.

A balanced, nuanced perspective on the value of psychophysiological indicators in media research is required. The entirety of individuals' experience of interacting with media is not reflected in validated psychophysiological indicators. There are important concepts in media research for which there is no validated physiological indicator. The most valuable insights into media processes and effects will be based on triangulation of data obtained from physiological responses, self-reports, and behavioral observations. Further, all of these measures may or may not be highly correlated because they measure the output of processes that do not reflect the same thing and may not respond in a uniform fashion. For example, a self-report measure of arousal does not measure the same thing as skin conductance, a physiological indicator of arousal. We expand on this point below with a brief overview of the human nervous system, which produces the physiological activity this work is based on.

Overview of the Human Nervous System

The human nervous system is made up of billions of neurons. These nerve cells produce bioelectrical activity that gets transmitted throughout the entire nervous system. Neurons generate small voltage electrical signals called action potentials. Action potentials travel between neurons throughout the nervous system, which connects the brain, spinal column, organs, glands, and muscles. Bioelectrical activity generated by the billions of neurons throughout the nervous system not only keeps us alive but also produces our mental experiences. Psychophysiological measures record these bioelectrical signals, which researchers take as reflecting embodied mental processes.

The human nervous system is organized into two major divisions, which are completely interconnected: the central nervous system and the peripheral nervous system. Psychophysiological indicators are primarily categorized according to whether the central or the peripheral

nervous system is being recorded. The central nervous system consists of the brain and spinal column. The peripheral nervous system consists of connections between the spinal column and the peripheral organs, glands, and muscles (e.g., heart, sweat glands, facial muscles). Motor neurons in the peripheral nervous system generate muscular activity throughout the body and are referred to as somatic nerves. Peripheral nervous system connections that control organs and glands are referred to as the autonomic nervous system. The autonomic nervous system is further divided into the parasympathetic and sympathetic nervous systems.

This is admittedly a brief description of a highly complex set of systems. The information offered is only intended to give the reader a basic understanding of how the nervous system produces the physiological activity that underlies psychophysiological indicators. For a more detailed discussion of the anatomy and functioning of the human nervous system, we strongly recommend the writings of Stern and colleagues (2001) and Cacioppo and colleagues (2007).

With that stated, we now explore measures of physiological activity. The bulk of media research in the area has relied on measures of the peripheral nervous system. Thus, we begin with a discussion of those approaches, followed by a discussion of central nervous system measures used in media processes and effects research.

Peripheral Nervous System Measures in Media Processes and Effects Research

Peripheral nervous system measures have the most established history in psychophysiology. As noted above, the first media effects experiment to record physiological activity measured skin conductance, a peripheral nervous system measure based on the activity of sweat glands. The early work of psychophysicologists focused on mapping variation in peripheral nervous system activity reflected in heart rate and skin conductance to variation in mental processes related to attention and arousal respectively (Graham, 1979; Lacey & Lacey, 1974; Sokolov, 1963). The early work also included studies of emotion, in which precise variation in facial expressions based on peripheral nervous system activity consisting of facial muscle responses were recorded (facial electromyography [EMG]; Fridlund & Cacioppo, 1986).

Skin conductance, heart rate, and facial EMG have emerged as the most commonly used psychophysiological indicators in media processes and effects research in large part due to early validation connecting these measures with variation in attention, arousal, and positive/negative emotional responses. Because the brain is connected to the spinal column (i.e., central nervous system) which contains nerves that run to all organs, glands, and muscles of the peripheral nervous system, brain activity generated through mental processes expands into the peripheral nervous system influencing the activity of organs, glands, and muscles. That is why heart rate, skin conductance, and facial EMG are valid indicators of embodied mental processes occurring in the brain.

Heart Rate in Media Processes and Effects Research

Heart rate is based on variation in the cardiac cycle that occurs as the heart beats and circulates blood throughout the body. Heart rate can be recorded in two ways. First, it can be recorded through pulse rate, produced by blood flowing through the arteries and veins. This method typically involves the application of a photoplethysmograph (often placed on a finger or earlobe)

that uses a photo sensor to measure blood flow and quantify pulse rate. Second, heart rate can be recorded by an electrocardiogram, which requires placing surface electrodes on the wrist and forearms. The electrocardiogram produces a visual representation of the bioelectrical activity generated during the cardiac cycle. Heart rate is quantified by measuring the amount of time between successive instances of the strongest positive peak in the electrocardiogram, which is referred to as the inter-beat interval.

The heart is innervated by both the parasympathetic and sympathetic branches of the peripheral nervous system, which complicates interpretation of changes in heart rate (Koruth, Lang, Potter, & Bailey, 2015). That being said, heart rate is most often used as a psychophysiological indicator of cognitive resources allocated to encoding information into a short term memory representation (Potter & Bolls, 2012), based on the assumption that a primary task involved in using media is taking in information from the content and encoding it in short term memory. This task increases parasympathetic nervous system activity, which decreases heart rate. It is important to remember that this is an assumption, and recent work by media processes and effects researchers has demonstrated the tremendous value of assessing heart rate variability, a technique for teasing apart parasympathetic and sympathetic influences on heart rate in interpreting heart rate data (Koruth et al., 2015).

Heart rate as a psychophysiological indicator of cognitive-resource allocation has been used in various media contexts, including, for example, how mobile media users cognitively process advertisements embedded in mobile content (Clark, Leslie, Garcia-Garcia, & Tullman, 2018). The researchers found that users allocated more cognitive resources (as evidenced through heart rate change) to encoding the ads when (1) the user had more control over interacting with the ad, (2) the ad was placed within the content in the least disruptive manner, and (3) the user was offered incentives for viewing the ad.

Heart rate has also been used to study how emotional content in anti-tobacco advertisements can influence the way smokers process the messages. In a recent study, heart rate data showed that combining smoking cues with disgusting images resulted in defensive message processing in smokers (i.e., fewer cognitive resources allocated to encoding the message; Clayton, Leshner, Bolls, & Thorson, 2017). This study is in line with other research (e.g., Yegiyani, 2015) using heart rate data to show how the emotional valence of video content can impact cognitive resources allocated to encoding, with pleasant (or appetitive) emotional content increasing (as evidenced by heart rate deceleration) and unpleasant (or aversive) content decreasing (as evidenced by heart rate acceleration) cognitive resources allocated to encoding.

Skin Conductance in Media Processes and Effects Research

Skin conductance involves recording changes in electrical conductance of the small current between two recording electrodes. Electrical conductance across the surface of the skin changes due to the activity of eccrine sweat glands. These sweat glands are associated with what has been termed *psychological sweating* (e.g., sweating palms due to nervousness). Accordingly, skin conductance is most frequently measured by placing electrodes on the surface of the palm or midsections of the fingers. Skin conductance is based on the activity of sweat glands below the surface of the skin, not the actual appearance of sweat on the skin's surface. The level of sweat in the bulb of the gland changes skin conductance. Electrical resistance of the skin surface decreases and conductance increases as the level of sweat rises in the gland. The eccrine sweat glands are solely innervated by the sympathetic branch of the peripheral nervous system. This

makes skin conductance a highly valid and reliable psychophysiological indicator of sympathetic arousal, taken to reflect the intensity of emotional responses evoked by a stimulus (Potter & Bolls, 2012).

Skin conductance has been used to study both general sympathetic arousal as well as anxiety specifically, in response to different media contexts (e.g., computer-mediated versus face-to-face communication; Shalom, Isreali, Markovitzky, & Lipsitz, 2015). One particularly interesting line of research examines arousal responses to video game content. In one study of a racing game, researchers observed that the intensity level of the game led to increased skin conductance, which also had a positive correlation with risk-taking inclination and resulted in a greater likelihood of risky driving behaviors (Deng, Chan, Wu, & Wang, 2015). Skin conductance has also been used to study sympathetic arousal while parents view media content with their children (i.e., parental co-viewing; e.g., Rasmussen, Keene, Berke, Densley, & Loof, 2017). The mere presence of a co-viewing parent increased the child's level of sympathetic arousal experienced when viewing educational television content.

Facial EMG in Media Processes and Effects Research

Facial electromyography (EMG) involves the recording of facial muscle activity through the placement of surface electrodes over specific muscle regions on the face. The electrodes record the bioelectrical signal that is generated by the firing of action potentials in the neurons of muscle tissue that occur when muscles contract. This makes facial EMG a highly sensitive measure of facial expressions because it records potentially meaningful activity that might not be visible on a person's face.

Facial EMG is one of the more challenging peripheral nervous system measures to validly record because the signal is especially susceptible to noise. The human face contains many muscles located closely together; thus, valid recording of the facial EMG signal is highly dependent on precise electrode placement. Noise can enter the recorded signal due to the activity of nearby muscles, as well as electrical frequencies generated by other equipment in the environment that may overlap with the frequency of the facial EMG signal.

Facial EMG is a validated psychophysiological indicator of emotional valence to a stimulus (Potter & Bolls, 2012). Emotional responses recorded through facial EMG can be positive, negative, or a mixture of positive and negative valence. Three different facial muscle regions are of particular interest to media processes and effects researchers: corrugator (located along the brow), orbicularis oculi (outer corner of the eye), and the zygomatic (along the cheek). Corrugator activity reflects variance in negative emotional responding, whereas orbicularis oculi and zygomatic activity reflects variance in positive emotional responding.

Facial EMG has proven to be a useful indicator of emotional valence in a wide range of media research. Researchers have, for example, used the measure to examine how positive and negative online news about corporations interact with existing corporate reputations in influencing how readers emotionally respond to the stories (Ravaja et al., 2015). Facial EMG activity reflecting a negative emotional response was higher for negative news stories about corporations with good reputations, whereas a positive response was higher for negative stories about corporations with bad reputations. Facial EMG has also been used to show that more calloused individuals have weaker negative emotional responses to violent films (Fanti, Kyranides, & Panayiotou, 2017) and that variation in the emotional tone of traffic safety videos can meaningfully impact viewer responses (Howell, Ekman, Almond, & Bolls, 2018).

Central Nervous System Measures in Media Processes and Effects Research

An exciting development in media research has been the resurgence in the use of central nervous system measures. Researchers working in the late 1970s and early 1980s used electroencephalogram (EEG; the electrical recording of cortical activity from the surface of the scalp) to study attention paid to television advertisements (Appel, Weinstein, & Weinstein, 1979; Krugman, 1971; Rothschild, Hyun, Reeves, Thorson, & Goldstein, 1988). But the latest age of central nervous system measures use has introduced a whole new ballgame: *media neuroscience* (Mangus, Adams, & Weber, 2015).

Media neuroscience and the use of brain imaging are exciting developments because the work provides a view of the brain “on” media. Central nervous system measures give researchers a peek at the functioning of mental processes engaged when individuals interact with media that emerge directly from brain activity. The use of these measures is referred to as brain imaging because the data recorded literally produces images of brain activity. It is critical to remember that images of brain activity can be as meaningless as looking at pictures of “blobs” on brains without proper training and expertise. In no way does this chapter substitute for that; specific training in brain anatomy and physiology, as well as measurement and data analysis techniques used with these measures, is required (Hopp & Weber, in press; Turner, Huskey, & Weber, in press; Weber, Mangus, et al., 2015).

This section highlights two common brain imaging techniques used in the application of central nervous system measures in media neuroscience: EEG and fMRI (functional magnetic resonance imaging). The valid application of both measures in media processes and effects research requires a basic understanding of brain anatomy. Here we provide a general summary that we hope is useful for a basic understanding of EEG and fMRI.

One major division in brain anatomy is between cortical areas (like the cerebral cortex, the outer folds of brain matter) and sub-cortical structures (like the limbic system). EEG only records cortical activity. fMRI is required for imaging activity occurring in sub-cortical structures. The brain is further organized into left and right hemispheres and four lobes: the frontal, temporal, occipital, and parietal that are contained in each hemisphere. Areas of the brain can play a dominant function in a mental process, but a highly localized view of brain function that tries to pin specific mental processes to specific brain locations is misguided. Higher cognitive functions are rooted in the activity of the cerebral cortex, whereas sub-cortical structures in the limbic system (e.g., amygdala, hippocampus) play an important role in emotion and memory. It would be a complete misunderstanding, however, to assume, for instance, that television advertisements that elicit higher activation in the amygdala are loved more than advertisements that elicit less activation in this sub-cortical structure.

EEG in Media Processes and Effects Research

Through the application of surface electrodes, EEG records small electrical signals that can be detected from the surface of the scalp. This electrical signal is generated by the firing of neurons in activated cortical areas. Cortical activity can be recorded from both hemispheres and all four of the brain lobes. This allows inferences to be made about mental processes engaged during various tasks—including interacting with media—emerging from cortical networks throughout the hemispheres and brain lobes.

Researchers have used EEG to study multiple forms of cognitive and emotional processes engaged through media use (for a recent review, see Morey, 2018). Herein we briefly review a few examples of recent experiments. Attention, one of the earliest cognitive processes studied in media research using EEG, continues to be of interest in recent work. Variation among brain waves recorded through EEG (specifically beta, theta, and alpha) continues to be used to reliably indicate how much attention, for instance, different types of video advertising elicits in viewers (Daugherty, Hoffman, Kennedy, & Nolan, 2018). Morey (2017) used EEG to study specific memory processes involved in cognitive processing of ads. Specifically, the gamma frequency band of the EEG signal was analyzed in response to exposure to positive and negative political television spots; this brainwave frequency is thought to be related to memory processes related to semantic processing and binding of information in memory. Results indicated that Republicans remembered more content from positive ads, whereas Democrats remembered more content from negative ads. Further, increased activity in the gamma frequency band of the EEG signal was related to increased semantic processing and memory.

EEG has also been used to investigate cognitive and emotional processes associated with newer, interactive media technologies. For example, individuals who report a preference for computer-mediated communication have shown a heightened predisposition to pay attention to emotional stimuli and decreased capacity to regulate emotional responses through their recorded EEG activity (Babkirk, Luehring-Jones, & Dennis-Tiwary, 2016). Researchers have also used EEG to identify neurobiological correlates that make up a brain network underlying the psychological phenomenon known as fear of missing out (FOMO), which is often associated with social media use (Lai, Altavilla, Ronconi, & Aceto, 2016). Finally, one of the most extensive applications of EEG in media processes and effects research has been to examine violent video game effects. In a recent study, frequent players of graphically violent games were found to experience lower levels of empathy, as evidenced by less attention paid to positive and negative facial expressions of others (Stockdale, Morrison, Palumbo, Garbarino, & Siltan, 2017).

fMRI in Media Processes and Effects Research

fMRI measures differences in magnetic properties of fluids and tissues in the brain. Hemoglobin, a protein that transports oxygen in the blood, has different magnetic properties depending on the level of oxygen in blood cells. Neural activity consumes energy in the form of oxygen and glucose. Consequently, neural processing leads to changes of oxygen concentration in blood cells, which changes the magnetic properties in blood, and then leads to small disturbances in an MRI scanner's strong magnetic field (Logothetis & Pfeuffer, 2004). These disturbances can be detected with highly sensitive receivers in the fMRI scanner. This effect is known as the blood oxygen level dependent (BOLD) effect and is one of the foundational principles of functional MRI. Taking advantage of this effect, latest generation fMRI scanners allow for the generation of brain images with a maximum spatial resolution of 0.5–1.0 cubic millimeter and a maximum temporal resolution of 0.5–1.0 second.

As with all psychophysiological measures, the BOLD effect generates a very weak signal compared to the numerous additional noise sources that cannot be avoided in fMRI scanning. Therefore, the generation and analysis of fMRI data requires sophisticated data pre-processing in order to obtain reliable and valid measures of brain activity at specified locations and at specified time points. For readers interested in the details of fMRI data analysis, we recommend

the well-written fMRI textbook from Huettel, Song, and McCarthy (2014). Easy-to-process introductions into fMRI tailored for communication and media scholars are also available (see Weber, Mangus, et al., 2015; Weber, Fisher, Hopp, & Lonergan, 2017). For communication scholars interested in advanced fMRI analyses, we recommend Bassett and Sporns (2017), Sporns (2010), and Turner et al. (in press).

The availability of fMRI facilities for communication scholars has significantly increased within the past ten years. This has led to decreases in costs for fMRI research. As a result, communication and media scholars have started studying a diverse set of topics with fMRI, including the use of brain imaging data as a predictor for persuasive message effectiveness (e.g., Falk, Berkman, Mann, Harrison, & Lieberman, 2010; Huskey, Mangus, Turner, & Weber, 2017; Weber, Huskey, Mangus, Westcott-Baker, & Turner, 2015), attentional processes and flow during media exposure (e.g., Huskey, Craighead, Miller, & Weber, 2018; Weber, Alicea, Huskey, & Mathiak, 2018), narrative engagement and neurocinematics (e.g., Hasson et al., 2008; Schmälzle, Häcker, Honey, & Hasson, 2015), message virality (e.g., Scholz et al., 2017), and affectionate communication in close relationships (Hesse et al., 2013). For recent and more detailed summaries of such studies, we recommend Falk, Cascio, and Coronel (2015), Floyd and Weber (in press), Weber, Mangus, et al. (2015), and Weber et al. (2017).

A Bright Future for Media Processes and Effects Research

This chapter has presented media psychophysiology and neuroscience as a new framework for media processes and effects research. The adoption of the psychophysiological paradigm by media researchers in the late 1980s generated exciting growth in the field. The infusion of neuroscience and other related scientific disciplines into the ways that psychophysiology is applied in media research has further brightened the future of media processes and effects research.

The media psychophysiology and neuroscience framework described here offers a new perspective on media effects. But this new perspective should not lead to intellectual arguments over the importance of studying media effects, as some might conclude. Instead, it should further elevate the importance of media effects research in communication and across all scientific disciplines. But this framework does assume different answers to some of the most basic questions confronting researchers in this area.

- **What are media effects?** According to the media psychophysiology and neuroscience framework, media effects consist of changes that constantly occur when individuals interact with media of any form, as opposed to changes in a static outcome measure obtained after media exposure.
- **Where do media effects occur?** According to the media psychophysiology and neuroscience framework, media effects occur in and emerge from the context-dependent functioning of the embodied human mind.
- **When do media effects occur?** According to the media psychophysiology and neuroscience framework, media effects unfold across time through the functioning of dynamic embodied mental processes evoked through media use.

These perspectives shape a recommended path forward to discovering unique knowledge about media processes and effects.

One area of research where the potential of this new perspective can be clearly illustrated is newer interactive and immersive media technology and content. Although media technology and content change constantly, the basic functions of the embodied human mind do not. This truth gives the framework described in this chapter an advantage over traditional approaches to media research in advancing knowledge of newer forms of media. Traditional approaches tend to focus on effects tied to a specific media form. In contrast, the media psychophysiology and neuroscience framework focuses on dynamic embodied mental processes occurring in the human brain and nervous system, which do not fundamentally change with each new form of media content and technology. This makes the media psychophysiology and neuroscience framework useful for exploring traditional, newer, and yet-to-be-invented forms of media.

An additional reason this approach has tremendous value is that media technologies are becoming increasingly immersive by becoming more embodied. Many newer technologies (e.g., virtual reality; see Chapter 26 in this volume) are designed to engage a wider form and degree of bodily responses through larger and more intense sensory experiences and physical bodily interactions. Such changes make the embodied experience of interacting with newer forms of media technology more critical to understanding the related processes and effects. The media psychophysiology and neuroscience framework offers researchers a valid approach to conceptualize all media use as an embodied experience.

A final point has to do with the unique opportunity that researchers who adopt the framework described here have to build bridges between academia and industry. Academic researchers are (often rightly) more focused on the theoretical and social importance of their work rather than the practical. Mutual enthusiasm for the application of brain science in media research, however, could help break through some of the barriers that have prevented academic-industry research collaboration in the past. This is an opportunity that does not exist within other research areas. For example, neuromarketing has sparked great enthusiasm for brain science in the media industries. Neuromarketing research utilizes all the measures discussed in this chapter (along with several additional ones) in an attempt to gain insight into consumers' brains as a means for optimizing the effectiveness of persuasive messages. This new area of marketing research was formally established around 2006 and now includes formal academic programs, mostly located in European business schools. Numerous research companies offer neuromarketing research worldwide. All of the major US television networks either conduct their own neuromarketing research or have a neuromarketing research provider to test content. One example of a successful academic-industry neuromarketing collaboration involved the Advertising Research Foundation and neuromarketing companies to examine the validity and value of neuromarketing research. That effort resulted in a scientific peer-reviewed publication on the validity of measures used in neuromarketing research (Varan, Lang, Barwise, Weber, & Bellman, 2015). Opportunities for similar collaborations should only increase in the future.

In conclusion, we hope that this chapter is a valuable resource for beginning and more experienced researchers, whether you plan to adopt this framework or not. As we have tried to convey, many additional resources are also available for understanding how psychophysiology and neuroscience is applied in media research. The new age of psychophysiology and brain science in media effects research is exciting, with the potential for new knowledge never greater.

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14

Media Violence and Aggression

Jessica Taylor Piotrowski and Karin M. Fikkers

No one is suggesting that video games are the only reason they went out and committed those horrific acts, but was it a tipping point? Was it something that pushed them over the edge? Was it a factor in that? Perhaps. That's a really big deal.

Jim Steyer, CEO Common Sense Media, 2012

No topic in the field of communication has been more heavily investigated than media violence and its effects on aggression. Each time an act of real-world violence hits the airwaves, the debate about the effects of media violence on aggression rears its ugly head. Some passionately argue that consumption of violent media content is a key route to aggressive behavior; others vehemently deny such a connection. Indeed, time and time again, tempers seem to flare when the effects (or lack thereof) of media violence are discussed.

Perhaps this is because the outcome most associated with media violence—namely aggression—is a topic that evokes deep concern and fear. Or perhaps it is because the events that often trigger the debate are poignant, heart-breaking, and traumatic. The quote above by Jim Steyer, for example, concerns Adam Lanza who, in December 2012, shot and killed 20 school children and six adults in Sandy Hook, New Jersey, and then turned his weapon on himself. Indeed, it is hard to think of images such as those associated with Sandy Hook Elementary School, Stoneman Douglas High School, Virginia Tech University, or the Pulse nightclub without feeling an immediate and urgent need to “fix” the problem. But as tragic as these incidents are—and they are tragic—the best we as scientists can do is use the objectivity science affords us to identify the extent to which media violence is a risk factor for aggression so that we can then identify routes for intervention. Herein lies the goal of this chapter.

From Then to Now

Most scholars view the Payne Fund Studies as a key starting point in the history of media violence (Sparks, Sparks, & Sparks, 2009). These privately funded studies, conducted between 1929 and 1932, were designed to ascertain the effects of movies on the behavior of children and

teens. Although numerous studies resulted, two in particular helped reinforce the notion that violent media content could be a public concern. First, Blumer's (1933) survey of nearly 2,000 respondents revealed that many movie viewers were aware that they had directly imitated acts of violence first witnessed in movies. Shortly thereafter, Dale's (1935) analysis of 1,500 movies revealed that movies of the day placed a heavy emphasis on crime. Together, these studies helped to exacerbate public concern surrounding violent media content.

The Payne Fund Studies certainly helped put media violence into the public foray, but it was work conducted in the early 1960s that attracted even greater attention. Specifically, in 1961, a team of American researchers demonstrated a positive relationship between televised violence consumption and aggressive behavior among youngsters (Schramm, Lyle, & Parker, 1961). In contrast and at nearly the same time, researchers in Great Britain suggested that not only was there no relationship between television violence and aggression but, moreover, argued that finding such a link would be difficult to prove (Himmelweit, Oppenheim, & Vince, 1958). With this conflicted background in mind, the American government held Congressional hearings to better understand the degree to which media violence might be a public concern. During these hearings, scholars argued that it was imperative to form and fund a program of research on the issue of media (then, specifically TV) violence effects, with a specific focus on children, given that this audience was seen as acutely susceptible to media's influence (Murray, 2007).

After these hearings, interest in media violence continued to grow, with significant attention in the U.S. due in part to the assassinations of President John F. Kennedy, Martin Luther King, Jr., and Robert Kennedy. This led to the formation of several government commissions and scientific review committees (e.g., the Surgeon General's Scientific Advisory Committee on Television and Social Behavior), all charged with summarizing the research evidence and identifying the public policy issues associated with media (namely, TV) violence. In many ways, these committees were central to setting the agenda for research and public discussion on media violence for the years ahead (Murray, 2007).

But they were not the only forces that helped set the agenda. In the 1980s, the Federal Communications Commission in the U.S. loosened broadcast restrictions related to public interest programming. This ushered in greater concern associated with television content, particularly children's content, leading to the Children's Television Act of 1990, which, among other things, required broadcasters to air a certain amount of "educational" programming suitable for young viewers (Kunkel, 1998). Within three years of this act, TV networks began labeling children's programs to warn parents about violent and unsuitable content, implicitly making the clear point that such content was, at a minimum, controversial and potentially harmful.

Fast forward to 1998 when the National Television Violence Study (NTVS), commissioned in the U.S., published its results of a three-year study that confirmed a link between viewing television violence and subsequent aggressive behavior among youth and noted that the proportion of violent media was increasing, particularly with content most likely to support behavioral imitation (Wilson et al., 1998). This report was almost immediately followed by the Columbine High School shooting in the U.S. in April 1999, where one teacher and 12 students were murdered in a highly planned attack by two other students. The attack was blamed, in part, on violent video games—*Doom*, *Wolfenstein 3D*, *Duke Nukem*, *Quest*—which the attackers reportedly played, once again perpetuating the (perceived) link between media violence and aggression. As a result of the tragedy, then-President Bill Clinton commissioned a report by the Surgeon General, which, similar to the NTVS, reported a "strong" relationship between media

violence consumption and short-term aggression, although this aggressive behavior “stopped far short of breaking limbs or committing murder” (Bryant, Thompson, & Finklea, 2013, p. 158; U.S. Surgeon General, 2001).

Since the Surgeon General’s report, both social and scientific concerns have continued to grow. As Murray (2007) notes, the extent of this concern is most aptly demonstrated by the fact that over the past half-century, more than 1,000 reports have been published on the issue. And this scholarship still continues with fervor, extending beyond the classic sphere of television and video games to social media, virtual reality, mobile media, and more (e.g., Lull & Bushman, 2016; Patton et al., 2014; Reed, Tolman, & Ward, 2016). But this scholarship has also increasingly witnessed a tension in the field. Although the historical rhetoric mostly suggests that violent media consumption is, at minimum, a risk factor for aggressive behavior, the current scientific community does not unilaterally share this sentiment. Rather, some scholars vehemently argue that the relationship is “much ado about nothing” (e.g., Ferguson & Kilburn, 2010), while others equally fierce in their conviction contend that it is indeed “much ado about something” (e.g., Bushman, Rothstein, & Anderson, 2010). And it is in this context, caught between the fences so to speak, that we find ourselves as scholars continuing to study an issue that may be among the most defining for communication science.

Key Theories

As this brief history shows us, since the early days of electronic media, concerns about the effects of media violence—particularly on aggressive cognitions, attitudes, and behaviors—have persisted. Alongside this concern, scholars have espoused numerous theories to explain why such a relationship might occur. Some of these theories focus primarily on short-term effects of media violence; others take a longer-term perspective.

Social Cognitive Theory

No chapter on the effects of media violence would be complete without explicit acknowledgment and focus on social cognitive theory (Bandura, 2009). In fact, Albert Bandura’s social cognitive theory has been among the most heavily cited when it comes to explaining how violent media content may induce aggressive behavior. This theory posits that humans learn behavior in two ways: by direct experience and by observing others. Like other behaviors, Bandura posits that aggressive ones are learned by (1) seeing certain behaviors, (2) trying them out for ourselves, and then (3) relying on cues from our social environment to encourage us to replicate (or suspend) these behaviors.

Readers are encouraged to review Chapter 7 in this volume for a thorough discussion of this theory, but a brief recap is helpful here. Social cognitive theory was developed and tested in the 1960s in Bandura’s now-classic “Bobo doll” studies. Although the studies varied in design, in the most classic version, Bandura invited a group of young children to watch a movie showing an adult acting aggressively toward a Bobo doll (i.e., an inflated toy that rights itself to a standing position when knocked down). Participants were assigned to one of three conditions: (1) the aggressor was rewarded for aggressive action in the film, (2) the aggressor was punished for aggressive action, or (3) neither reward nor punishment occurred. Following the viewing, all participants were allowed to play with the Bobo doll featured in the movie. Results showed that reward matters: Children in the rewarded

condition imitated more aggressive acts than the children in the punishment or no consequences condition (Bandura, 1965).

The Bobo experiments, and other comparable studies, tried to explain the process of observational learning, in particular when aggressive behavior was rewarded or punished. Importantly, the theory makes the explicit point that audiences do not merely imitate behaviors learned observationally, but rather that, by observing, audiences learn more abstract rules about a behavior, which can then be applied in future situations. In order to learn these abstract rules, Bandura posits that viewers must attend to, remember, and be physically capable of replicating the modeled behavior (see Chapter 7 for more detail about these processes). But even if these processes are accomplished, the observer needs to be *motivated* to perform the behavior. This is where external reinforcement comes into play: If you believe that your environment will not support the planned (aggressive) behavior, then you are less likely to engage in it. But if you believe the environment will support the behavior—think of hero genres whereby the “good guy” receives accolades for acting violently—then you are more likely to replicate the behavior (Bandura, 1986). As such, the presence, type, and context of violent behaviors, together with the attention of the audience, is argued to predict the degree to which violent behaviors may be learned and replicated in society.

Desensitization Theory

Social cognitive theory is used to explain both short and long-term effects of violent media content, with the (implicit) acknowledgment that the replication of behaviors is dependent upon the opportunity to engage in such replication. Desensitization theory, in contrast, is focused primarily on long-term effects. Like social cognitive theory, it has been used to explain a variety of potential media effects, although it has found a particularly strong footing in the media violence literature. In short, desensitization theory posits that repeated exposure to media violence leads to gradual cognitive and emotional habituation in response to aggression. Over time and with increased exposure, audience members become more accustomed to aggressive behavior, which then impacts moral judgments and behaviors. In particular, it is anticipated that audiences will find violent content less ethically problematic and eventually become indifferent to enacting and observing aggressive behavior in their daily life (Carnagey, Anderson, & Bushman, 2007; Gubler, Herrick, Price, & Wood, 2018; Krahe et al., 2011).

Support for desensitization theory can be found in the media violence literature. In what many consider a classic study, Linz and colleagues (1984) showed a group of college-aged men violent “slasher” films (i.e., films in which physical violence against women was quite pronounced) for five consecutive days. By the end of the viewing period, the male participants found the films to be less violent and degrading to women. Even more, after watching a documentary about a trial for sexual assault, the male participants were less sympathetic toward the rape victim than men who had not viewed the slasher films. In similar work, Smith and Donnerstein (1998) demonstrated that the more viewers saw graphic media violence, the more they viewed the material that they once perceived as offensive as significantly less so.

More recently, Krahe and colleagues (2011) provided evidence to support desensitization via skin conductance analyses. In their study, college undergraduates completed a battery of measures, including habitual media violence exposure. Two weeks later, they were shown a violent film clip (and a sad or funny clip for comparison). During viewing, skin conductance—an indicator of physiological arousal (see Chapter 13 in this volume)—was measured continuously.

After the clip, a lexical task measured the accessibility of aggressive cognitions. Results showed that habitual media violence exposure correlated negatively with arousal during violent film viewing and positively with faster accessibility of aggressive cognitions. This was not the case for the comparison group viewers. In line with predictions of desensitization, viewers more accustomed to violent media content were less likely to be aroused by a violent clip and more likely to quickly access aggressive thoughts post-viewing (Krahé et al., 2011).

Just as Krahé relied on psychophysiological measurement (in part) to operationalize desensitization, scholars have also recently begun to rely on brain-scanning technology to provide a more refined look at this potential process (see Chapter 13 in this volume). In this work, researchers used fMRI to view the neural responses of teen boys during violent film viewing (Strenziok et al., 2010). Here, the argument is that active areas of the brain require more oxygen than less active areas. If desensitization occurs, then one would expect less activity in the emotional areas of the brain over the course of exposure. In this particular study, the researchers observed increased oxygen in the area of the brain most often connected with emotional responses at the outset of exposure. But, as the clips being viewed became more violent, the activation diminished. This diminishing oxygen was interpreted by the authors of evidence of a desensitization effect.

Priming Theory

Unlike desensitization theory, which focuses on the long-term consequences of media exposure, priming theory helps explain short-term effects of media exposure. Although priming theory is often linked with research in the political communication sphere (Roskos-Ewoldsen & Roskos-Ewoldsen, 2009), it has also been used to explore how media violence may influence aggression.

Discussed elsewhere in this volume in greater detail (see Chapter 6), in short, priming theory is based on the understanding that humans rely on scripts and schemata to efficiently store information. Schemata are defined as mental frameworks or concepts we use to organize and understand the world. Related to schemata are scripts, which are defined as a specific schema (or schemas) that is associated with the particular order of expected events in a particular context. Schemata and scripts are core to priming theory. Specifically, priming theory relies on the assumption that the human brain consists of different associative schemata that reflect thoughts, ideas, emotions, and actions that are stored in memory and that, when an external stimulus activates a certain schema, it may also activate—or prime—other conceptually related schemata (Jo & Berkowitz, 1994).

In the case of violent media exposure, researchers have argued that consuming media violence can prime certain violent schemata, which in turn may activate related schemata. As a result, these related schemata become (temporarily) more accessible. The now-classic *Karate Kid* study (Bushman, 1998) does a good job of elucidating this process. Specifically, in this study, participants were randomly assigned to either watch the film *Karate Kid* or a non-violent film. Afterwards participants were asked to identify whether a set of letters was an actual word or not by pressing a button as quickly as possible. Half of the depicted words were aggressive in connotation. Viewers of *Karate Kid* had faster reaction times to aggressive words compared to their control group peers. The researcher interpreted this as evidence that certain violent schemata in the brain were primed and thus these schemata were temporarily more accessible, leading to faster judgments regarding subsequent violence-related stimuli.

Excitation Transfer Theory

Just as some scholars have used priming to explain why media violence might enhance short-term aggressive cognitions (and in some instances aggressive behavior), others have suggested it is not the activation of the neural network that explains this relationship but rather it is a more physical response, namely, arousal. Coined excitation transfer theory, this theory assumes that people become physically aroused during certain types of media content, including violent content. The theory argues that, even when the media exposure ends, arousal does not immediately subside but rather dissipates slowly. As such, it can transfer to behavior after the media experience, making that experience seem more arousing (i.e., misattribution; Zillmann, 1978). For example, if you are frustrated (e.g., your boss gives you extra work just as you are leaving the office for the weekend) and then something makes you angry (e.g., someone has dented your new car while you were at work), then the leftover arousal from the first event (frustration) will be added to the arousal from the second event (anger), leading you to experience the latter more intensely than you would have otherwise.

In much the same way, if violent media consumption immediately precedes a situation that induces anger, the experienced anger may be intensified and, as such, increase the likelihood for aggressive behavior. Not only might this misattribution occur, but the high arousal evoked by violent media content is also proposed to increase aggressive behavior by energizing action tendencies immediately after (Anderson & Bushman, 2001). In other words, individuals may feel more aroused after consuming violent media and then opt for action-based activities afterwards, which may be more aggressive in nature than had they consumed less violent media content. Even more, if confronted with a provocation, a person in a heightened state of arousal is more likely to respond aggressively (Ireland, Birch, & Ireland, 2018).

General Aggression Model

The challenge with each of the above theories is that, although they all offer a plausible explanation as to why violent media consumption may induce aggression, they focus on different manifestations of aggression and on different timelines. For example, social cognitive theory looks at both short and long-term effects and is more strongly focused on the replication of modeled behavior. On the other hand, desensitization and priming theory tend to focus most on aggressive cognitions, with desensitization explaining potential long-term effects and priming explaining immediate ones. Contrast this with excitation transfer theory, which focuses on physiological responses in the immediate moment, with some (potential) connection to behavior. Combined, these differing theories indicate that the route to effect is likely dependent on characteristics of the content *and* of the audience. This is what Anderson and Bushman observed, and from this observation they united these theories in the General Aggression Model (GAM) (Anderson & Bushman, 2002, 2018).

Not a communication or media effects model per se, the GAM is designed to identify how individual and situational factors may directly (and in combination) influence three potential routes to aggression—cognition, affect, and arousal—that subsequently influence appraisal and decision-making processes, which in turn influence behavior. The model specifies both immediate and longer-term effects. In the short term, the model posits that violent media can cause increases in aggression via a person's cognitive, affective, and physiological state. For example, Bushman and Anderson (2002) note that playing a violent video game may prime aggressive

cognitions, increase arousal, and create an angry state. In the long-term, the GAM specifies that learning processes—namely, learning how to perceive, interpret, judge, and respond to events in the environment—will influence knowledge structures. In this way, each violent media episode is seen as one additional trial to “learn that the world is a dangerous place, that aggression is an appropriate way to deal with conflict and anger, that aggression works” (p. 1680) and more. With repeated exposure, these hostile knowledge structures become more complex and difficult to change, which may ultimately lead to an aggressive personality (Bushman & Anderson, 2002). In line with the predictions of the GAM, a recent meta-analysis demonstrated that increased exposure to violent media content is both cross-sectionally and causally linked to increased hostile attributions in daily life (i.e., perceiving the ambiguous actions of others as aggressive actions) (Bushman, 2016).

Differential Susceptibility to Media Effects Model

In recent years, the GAM has been one of the key models used to explain how violent media may affect audiences. This is relatively unsurprising given its comprehensive and nuanced stance. Yet, it is not a media-effects model per se but rather a model focused on the predictors of aggression. And while aggression is certainly the most commonly investigated outcome associated with media violence (and, as such, the focus of this chapter), scholars have investigated other (related) outcomes, including criminal violence (Savage & Yancey, 2008), empathy (Vossen, Piotrowski, & Valkenburg, 2016), prosocial behavior (Anderson et al., 2010; Bushman & Anderson, 2009), social-emotional development (Beyens, Piotrowski, & Valkenburg, 2018), issue acceptance (e.g., rape myth, Emmers-Sommer, Pauley, Hanzal, & Triplett, 2006; gun control, McGinty, Webster, & Barry, 2013), ethical decision-making (Gubler et al., 2018), and societal moral panic (Burns & Crawford, 1999; Ferguson, 2008). These outcomes do not fit squarely within the GAM and, at the same time, face the challenge as to which of the competing theoretical models may best explain any potential relationship with exposure to media violence. Here is where the differential susceptibility to media effects model (DSMM) comes into play (Valkenburg & Peter, 2013).

The DSMM is among one of the newest models of media effects in communication science. Considered by some to be a tour de force, it is a comprehensive model that takes a nuanced perspective to understand the ways in which media—including violent media—affect users. The model makes the explicit point that media effects are not homogeneous and instead that, a priori, it is crucial to identify for whom and in what situations media effects may (or may not) occur. Broadly speaking, the DSMM posits that media content will directly influence one’s response to media (i.e., cognitive, affective, and physiological response states), which will subsequently influence the breadth and depth of experienced media effects. In other words, content matters. In particular, the way that content is shaped, contextualized, and delivered influences one’s responses. But the model goes further to acknowledge that not all users will respond to all content in the same way. Instead, developmental, dispositional, and contextual factors are said to influence both media selection and the processing of media content, which then determines media effects. This differential susceptibility is argued to explain why some individuals are particularly affected by media content and others are seemingly less so (see also Piotrowski & Valkenburg, 2015).

While the DSMM is relatively new and has only been applied in a scattering of studies on media violence, the available evidence—both using and related to the DSMM—suggests that the

model deserves careful consideration. For example, consider the issue of media content for a moment. While researchers often use the phrase “violent media” as though the content was homogeneous (including here in this chapter), violent media content is undoubtedly a far more heterogeneous concept. As Valkenburg and Piotrowski (2017) note,

a documentary containing violent scenes that is meant to inform viewers cannot be compared with a movie in which a character attacks his enemies with a chainsaw ... it is not difficult to predict that the effects of *Schindler’s List* will differ from those of *Terminator Genisys*.

(p. 111)

And indeed, when it comes to the portrayal of media violence, research has suggested at least five relevant contextual variables that may increase the likelihood of subsequent aggression: (1) appealing perpetrators, (2) rewarded violence, (3) justified violence, (4) consequence-free violence, and (5) arousing violence (Anderson et al., 2010; Bandura, 1986; Krmar & Valkenburg, 1999; Paik & Comstock, 1994; Wilson et al., 1998, as cited in Valkenburg & Piotrowski, 2017 in Table 7.1), inasmuch as the DSMM explicitly argues that these content attributes are crucial to consider when understanding which violent media may induce effects.

But it is not just a question of exposure (or not) to media content. The literature has numerous examples where media violence had little to no documented effect on audiences. In many cases, effect sizes reported in media violence studies are relatively small, while in other cases there seem to be reasonably robust effects for certain groups of the population. This raises the question as to who is more or less likely to experience consequences of violent media. Consistent with the predictions of the DSMM, a closer examination of the literature on media violence suggests that there are three global factors that can modulate the relationship between media violence exposure and subsequent effects: development, disposition, and social factors (Valkenburg & Piotrowski, 2017; see also Wiedeman, Black, Dolle, Finney, & Coker, 2015).

In terms of development, for example, the work with children and adolescents indicates that younger children are more at risk of negative outcomes associated with media violence, particularly children younger than age seven (Paik & Comstock, 1994). Although several competing explanations for this susceptibility exist, most agree that it is due to a combination of the portrayals of media violence and the still-developing cognitive and emotional capacities of children. Specifically, during the younger years, violent media content is often depicted in animated movies or cartoons—often as part of the rewarded-hero genre—which in general has been shown to increase the likelihood of media violence effects (refer back to predictions of social cognitive theory). Alongside this, thanks to still-developing cognitive capacities, young children struggle to separate reality from fantasy, which makes standard media literacy techniques (e.g., “this is not real!”) difficult to employ. Further, as a result of their still-developing emotional and physiological capacities, young children struggle to regulate their responses more so than their older peers, leading to intense emotional and physical arousal, which subsequently predicts more lasting effects (refer back to excitation transfer theory).

Much like development, dispositional differences have also been shown to modulate the effects of media violence. For example, a rich body of research shows that individuals with an aggressive temperament, as well as individuals with a strong need for sensation, seem to be more susceptible to media violence effects. Valkenburg and Peter (2013) argued that disposition-content congruency may explain this finding. Specifically, they argued that violent media—with its frequent

spacing and scene changes, alongside its inclusion of aggressive content—aligns well with aggressive and high-sensation-seeking temperaments. As a result, they explain (via hedonic contingency; Wegener & Petty, 1994) that the processing of violent content is more aesthetically pleasurable for some viewers, which may lead to amplified effects.

Lastly, also in line with predictions of the DSMMM, a clear body of research suggests that the context in which media violence is consumed also influences the degree of any potential effects. In our Center at the University of Amsterdam, this role of context has been of particular interest as we have sought to understand how differential contextual factors may influence media violence effects on teens. Inspired by work on cultivation theory (see Chapter 5 in this volume) and the notion of resonance effects (Morgan & Shanahan, 2010), for example, we have explored whether living in an environment that (implicitly or explicitly) endorses aggressive behavior may augment the effects of violent media consumption in adolescents. In particular, if a living environment does not place clear sanctions on aggression, then individuals may be less likely to reject aggression and instead see it as an acceptable behavior for replication. Our results bear support for these expectations. Specifically, we found that teens growing up in homes with increased family conflict seem to be particularly aroused by media violence and are more likely to demonstrate later aggression, which we refer to as a double-dose effect (see Fikkers, Piotrowski, & Valkenburg, 2016; Fikkers, Piotrowski, Weeda, Vossen, & Valkenburg, 2013). Even more, we identified a similar pattern with teens' peer networks in that teens seem to be more aggressive after violent media consumption if they believe that the peers in their life are also likely to engage in similar behaviors (Fikkers, Piotrowski, Lugtig, & Valkenburg, 2016).

Much Ado about Nothing ... or Something? The Evidence

As previously noted, the majority of research looking at media violence has focused on the degree to which media violence may induce aggressive feelings, thoughts, or behavior¹ (Murray, 2013). Admittedly, this chapter too has focused mostly on those outcomes. And all told, the evidence accumulated to address media violence and aggression has yielded compelling findings. Indeed, we see that experimental data have provided internally valid evidence about short-term effects, whereas correlational work has yielded externally valid evidence about long-term relationships. For example, consider the now-classic study by Leyens and colleagues in which youth living in an institution for juvenile delinquents who were shown violent movies every evening for a week (compared to a group who watched neutral movies) became more aggressive after viewing. This study certainly provides an interesting discussion from the experimental domain (Leyens, Camino, Parke, & Berkowitz, 1975). Similarly, the equally classic study by Eron and colleagues provides a rich example from the correlational domain (Eron, Huesmann, Lefkowitz, & Walder, 1972). Here, the authors observed youngsters' preferences for media violence and a tendency to engage in aggressive behavior at age eight. Ten years later, these subjects were observed again for both violent media preference and aggressive behavior. The researchers found that watching violent content at age eight predicted increased aggressive behavior a decade later. And although they did not find a reciprocal pattern in their work, other scholars using a similar methodological paradigm did provide evidence for reciprocity, showing that violent media affects aggressive behavior and aggressive behavior subsequently predicts increased preference for violent media (e.g., Slater, Henry, Swaim, & Cardador, 2004).

These—and the handful of studies described earlier—represent just a few examples of the more than 600 studies (Murray, 2013) investigating the effects of media violence. Any attempt at a comprehensive reporting of all of these studies is a fool's errand. Instead, it seems more logical to spend the final few paragraphs of this chapter examining the *size and scope* of media violence

effects. That is, although our historical accounting of the scholarly record certainly suggests that media violence is a concern for (some members of) society, and although a great number of theoretical suppositions explain why and how media violence may affect aggression, perhaps a more useful question to interrogate as a concluding thought is the degree to which the empirical evidence supports or rejects the assertion that media violence is worthy of concern. To that end, we turn to meta-analyses of the effects of media violence. Although meta-analyses may provide overestimations of effect sizes due to publication biases, errors in statistical reporting, or varying quality of included studies (Ferguson, 2007; Savage & Yancey, 2008), they offer us a reasonably comprehensive lens with which to assess the effects of media violence.

As of the time of writing, seven meta-analyses have investigated the influence of media violence on aggressive behavior. The first, conducted by Paik and Comstock (1994), suggested a moderate ($r = .31$) relationship between violent media and aggressive behavior. The others (Anderson et al., 2010; Bushman & Huesmann, 2006; Ferguson, 2015; Ferguson & Kilburn, 2009; Greitemeyer & Muegge, 2014; Sherry, 2001) have all similarly demonstrated a positive (though relatively weaker) correlation (ranging between $r = .08$ and $r = .20$) between violent media consumption and subsequent aggressive outcomes, with reported effect sizes that are considered by statisticians to be small to moderate (Cohen, 1988). In these cases, a statistically small to moderate effect means that there is a small to moderate chance of media violence consumption causing aggressive behavior. And this, of course, does not include other potential effects of media violence (e.g., social-emotional development; Beyens et al., 2018; Vossen et al., 2016). So, the question becomes, is a small or moderate chance of media violence effects sufficient to warrant concern? Herein lies the debate.

Indeed, perhaps the largest issue in the field of media violence effects is not whether there is a small to moderate effect of media violence on subsequent aggression, but whether this effect is *meaningful* (Valkenburg & Piotrowski, 2017). On the one hand, one group of scholars (e.g., Anderson & Bushman, 2001; Bushman et al., 2010) has staunchly argued that these effects should be taken seriously because large parts of society are exposed to violent media, effects cumulate over time, and potential consequences are severe (Fikkers, 2016). Yet there are others who argue, with similar intensity, that effects are statistically so small that they are negligible and not a concern to public health (e.g., Ferguson & Kilburn, 2009, 2010). They take the stance that meta-analytic results are likely too liberal because they have not taken into account risk factors of “real importance” (e.g., an aggressive temperament or harsh familial environments; Ferguson & Kilburn, 2010, p. 176). To this end, in their work, they show that—when controlling for such risk factors—any detected effect is nearly non-existent and, as such, they argue that efforts to reduce media violence exposure are misdirected and, instead, society should target “true” risk factors of aggression (also see Kühn et al., 2018 for a discussion of null effects).

So, where does this leave us? In this hotly contested debate, it almost feels as though there are two “camps”: one that acknowledges the existence of effects, the other rejecting them. Both are working with the same data, the same articles, the same results, and drawing entirely different interpretations. This makes for a messy field, not only for scholars but also for public stakeholders—parents, caregivers, health care professionals, policy officials—who have a vested interest in the topic. And at a time when media are increasingly digital, when we are no longer modeling media violence but are quite literally performing “virtual” violence in rich, immersive platforms (Daneels, Malliet, Koeman, & Ribbens, 2018; Madsen, 2016), the importance of this field cannot be underestimated. Although we cannot tell you as a reader which side you should choose, we would suggest that, rather than two sides, there might be a third viewpoint.

Specifically, in our own research, we interpret effect sizes for what they are: an aggregate of the relationship between media violence and aggression. Although effect sizes help us understand what is going on for *most* people, they can easily mask the messier truth: namely, a minority of individuals may be particularly influenced by media violence, while others may be less so or unaffected altogether. For example, as discussed earlier, children growing up in high conflict homes or with peers who are more aggressive may be particularly at-risk for the effects of violent media, whereas individuals without these additional risk factors for aggressive behavior may be more resistant to media violence (Fikkers et al., 2013, 2016). Even more, we would argue that this small group is meaningful because, in absolute terms, we could be talking about millions of people worldwide (Valkenburg & Piotrowski, 2017). That does not (necessarily) mean, however, that we should take to the airwaves to warn against the dangers of effects. Rather, it is important to recognize that, for the majority of audience members, media violence seems to have a negligible effect on aggressive outcomes. It is our role as scholars to ensure that both messages are accurately conveyed and understood if we hope to support at-risk individuals and simultaneously counter the moral panic rhetoric that typically accompanies real-world violent tragedies. This requires continuously engaging in a healthy scholarly and public debate about media violence. As Fikkers (2016, p. 14) poignantly noted, “the current debate [can become] even more meaningful when discussants forego the notion that effects should be either large, important, or for everyone, or small, unimportant, and for none.” This is the future of the field: foregoing the bivalent discussion in favor of a nuanced, messier perspective that better reflects the scientific record and our collective realities.

Conclusion

Nearly a century ago, scientists began to ask questions about the influence of media violence on its users. Although these questions have grown in complexity—just like the media spaces in which they are entrenched—we still find ourselves without a definitive answer to the question “Does media violence induce aggression?” Despite advanced theories, methods, and approaches, the literature does not bear a “yes” or “no” answer. If anything, after nearly 100 years, our best answer is “probably, sometimes.” But then again, maybe “sometimes” *is* the answer. We now know that not all violent media content leads to effects. We know that the presentation and context of violent media content (e.g., justified, rewarded), alongside a host of individual variables, influence how users respond to the content and subsequent effects. Furthermore, we (perhaps somewhat implicitly) now see the value of asking, a priori, “Effects on whom?” Rather than statistically controlling for individual differences, and thus assuming that the effect of media violence is only truly meaningful if it holds for all media users, empirical research that conceptualizes and tests the complex relationships between media violence and individual difference variables is key for the future (Fikkers & Piotrowski, 2019). Not only will this better map onto the reigning theoretical models of the day, but it will better reflect our diverse multicultural spaces (Krahé, 2016) and, in doing so, help us develop improved predictions about how, for whom, and why media violence effects occur.

Although readers of this chapter may find it frustrating that after nearly a century we still cannot offer a simple yes/no answer as to whether media violence induces aggression, we would argue the problem lies not with the answer but rather with the answer options. Our world is too complex for such bivariate response categories. “Sometimes.” This is the answer that best reflects the complexity of the world we live in and the media space we share in. Some media violence affects some individuals in some situations: this is what we

know to be true. And, with this knowledge in hand, it is our job to understand the boundary conditions to this statement. Serious work on that job has already begun, and it is likely where the field has the greatest opportunity for growth. Rather than staking a claim in a particular camp, we would argue that our greatest future lies in a healthy debate wherein we can accept that “sometimes” may best conceptualize the field. From that point, we can then work together to identify who is most vulnerable to the undesirable effects of violent media in order to affect real societal change.

Note

- 1 The literature on aggressive behavior reports both direct (i.e., physical; for example, kicking or hitting) and indirect (also called social or relational aggression; for example, gossiping or spreading rumors) aggression; however, the great majority of work has focused on direct aggression. It is only in recent years that we have seen a focus on indirect aggression as well (Coyne & Archer, 2004; Gentile, Coyne, & Walsh, 2011).

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15

Media and Sexuality

Paul J. Wright

This chapter provides a review of scientific research on media effects and sexuality, with a particular focus on studies from the past two decades. Scholars interested in the effects of sexual media have primarily been communication scientists studying the role of media messages in sexual socialization processes and outcomes. Their examinations of mainstream entertainment media, social media, and sexually explicit media designed to arouse the consumer (aka “pornography”) are reviewed herein. Due to space constraints, topics receiving the most attention from scholars and the public are prioritized; citations are illustrative rather than exhaustive.

Theory

Media sex effects research, for many years, tended to be either based on theories not originally developed with sexual media in mind, or variable analytic and not tied to any particular theory (Ward, 2003). This changed with the development of the sexual script acquisition, activation, application model ($_3$ AM) of sexual media socialization (P. J. Wright, 2011). First articulated in the context of mainstream media effects on youth sexual behavior, the model has since been applied to a wider array of sexual media, age groups, and outcomes.

The $_3$ AM is a critical synthesis and integration of a variety of mass communication, information processing, and behavioral theories, as well as conceptual and empirical work not tied to any particular named theory. It posits a multipart sequence for socialization effects due to sexual media exposure, a variety of pathways through which effects can result, and a large number of moderating factors at each step of the model. This complexity makes a brief encapsulation difficult, but the following paragraphs summarize its essence.

The $_3$ AM specifies both mediating mechanisms and moderating factors that operate simultaneously. At the level of mediation, the model proposes that the socializing effects of sexual media are carried through the acquisition, activation, and application of sexual scripts. Sexual scripts are symbolically imparted guidelines for sexual behavior; they answer questions about who should be engaging in what types of sexual activities with whom, when, how, under what circumstances, and to what consequence. Accordingly, the sexual scripts people possess have

a direct impact on their sexual beliefs and attitudes, which can ultimately impact their sexual behavior. The model asserts that exposure to sexual media can result in the learning of novel sexual scripts (acquisition), the priming of already acquired sexual scripts (activation), and the utilization of sexual scripts to guide one's own activities or judgments about other people's activities (application). The model further proposes that scripting effects can be specific or abstract. A specific scripting effect occurs when the observation of a particular behavior affects the viewer's beliefs or attitudes about that specific behavior. An abstract scripting effect occurs when the viewer deduces the general principle or belief guiding the modeled behavior and then references this information to guide beliefs and attitudes about different, but conceptually related, behaviors. In this way, the model predicts that viewing specific sexual behaviors can lead to modified cognitions of not only those behaviors but also of behaviors not depicted.

At the level of moderation, the model proposes that a number of factors either increase or decrease the likelihood that sexual scripts observed in media will be acquired, activated, and applied. These include *content factors* such as model attractiveness, behavioral rewards and punishments, and depiction prevalence; *audience factors* such as existing sexual scripts, personal motivations, psychological involvement, identification, perceptions of norms and risk, evaluations of functionality and realism, moral views, and efficacy; and *situational factors* such as script-situation correspondence, time pressure, and sexual arousal. Additionally, *accessibility* moderators are specified for the stage of sexual script activation (e.g., recency, frequency, and duration of exposure, message vividness).

The model has evolved to recognize that several of the variables originally specified as moderators can also operate as mediators, depending on the person and situation. For instance, although differences in existing sexual attitudes and normative perceptions can result in divergent reactions to the same sexual depictions (moderation), it is also possible that certain depiction elements can lead to shifts in specific sexual attitudes and norms that ultimately influence other sexual cognitions or particular sexual behaviors (mediation) (P. J. Wright, 2018b; P. J. Wright, Tokunaga, & Kraus, 2016a). The sections that follow demarcate studies of moderation and mediation, and emphasize variables theorized as important by the 3AM.

Mainstream Media

After many years of calls with few responses, studies investigating the effects of sexual depictions in mainstream media have now become common, cross-disciplinary, and cross-global. Following the findings of content-analytic studies, researchers have hypothesized effects on variables related to a more permissive approach to sex, more diverse and frequent sexual experiences, sex associated with increased sexual risk, increased perceptions that others are sexually experienced or engage in permissive or risky sex, sexually aggressive cognitions and behaviors, and a more gendered view of heterosexual sex. For certain types of mainstream media, researchers have also hypothesized positive effects on perceptions of and attitudes toward gay men and lesbian women.

Numerous cross-sectional surveys have explored mainstream media use and various cognitive and behavioral outcomes. For example, greater mainstream media consumption has been associated with more positive (or permissive) attitudes toward sex outside of marriage, one night stands, sex in public, casual oral sex, having ongoing sexual relationships with more than one person simultaneously, and sex as an exchange of favors (e.g., Chia, 2006). In terms of social perceptions, mainstream media use has been correlated with higher estimates of others' frequency of sexual intercourse, sex with multiple partners, sex in public places, extramarital sex, and teenage pregnancy

(e.g., Woo & Dominick, 2001). With regard to gender and heterosexuality, more media use has been associated with the belief that men are sex driven, women are sexual objects, and dating is a battle between the sexes (e.g., Ferris, Smith, Greenberg, & Smith, 2007). Finally, a few studies have found direct or indirect correlations with more acceptance of same-sex sex, willingness to interact with gay men, and positive attitudes toward homosexuality (e.g., McLaughlin & Rodriguez, 2017).

At the level of sexual experience, greater mainstream media use has been correlated with (among other behaviors) intercourse initiation, intercourse frequency, one night stands, and multiple sexual partnerships (e.g., Ybarra, Strasburger, & Mitchell, 2014). In terms of sexual risk, intention to have sex while intoxicated, reduced perceptions of pregnancy risk, lower intentions to avoid sex if protection is unavailable, and unrealistically optimistic beliefs about life after an unintended pregnancy have all been correlated with greater mainstream media use (e.g., Martins & Jensen, 2014). Finally, with regard to sexual aggression, media use is associated with rape myth acceptance, tolerance of the use of force to have sex, heightened perceptions that rape accusations may be false, reduced intentions to seek and adhere to sexual consent, and attempted or completed rape (e.g., Kahlor & Eastin, 2011).

Although rarer, longitudinal surveys have assessed changes in attitudes and actions over time, as well as selective exposure as a confounding, alternative explanation for observed effects. For example, Vandenbosch and Eggermont (2015) found that, among Belgian adolescents, girls' and boys' magazine use over six months predicted valuing their body more for appearance (e.g., sex appeal, physical attractiveness) than for competence factors (e.g., physical coordination, stamina). Aubrey and Smith (2016) found that television and magazine use predicted more positive and permissive attitudes toward "hooking up" (i.e., casual, uncommitted sex) among U.S. college males eight months later; similarly, music video exposure over the course of a year predicted belief in rape myths among Dutch female adolescents (van Oosten, Peter, & Valkenburg, 2015). Further, a year's worth of television and movie use among Flemish youth was associated with a reduced fear of contracting AIDS (Lemal & Van Den Bulck, 2009). Moreover, Brown et al. (2006) found that mainstream media use among white adolescents in the U.S. predicted intercourse initiation two years later.

Corroborating experimental studies have also been conducted. With regard to gender, exposure to images of sexualized women led British women to report an increased valuation of their body in terms of appearance (e.g., sex appeal, physical attractiveness) rather than competence factors (e.g., strength, physical fitness) (Halliwell, Malson, & Tischner, 2011). Galdi, Maass, and Cadinu (2014) reported that exposure to sexual television segments led to an increased favorability toward nonrelational sex in Italian men; similarly, Romero-Sanchez, Toro-Garcia, Horvath, and Megias (2017) found that experimental exposure to magazine covers with sexualized women led to an increase in self-reported rape proclivity among certain Spanish men. On a more positive note, experimental exposure to sympathetic cinematic depictions of lesbian women and gay men led to a stronger belief among Chinese college students that sexual orientation is innate and more positive attitudes toward expressions of same-sex sex (Zhang & Min, 2013). Also, in terms of sexual risk, Finnerty-Myers (2011) reported that exposure to television programming depicting negative consequences of unintended pregnancy led to more positive attitudes toward condoms and intentions to avoid risky sex among certain U.S. college students.

Associations between the use of mainstream media with particular sexual themes and related sexual outcomes have not always been found, however, suggesting that some effects are indirect or contingent on moderating factors. That contingency factors attenuate main effects has long been understood. It is only more recently, however, that scholars have realized that the lack of

a direct association between two variables does not preclude the possibility that one may indirectly affect the other through an intermediary (i.e., mediating) variable.

A variety of potential mediators between exposure to mainstream media sex and sexual cognitions and behaviors have now been studied. Of particular interest are those that are both theoretically predicted and have been studied in multiple samples. One potential mediator that meets these criteria is self-efficacy. Seeing media models successfully enact sexual behaviors may increase viewers' confidence that they can do the same. Early evidence suggests that self-efficacy is indeed a mediating factor. In their longitudinal study of U.S. adolescents, Martino, Collins, Kanouse, Elliott, and Berry (2005) found that baseline television exposure predicted heightened sexual self-efficacy (e.g., the ability to talk about sex with a potential partner), which in turn prospectively predicted a higher probability of having initiated intercourse. In their experimental study of U.S. college students, Moyer-Gusé, Chung, and Jain (2011) found that exposure to a soap opera featuring a sexual health discussion led to an increased likelihood of participants engaging in discussions of sexual health two weeks later, in part due to an increase in sexual discussion self-efficacy.

Another mediator is normative perceptions. Recurrent depictions of particular sexual viewpoints and practices may influence viewers' normative perceptions and result in corresponding adjustments to their sexual judgments or behaviors. As one example, Gottfried, Vaala, Bleakley, Hennessy, and Jordan (2013) found in their two-wave panel study of U.S. adolescents that sitcom viewing at an earlier wave predicted intercourse initiation at a later wave, in part through the perception that peers are engaging in sexual intercourse. As another example, Chia (2006) surveyed emerging adults in the U.S. and found evidence suggesting that more frequent television viewing was associated with more personally permissive sexual attitudes via heightened perceptions that peers' sexually permissive attitudes were affected by television viewing. Understanding of the role of normative perceptions should be considered preliminary, however, as measures and samples have differed, as has the consistency of results.

Perception of risk is another mediator of mainstream media sex effects. Observing positive consequences and no (or infrequent) negative consequences could reduce viewers' inhibitions and encourage parallel sexual behavior. Fisher et al. (2009) surveyed adolescents in the U.S. and found that television viewing was associated with various indicators of risk perceptions about sexual intercourse, including lower expectations of negative consequences (e.g., STIs, pregnancy) and higher expectations of positive consequences (e.g., fun, enjoyment). Sitcom viewing specifically has been shown to predict intercourse initiation over time, in part through risk perceptions (e.g., lower perceptions of harm and higher perceptions of benefit) (Gottfried et al., 2013). Also, viewing a television program that sanitized unintended pregnancy through humor led males to reduced perceptions of the negative consequences of unprotected sex, which in turn predicted stronger intentions to engage in unprotected sex (Moyer-Gusé, Mahood, & Brookes, 2011).

Additional potential mediators are beginning to be investigated, such as affective engagement, counter-arguing, and psychological reactance. Another—sensation seeking—is of particular interest because this variable has typically been conceptualized as a stable trait that could only confound associations between media consumption and sexual behavior. Instead, in their multi-year, multi-wave panel study of U.S. youth, O'Hara and colleagues (2012) found that earlier movie consumption led to later increases in sensation seeking, which in turn led to earlier sexual debut and higher levels of risky sexual behavior. Findings such as these suggest that variables that have traditionally been modeled only as "controls" may need to be re-envisioned as potential mediators or moderators.

Similar to the increasing focus on mediation (mechanism), an increasing number of studies are focusing on moderation (contingency). The key question in this regard is why some viewers are more, while others are less, affected when exposed to the same sexual depictions. Given the emphasis on youth in research on mainstream media sex effects, it is not surprising that parental factors have been the focus of many studies. However, studies tend to examine patterns of parental behavior surrounding media with youth sexual outcomes, rather than studying how parental behaviors may moderate the effects of youths' actual media use. But a few studies have explored whether associations between media use and youth sexuality vary across differing types of parental behaviors using formal moderation analysis. A central focus has been on parental media intervention strategies, such as setting restrictions on the use of media or discussing media that has been viewed. For example, in their longitudinal study of adolescents in the U.S., Ashby, Arcari, and Edmonson (2006) found that the combination of frequent television viewing and no parental content restrictions resulted in the highest rates of sexual initiation. In contrast, the lowest initiation rates were found among youth who viewed television less frequently and had content restrictions placed on their use.

Parental media intervention has not always emerged as a relevant or consistent moderator, however. It may be that parental behaviors more core to the formation of sexual scripts, such as engaging in direct and candid discussions about sex, are more important buffers than behaviors specific to media alone. For example, P. J. Wright, Randall, and Arroyo (2013) found that U.S. collegiate women's viewing of teen mom reality television predicted a higher likelihood of pregnancy-risk behavior when their fathers did not communicate with them about sex while growing up, but a lower likelihood of pregnancy-risk behavior when their fathers communicated often with them about sex while growing up. Other research suggests that parental sexual values may also moderate media effects (Starr & Ferguson, 2012).

Additionally, perceptions of media realism have been a theoretically important focus of research. In an early experiment, Taylor (2005) found that the effects of exposure to sexual television depictions on U.S. college students' permissive sexual attitudes were generally limited to students who perceived such depictions as realistic. In a more recent survey of U.S. adolescents, Martins and Jensen (2014) found that associations between teen mom reality television viewing and unrealistically optimistic perceptions about the lifestyles and finances of teen moms were strongest among those who perceived the genre of reality television as realistic. In an experiment conducted with collegiate men in Spain, Romero-Sanchez et al. (2017) found that the effects of exposure to sexualized images of women from men's lifestyle magazines on self-reported rape proclivity were only present when participants perceived men's magazines as realistic sources of learning about sex and gender. Results such as these leave little doubt that realism perceptions are a moderating factor under certain conditions. But the absence of moderation either for some outcomes (Taylor, 2005) or for some contexts (Ferris et al., 2007) indicates that additional research and conceptualization are needed.

Another theoretically important variable that has received some attention is perceived similarity with media characters. Most studies, though, have not tested perceived similarity as a boundary condition on the effects of exposure. Instead, they have correlated measures of perceived similarity directly with the outcomes of interest in their particular studies. The experimental study with college students in the U.S. conducted by Moyer-Gusé et al. (2011) points a bit more directly to the moderating importance of perceived similarity. In the exposure condition (a soap opera featuring sexual health discussion), identification with the characters predicted an increased intention to engage in sexual health discussions. But a recent experimental

study with adolescent girls in the U.S. provides the most direct evidence. Behm-Morawitz, Aubrey, Pennell, and Kim (2017) found that exposure to teen mom reality television was only associated with more positive attitudes toward becoming a teen mom when perceived similarity was high. However, perceived similarity did not moderate exposure effects for other outcomes, such as belief in myths about teen pregnancy. Like the research to date on perceived realism, this inconsistency, as well as the overall paucity of studies that have directly tested for moderation, indicates a need for additional research and theoretical nuance.

Other potential moderators have been studied (e.g., previous sexual experience, age, media multitasking, recency of exposure, whether depictions are visual or verbal), but two are especially important to note because of how frequently they have been investigated. The first is gender (primarily studied as male/female). No clear pattern can be deduced from these studies. Sometimes gender is a null moderator, other times associations are stronger for men, still other times associations are stronger for women (Collins et al., 2004). The second is ethnicity. Some studies have found interactions between ethnicity and exposure on youths' sexual risk behavior, such that particular groups show no effect (Brown et al., 2006). But when those groups are isolated and studied on their own, exposure is associated with sexual outcomes in expected ways (Ward, Hansbrough, & Walker, 2005). It is not argued here that gender and ethnicity should not in and of themselves be tested as moderators. However, the variability of results to date, as well as a lack of a convincing rationale for the variability, suggests that understanding may be furthered better by individual difference assessments that are more psychographic in nature.

Social Media

Scholars have also begun to examine the nature and impact of sex found in social media, such as Facebook and Instagram. This body of research is in its infancy compared to the study of sex in mainstream entertainment media, but certain commonalities can already be identified.

First, studies tend to focus on adolescents and emerging adults. Second, cross-sectional and longitudinal survey research, as well as experimental findings, suggest that posting and viewing sexual posts may increase the likelihood of certain risky sexual beliefs and behaviors (e.g., van Oosten, Peter, & Boot, 2015; C. L. Wright & Rubin, 2017).

The primary focal point of the research to date is sexual objectification. Findings suggest that social media activity is associated with girls' and young adult women's self-sexualization, objectified body-consciousness, and decreased sexual assertiveness (e.g., Manago, Ward, Lemm, Reed, & Seabrook, 2015). The more girls and women use social media, the more they may compare themselves to others who self-sexualize, and the more they may feel like they too should self-sexualize (Fardouly, Diedrichs, Vartanian, & Halliwell, 2015). However, no convincing evidence exists that posting sexualized photos on social media is the result of or increases offline sexual agency (Ramsey & Horan, 2018).

Sexually Explicit Media

Unlike the study of mainstream media sex effects, investigations into the impacts of pornography have been conducted for many decades. The traditional emphasis on sexual aggression and satisfaction has been expanded to include many additional points of analysis, several of which correspond thematically to the sociosexual domains of interest to mainstream media sex

researchers. Specifically, similar to mainstream media sex scholars and following the results of content analytic studies, pornography researchers have hypothesized that exposure to sexually explicit media increases the likelihood of sexual attitudes and behaviors that are more unrestricted, risky, and gendered, but also more tolerant, particularly of lesbian women and gay men. Aggression and sexual satisfaction have continued to be important areas of inquiry.

Although still relatively rare, meta-analyses of the pornography literature have been much more common than meta-analyses of the mainstream media sex literature. It is not surprising that most pornography meta-analyses have focused on sexual aggression, given the longevity of the research area and its obvious social and public health importance. Early meta-analyses found that pornography exposure could increase the likelihood of nonsexual aggression and rape myth acceptance (e.g., Hald, Malamuth, & Yuen, 2010). More recently, P. J. Wright, Tokunaga, and Kraus (2016b) found in both cross-sectional and longitudinal survey studies that pornography consumption was associated with committing actual acts of sexual aggression. Results were similar in the U.S. and internationally and did not vary by gender. Although both associations were significant, the effect size for verbal sexual aggression was stronger than for physical sexual aggression, and the general pattern of results suggested that more violent content may have an exacerbating effect.

It has been hypothesized that reduced interpersonal (relational and sexual) and intrapersonal (self and body) satisfaction may be caused by viewing pornography, due to upward comparisons between one's own and one's partners' sexual appeal, acumen, and availability in comparison to the idealized actors and hypersexual scripts in pornography. Recent meta-analysis results suggested that pornography consumers are more likely to find fault with their partners than themselves (P. J. Wright, Tokunaga, Kraus, & Klann, 2017). Pornography use was unrelated to intrapersonal satisfaction. Conversely, pornography use was associated with lower interpersonal satisfaction in cross-sectional surveys, longitudinal surveys, and experiments. Analyses by gender, though, suggested that detrimental interpersonal satisfaction effects may be more likely for men than women.

Only one meta-analysis has been conducted on the (relatively) newer topics of interest. Tokunaga, Wright, and Roskos (2018) meta-analyzed the literature on pornography and impersonal sex, one of the most commonly studied areas of unrestricted sexuality. This study found that pornography consumption predicted a more impersonal approach to sex among adolescents and adults, women and men, and across the various countries with inclusive data. Both experimental and correlational data, including from cross-sectional and longitudinal surveys, yielded similar findings. Importantly, mediation analysis fit the hypothesis that pornography consumption predicts increased impersonal sexual behavior through more impersonal sexual attitudes, while confounding analysis did not support the hypothesis that the association between pornography consumption and impersonal sexual behavior is spurious and due to pre-existing impersonal sexual attitudes.

The sexual risk behavior that has received the most attention is condom use. Some studies have focused on general population samples, whereas others have specifically focused on gay men. General population studies have yielded mixed results, with some samples finding the anticipated association between pornography consumption and condomless sex and other samples resulting in null associations. Two recent studies of heterosexual individuals—one conducted in Germany (P. J. Wright, Sun, & Steffen, 2018a) and the other in England (P. J. Wright, Sun, & Steffen, 2018b)—may help to reconcile these findings. They suggest firstly that due to condomless-sex floor effects among monogamously committed couples, associations

may primarily be found among individuals not in monogamous relationships. They suggest secondly that while frequency of consumption is important, it is the combination of consuming pornography and perceiving it as a source of sexual information that is most likely to result in condomless sex. Because of the higher incidence of condom use in gay pornography, associations between pornography consumption and condomless sex may only be present among gay men who specifically prefer to view pornography depicting men having sex without condoms (Rosser et al., 2013).

The gendered outcome that has been studied most frequently is the sexual objectification of women. Associations between pornography consumption and perceiving women as sexual objects have been found across methods and several countries. In a cross-sectional survey study of Japanese college students, Omori and colleagues (2011) found that both online and offline pornography consumption were associated with stronger perceptions of women as sexual objects. In a longitudinal survey study of Dutch adolescents, Peter and Valkenburg (2009) found that earlier online pornography consumption predicted later notions of women as sexual objects for both boys and girls. In an experimental study with emerging adult males in the U.S., P. J. Wright and Tokunaga (2015) found that exposure to nude centerfolds increased objectified cognitions about women both immediately after exposure and approximately 48 hours later.

Finally, a series of longitudinal studies with adults of varying ages in the U.S. have queried the supposition that pornography's unrestricted approach to sex may increase acceptance of sexual relationships that were traditionally stigmatized, such as same-sex relationships. Taken together, their results suggest that viewing pornography increases the likelihood of a liberalization in attitudes toward nontraditional sexual roles and relationships, which in turn predict more support for a variety of rights for gay individuals (P. J. Wright & Bae, 2013; P. J. Wright & Randall, 2014; P. J. Wright, Tokunaga, & Bae, 2014). Findings such as these make clear that the same person might identify one socializing effect of pornography as antisocial (e.g., sexual aggression) but another effect as prosocial (e.g., more positive attitudes toward gay individuals). Scientific understanding of and social discussions surrounding pornography's impact can only progress when nuances and complexities such as these are accepted and considered.

After many years of neglecting the question of process (at least analytically), pornography effect studies have started to engage in formal mediation analyses. Studies to date have primarily focused on mechanisms that may link consumption to engagement in sexual behaviors similar to those in pornography.

Sexual expectations have been the focus of several longitudinal studies. Gwinn, Lambert, Fincham, and Maner (2013) observed that the large number of sexually eager and attractive actors in pornography may lead consumers to the expectation that they too deserve alternatives to their current partner. Consistent with this premise, they found in a sample of U.S. college students in exclusive relationships that earlier pornography consumption predicted later extrarelatational sexual behavior through heightened expectations of relational alternatives. D'Abreu and Krahé (2014) noted that several known risk factors for male sexual aggression have been observed in pornography (e.g., sex between strangers, that people say "no" when they really mean "yes" to sex). They theorized that pornography consumption may lead to the expectation that these are common attributes of sexual situations, which in turn may increase men's likelihood of sexual aggression. Consistent with this hypothesis, they found in a sample of male college students in Brazil that the association between earlier pornography consumption and later sexual aggression was mediated in part by expectations of participating in sexual situations with these risk factors present.

Sexual attitudes have also been studied as a mediator between pornography consumption and sexual behavior. Pornography producers generally cast the behaviors they select as pleasurable and without negative consequence. Such portrayals may produce or reinforce more positive attitudes toward those behaviors among consumers, leading to an increased likelihood of engaging in those behaviors if given the opportunity. A single-sample longitudinal study conducted with U.S. college students provided some initial evidence that associations between pornography consumption and sexual behavior may be mediated in part by sexual attitudes (Braithwaite, Aaron, Dowdle, Spjut, & Fincham, 2015). A more recent study was conducted by P. J. Wright (2018b). This multiple-sample, multiple-decade analysis of adults of varying ages across the U.S. found that associations between both pornographic movie and website consumption and premarital and extramarital sexual behavior were mediated by premarital and extramarital sexual attitudes, respectively.

Pornography researchers are also beginning to study the mechanistic role of perceived peer norms and efficacy in the pornography consumption–sexual behavior relationship. Since candid discussions with others about their actual sexual behavior can be awkward, consumers may use pornography to come to conclusions about what is sexually normative. Furthermore, observing pornographic actors efficaciously enact various sexual behaviors may encourage consumers that they can follow suit. As a norms example, P. J. Wright et al. (2016a) found in a study of mostly heterosexual U.S. college students that the association between pornography consumption and engaging in condomless sex in the prior year was mediated by lower estimates of peers' condom use. As an efficacy example, Traeen et al. (2014) found in a study of gay men in the U.S. that the association between viewing pornography that did picture condoms and reduced STI-risk behavior was mediated by condom use self-efficacy.

An additional mediating variable that is essential to consider in the context of pornography is sexual arousal. Arousal may mediate cognitive effects for three reasons. First, higher arousal should reduce the motivation and ability to engage in an effortful and deliberate search for the most applicable sexual script, increasing the likelihood that the most accessible script will be applied (P. J. Wright, 2011). Second, if arousal was present when the script was encoded, later arousal should increase the likelihood the script will be reactivated (Hald & Malamuth, 2015; P. J. Wright, 2011). Third, in order to reclaim cognitive balance during or after being aroused by a particular pornographic depiction, the consumer may adjust their attitudes to be more accepting of the type of sex depicted (Peter & Valkenburg, 2009). Consistent with these ideas, experimental studies conducted in Denmark and the U.S. have found that the effect of pornography on cognitions supportive of violence against women is mediated by sexual arousal (e.g., Hald & Malamuth, 2015).

In terms of potential moderators of pornography effects, most often the focus has been on possible differences across various demographic categories. Interestingly, results for gender and ethnicity mirror in many respects those from mainstream media studies. Gender interactions are sometimes null (P. J. Wright et al., 2016a) and sometimes significant (P. J. Wright et al., 2016b) and the variability across studies is not easily explained. In studies involving different ethnic groups, pornography consumption has been associated with the outcome under study for some groups but not others (P. J. Wright & Bae, 2013). Yet, when the null group is studied in isolation, evidence of effects are found (Wingood et al., 2001). Therefore, although it is acknowledged that identifying demographic contingency is important and can shed light on probable theoretical mechanisms, the remainder of this section will focus on psychographic rather than demographic moderators.

Findings from several studies suggest that consumers who have more confidence in the veracity and utility of media generally, and pornographic media specifically, are more likely to be impacted. In national survey data of U.S. women across a range of ages, associations between internet pornography consumption and extramarital sex attitudes (P. J. Wright, 2013) and multiple sexual partnerships (P. J. Wright & Arroyo, 2013) were stronger when confidence in media institutions was higher. In a three-wave panel survey of Dutch adolescents, over-time increases in pornography consumption were accompanied by increases in sexual permissiveness only among youth who perceived pornography as more realistic at baseline (Baams et al., 2015). In a survey study of heterosexual German adults, the correlation between higher pornography consumption and less frequent condom use was largest among those who most strongly perceived pornography as a source of information about sex (P. J. Wright et al., 2018a).

In contrast, survey findings suggest that U.S. adults whose existing sexual scripts, values, and moral orientations are more incompatible with pornography's presentation of sex will be less impacted. Cross-sectionally, studies have found that associations between pornography consumption and variables such as multiple sexual partnerships and more unrestricted sexual attitudes are weaker when consumers are more politically conservative, religious, and oriented toward moral absolutes (P. J. Wright, 2018c; P. J. Wright et al., 2014). Likewise, longitudinal panel surveys have found that positive associations between earlier pornography consumption and later more sexually unrestricted attitudes are less likely when consumers are more politically conservative and more oriented toward moral uniformity (P. J. Wright, 2013; P. J. Wright & Bae, 2015).

Evidence also exists that education in general and education about pornography specifically may decrease the likelihood that consumers incorporate information from pornography into their own sexual scripts. In cross-sectional and longitudinal data gathered from adult U.S. men and women, Wright and colleagues (P. J. Wright, 2013; P. J. Wright & Randall, 2014) found that associations between pornography use and various sexual attitudes were weaker among participants with more years of education. In two-wave panel survey data gathered from Dutch adolescents and young adults, the association between pornography use and perceiving women as sexual objects was strongest among those who had not received sexuality education on pornography (Vandenbosch & van Oosten, 2017). These findings are consistent with early work on the role of educational briefings designed to mitigate harmful effects of laboratory exposure to violent pornography (Allen, D'Alessio, Emmers, & Gebhardt, 1996). The results of this meta-analysis indicated that antisocial attitudinal effects from viewing violent pornography could be reduced through either pre- or post-exposure communications noting that pornography is nothing more than fictional fantasy.

Several studies have focused on identifying moderators in the context of sexual aggression specifically. Tests guided by Malamuth's confluence model of sexual aggression (Malamuth, Linz, Heavey, Barnes, & Acker, 1995) have yielded the most informative results. Across separate samples of adults in the U.S., pornography consumption has been shown to most strongly predict sexually aggressive attitudes and behaviors when men are both impersonal in their approach to sex and adhere to a style of masculinity that is hostile toward women (Malamuth, 2018). These findings are consistent with the general theoretical premise that effects are less likely when consumers' existing scripts are incompatible with how pornography presents sexual roles and relationships.

The previous discussion does not represent an exhaustive list of moderators tested to date. Many other moderators have been explored in at least one study: age of first exposure to

pornography, intoxication during sex, history of drug use, life satisfaction, sexual sensation seeking, character liking, relationship status, frequency of exposure, country of study, imagery explicitness, views on personal freedom, and perceived life dullness, to name a few. It is recommended that the analysis of moderators continue, with the stipulation that the field will be moved forward the most quickly when the moderators selected can be linked to an established theoretical model (P. J. Wright, 2018c).

A final issue that deserves mention is problematically compulsive or “addictive” use of pornography. Debate of this issue has largely taken place among clinically oriented psychologists and neuroscientists, not media and communication scholars. Key points of debate have included whether the accessibility, affordability, and anonymity of internet pornography (in comparison to offline pornography) increases the likelihood of dysregulated use, if there are reliable and sequential stages of internet pornography addiction, whether an underlying etiology and effective treatment modality can be identified, if the physiological responses of problematic pornography consumers to pornographic depictions are similar to or different from the responses of other classes of addicts to their particular addictive stimuli, and the extent to which moral incongruence between holding negative attitudes toward pornography but using it anyway may lead to the self-perception of being addicted (Grubbs, Perry, Wilt, & Reid, 2018; P. J. Wright, 2018a).

Conclusions

This chapter reviewed scientific research on the effects of mainstream, pornographic, and social media sex, with a primary emphasis on sexual socialization. The following “big picture” conclusions can be drawn from this review.

First, enough experimental and longitudinal work has been produced to conclude that sexual media causally influence the sexuality of some consumers. Second, while most research focuses on effects typically deemed problematic, an increasing number of studies are considering effects that would generally be considered prosocial. Third, effects are often indirect and contingent on a variety of factors. Fourth, there is now empirical evidence of similarity in at least some of the mechanisms and contingencies across mainstream, social, and pornographic media. Fifth, although the magnitude of media sexual socialization effect sizes is typically modest, they align with the magnitude of effect sizes in the social sciences more generally. Sixth, in ecological studies that consider a number of predictor variables, the magnitude of the media sex effect is typically within the range of other more accepted social influences. Seventh, although some differences have been found, the literature at present suggests that the effects of sexual media are more similar than disparate across cultures.

The chapter’s primary future research suggestion is that media sex scholars call on identifiable theory to guide their projects. If researchers do not overtly specify, derive predictions from, and test distinct theoretical models in a sequential, programmatic manner, the accumulation of knowledge will be disorganized and delayed. Additional, finer-grained future research suggestions—not ordered by importance—are as follows. First, the effects of sex in mainstream and social media on older adults is in need of investigation. Second, additional studies that examine a variety of mediums and genres within mediums within the same sample are needed. Third, further studies that use the same instrumentation across countries and directly compare the results would be of value. Fourth, research that has taken variables that have typically been looked at as potential confounds (e.g., religiosity, political orientation, sensation seeking) and attempted to model them as predictors, mediators, or moderators should continue. Too often,

variables are modeled as confounds that are likely part of the effects dynamic. This decreases the explanatory power of the model and increases the chance of Type II errors. Fifth, additional work is needed that clarifies when the same variable may function as a mediator or a moderator (e.g., perceived realism, sexual attitudes).

Media and sexuality research has finally captured the cross-disciplinary and cross-cultural attention it clearly warrants. It is the hope of this chapter that even more researchers will take up the important and interesting questions that are still in need of address.

Author's Note

The author would like to thank the following for their suggestions of pertinent studies: Jennifer Stevens Aubrey, Mona Clay, Elizabeth Daniels, Ed Donnerstein, Steven Eggermont, Josh Grubbs, Amy Nathanson, Annemarie van Oosten, Victor Strasburger, Laura Vandebosch, Laurens Vangeel, and Monique Ward.

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16

Media Stereotypes

Content, Effects, and Theory

Travis L. Dixon

The effects of media stereotyping on both individuals and society has been a topic pursued by media scholars for decades. However, this area of inquiry often struggled to address widespread skepticism and a “step-child-like” attitude from both the media industry and its observers. Those skeptical of the area resisted viewing media as forming a significant part of the landscape influencing our personal, social, and political interactions. To address these critics, media stereotype scholars conducted numerous content analyses to provide strong evidence that the media regularly stereotype women and people of color. However, fewer studies addressed the effects of these images or advanced theory designed to explain the impact of such portrayals on audience members.

Since the last edition of this book, three new and significant factors require our attention. First, the U.S. elected a president who utilizes media stereotypes, particularly against Latinos, Muslims, and African Americans, as political mobilization tools (Gray, 2017; Parker & Costa, 2017; Vitali, Hunt, & Thorp, 2018). His successful utilization of media stereotypes remains a testament to their ability to influence both political and social interaction.

Second, scholars now devote significant time and resources to tease out media stereotype effects and advance theoretical constructs designed to further understand their influence on human behavior (Atwell Seate & Mastro, 2016; Dixon, 2017c). Scholars’ recognition of mediated stereotyping’s power has grown. Most early scholars took pains to identify how various depictions were commonplace within media. Now, many researchers work to understand the extent to which such depictions shape cognitive, attitudinal, and behavioral outcomes, using theory to drive these investigations. The attention to effects studies and theorization reflects a maturing of this area of inquiry.

Third, the number of scholars studying media stereotyping effects grew substantially. This growth’s ramifications extend to the heart of media effects and intersect with many areas of study within communication including interpersonal relationships, intergroup relations, and new media (Abrams & Giles, 2007; Harwood & Giles, 2005). Moreover, the blossoming availability of digital media offerings present a fertile frontier for further investigation.

Therefore, this chapter devotes substantial time to stereotyped media content along with an increased focus on how the media influence perceptions of both Whites and people of color.

Below, I provide some key content findings regarding media portrayals of five commonly stereotyped groups: African Americans, Latinos, Native Americans, Asian Americans, and women. Following this, the chapter outlines three key theoretical perspectives utilized by media stereotype scholars to understand the impact of media stereotypes. In order to illustrate each perspective's utility, I review specific effects studies that apply each theoretical approach. The chapter concludes with a discussion of how emerging media on various digital platforms may either enhance or weaken mediated stereotypes' influence.

Content Representations and Prominent Media Stereotypes

To understand media stereotyping's potential effects, one must first determine the extent of their prominence within the media environment. Media effects scholars investigating stereotyping often begin their research by trying to understand a particular group's depiction. Prior investigations have revealed a significant amount of information regarding three groups: women, African Americans, and Latinos. Unfortunately, scholars undertook fewer studies of Asian American and Native American depictions. Below, I describe the unique revelations illuminated by this research.

Gender Portrayals

In this section, I discuss the numerical representation of women, followed by the extent to which gender stereotypes proliferate in the media. Given the intersections between gender and race, later in this chapter I discuss gender differences relevant to African American, Latino, Native American, and Asian American identities.

Content analyses consistently found significantly more male than female characters depicted in primetime television (Sink & Mastro, 2017). Women remain underrepresented in comparison to their census population numbers (Parrott & Parrott, 2015). Men dominate film appearances even more, with the vast majority of characters and voice overs in G-rated films produced by males (Smith, Pieper, Granados, & Choueiti, 2010).

In terms of gender stereotypes, primetime and film depictions tend to overrepresent women as homemakers (Sink & Mastro, 2017; Smith et al., 2010). In addition, women tend to be portrayed as more attractive, thinner, and younger than men. Women also behave in a more sexually provocative manner compared to men on television. In fact, the sexual subordination and objectification of women remain the most consistent research findings media scholars investigating gender stereotypes report (Dillman Carpentier & Stevens, 2018; Lynch, Tompkins, van Driel, & Fritz, 2016).

The objectification and subordination of women appears consistently in music videos (Aubrey & Frisby, 2011; Frisby & Aubrey, 2012; Karsay, Matthes, Platzer, & Plinke, 2018). Music video content analyses reveal that women are more likely than men to display body parts, be more sexualized, dress more provocatively, engage in sexualized dance, and be sexually objectified (Aubrey & Frisby, 2011; Frisby & Aubrey, 2012; Turner, 2011).

African American Representations

Generally, media researchers focus a tremendous amount of attention on depictions of African Americans in the media. The binary thinking that drives discussions of race in the U.S. (e.g.,

Black versus White) may explain why African American depictions receive so much attention (Entman & Rojecki, 2000). That said, research on African American portrayals continues to be the most extensive in the media stereotyping literature.

African American Entertainment Television Portrayals

Multiple studies confirm that entertainment media contain numerous and proportional African American representations, especially of Black professionals (Mastro & Greenberg, 2000; Signorilli, 2009; Tukachinsky, Mastro, & Yarchi, 2015). Multiple studies found that African Americans tend to fall somewhere between 13% and 17% of the major characters featured in entertainment television, including as major primetime characters. However, the actual number of Black characters appearing fluctuates quite a bit, and many scholars speculate that this may be tied to the popularity of situation comedies. Television producers tend to relegate African Americans to situation comedies, including entire television shows dominated by African American casts. In turn, their portrayal in both dramas and reality programming tends to occur less frequently. When African Americans do appear on dramas and reality shows, they tend to be depicted in smaller numbers as part of diverse casts, rather than majority Black casts. The entire television landscape has seen situation comedies dip and reality programs increase. As the number of situation comedies has declined, so has the number of African American characters.

Entertainment television tends to be a mixed bag in terms of the quality of portrayals for African Americans. On the one hand, many Black characters in entertainment often appear as good rather than bad characters. Moreover, many Black characters hold high social positions, though this trended downward in recent years (Tukachinsky et al., 2015). On the other hand, African Americans still tend to appear immoral and more despicable compared to White characters (Monk-Turner, Heiserman, Johnson, Cotton, & Jackson, 2010). This portrayal often pervades sports depictions. Sports news and commentary frequently depicts Blacks as unintelligent or dumb, yet naturally talented athletes (Angelini, Billings, MacArthur, Bissell, & Smith, 2014; Primm, DuBois, & Regoli, 2007; Rada & Wulfemeyer, 2005). However, these same sports outlets portray White athletes as intelligent while lacking in athleticism.

Advertising Images of African Americans

A number of studies also considered the African American depictions in advertising. Advertising offers assorted images, with increasingly diverse representations, particularly of Black women in fashion magazines (Baker, 2005; Covert & Dixon, 2008). However, many African American women tend to exhibit Eurocentric rather than Afrocentric features when they appear in ads targeted at both Black and mainstream audiences (Baker, 2005). Meanwhile Black men tend to assume either unemployed or athletic roles (Bailey, 2006).

Music Depictions of African Americans

An increasing number of scholars have devoted their attention to stereotyped music video effects. Much of this work focuses on the rap and R&B (rhythm and blues) genres of music. This research finds that African Americans dominate as both performers and background dancers. The music also features a variety of themes, some of which reinforce stereotypes. For

instance, materialism and sexual objectification emerge as common themes in hip hop music videos (Conrad, Dixon, & Zhang, 2009). Music videos often sexualize Black women as the “Black jezebel” stereotype (e.g., attitudinal and sexually promiscuous Black woman), presenting them as thin and light-skinned (Conrad et al., 2009; Turner, 2011; Zhang, Dixon, & Conrad, 2010). Black female artists are more likely than White female artists to wear provocative clothing and exhibit qualities of sexualized objectification (Frisby & Aubrey, 2012). Conversely, music videos present Black men as “dark-skinned aggressive thugs,” especially within rap videos (Conrad et al., 2009).

News Depictions of African Americans

Unlike entertainment, news often negatively portrays African Americans. Although not in all circumstances (e.g., not all news genres), the news often associates Black people with criminal behavior. News programs overrepresent African Americans as criminals compared to crime statistics and underrepresent them in more sympathetic roles such as crime victims (Dixon, Azocar, & Casas, 2003; Dixon & Linz, 2000a, 2000b). When exclusively considering family depictions, Black family members appear to be overrepresented as criminal suspects when compared to both crime reports and compared to White family members (Dixon, 2017a). News and news opinion media also overrepresent African Americans as welfare recipients, especially during times of financial stability (Gilens, 1999; van Doorn, 2015). Finally, news tends to emphasize Black athletes’ criminal activity more strongly than White athletes’, resulting in less sympathetic coverage of Black athletes (Mastro, Blecha, & Atwell Seate, 2011).

Latino Representations

Latino representations differ in some important ways from African American portrayals. The most troubling and consistent finding across numerous studies includes their underrepresentation in comparison to their presence in the population. This underrepresentation can be found across numerous genres and roles, including primetime television (Signorielli, 2009), advertising (Brooks, Bichard, & Craig, 2016), hospital dramas (Hetsroni, 2009), and even gay male blogs (Grimm & Schwartz, 2017).

Latino Entertainment Television Representation

Unlike African Americans, Latinos remain severely underrepresented within commercial English-language television outlets. For example, Tukachinsky et al. (2015) found the percentage of Latino characters was less than 1% in the 1980s and then increased to more than 3% by the 2000s. However, these numbers fall significantly below the 18% of Latino people who live in the U.S. (U.S. Census Bureau, 2018). Similarly, Signorielli (2009) found that the proportion of Latinos in the U.S. census and the percentage of Latino characters on primetime TV differed by almost 10%. Moreover, Latinos only represent about 1% of models found in mainstream magazines (Seelig, 2007).

Besides being underrepresented, Latinos tend to be portrayed in several stereotypical manners in entertainment media. For example, Tukachinsky et al. (2015) found that many Latino characters were hypersexualized in primetime television and occupied low professional status roles. This occurred more often with Latina females than Latino males. Moreover, Spanish

language television reinforced “the harlot” stereotype, depicting rich Latina women who were sexualized, provocatively dressed, and sporting slim body types (Mastro & Behm-Morawitz, 2005; Mastro & Ortiz, 2008). In addition, these programs depicted dark-complexion men as aggressive (e.g., “the criminal” stereotype), while portraying men with a fair complexion as intelligent and articulate.

Latinos in the News

The underrepresentation of Latinos continues within the news context, especially when we consider sympathetic roles (Sorenson, Manz, & Berk, 1998). For example, early studies by Dixon and Linz (2000a, 2000b) uncovered Latino underrepresentation as police officers, victims, and perpetrators. A replication of this study found Latinos to be correctly represented as perpetrators, although still underrepresented as officers and victims (Dixon, 2017b).

The issue of immigration and Latino immigrants as criminal or cultural threats manifests as the most recurring stereotype for Latinos in the context of news (Rendon & Johnson, 2015). For example, Chavez, Whiteford, and Hoewe (2010) found that the majority of news stories regarding Mexican immigration from the *New York Times*, *Washington Post*, *Wall Street Journal*, and *USA Today* featured illegal immigration, with crime being the greatest aspect of these stories. Moreover, the news media, especially English-language outlets, concentrate on immigration in a negative light, focusing on crime and job competition (Branton & Dunaway, 2008; Dunaway, Goidel, Krizinger, & Wilkinson, 2011; Kim, Carvalho, Davis, & Mullins, 2011). Similarly, Dixon and Williams (2015) found that news reporters identified immigrant criminals as overwhelmingly (and falsely) Latino. In addition, the news depicted virtually every illegal or undocumented immigrant as Latino, which significantly distorts social reality.

Asian Americans

Unfortunately, much of the work on Asian portrayals points to their extreme underrepresentation in the media (Graves, 1999; Grimm & Schwartz, 2017; Mastro, 2009; Mastro & Behm-Morawitz, 2005; Mastro & Greenberg, 2000). Media stereotype representation models put them squarely in a non-recognition stage, in which their appearance occurs so infrequently (less than 3% and often 1% or lower), their presence barely registers within a formal content study (Clark, 1973). For instance, Asians remain severely underrepresented in mainstream magazines and in various genres of television including crime dramas (Schug, Alt, Lu, Gosin, & Fay, 2017).

A few prior studies uncovered evidence that media frequently stereotype Asian Americans as “model minorities.” Primarily, they represent Asian American males as techno-nerds or geeks. For instance, on video games ads and covers, Asian models often interact with new technology (Burgess, Dill, Stermer, Burgess, & Brown, 2011). Meanwhile, sports news reinforces this stereotype by depicting Asian athletes as lacking composure (Angelini et al., 2014).

Native Americans

When compared to Asian Americans, researchers uncovered even fewer media representations of Native Americans. Content analyses commonly register fewer than 1% of onscreen characters as Native American, who tend to be relegated to “historical” depictions, such as plains Indians who fought cowboys (Heider, 2000; Lipsitz, 1998; Mastro, 2009). More recent 21st-century

media depictions replaced Native American “savage” imagery, commonly depicted in mid-20th century Westerns, with images of alcoholism and untrustworthy Native casino owners (Harris, 2013; Strong, 2004). Many Native American images in news focus on their cultural festivals, reinforcing the notion that this group is “mysterious” and overly spiritual (Heider, 2000). At the same time, numerous U.S. team mascots employ the savage Native American Warrior trope (Strong, 2004).

Theories and Effects of Mediated Stereotypes

Despite the problematic depictions described above, our understanding of media stereotyping effects increased significantly in the last two decades. This section describes the cognitive, attitudinal, and behavioral effects that result from exposure to mediated stereotypes, focusing on relevant theory to drive the discussion. These theories primarily focus on the extent to which mediated stereotypes reinforce White audience members’ negative perceptions of people of color. I describe three primary theoretical perspectives that drive these studies including: priming/cognitive accessibility, cultivation, and social identity theory/social categorization. Following an introduction to these theories and their effects in reinforcing stereotypes, I offer a discussion of how people of color might be influenced by self-consumption of stereotypes related to their own group. I conclude by providing an overview on how media might successfully reduce stereotyping.

Priming, Short-Term Effects, and Cognitive Accessibility

Priming and cognitive accessibility theories argue that media consumption creates mental shortcuts utilized in making relevant judgments about various issues and social groups (Shrum & O’Guinn, 1993; Shrum, Wyer, & O’Guinn, 1998; see also Chapter 6 in this volume). Social psychologists have for some time demonstrated that our minds rely on various cognitive associations that lead to quick judgments about various social categories (i.e., heuristic processing; Slater, 2007; Wicks, 1992). In this sense, heuristic processing enhances social functionality, because it would be cognitively taxing to make individual choices in each social instance (e.g., meeting a person for the first time).

However, heuristic processing also leads to reductionist stereotypical judgments that can be strengthened by media consumption. Numerous scholars demonstrated that a single exposure to a mediated stereotype can activate the cognitive linkage between a particular social group and a stereotypical trait (Dixon, 2007; Gilliam, Iyengar, Simon, & Wright, 1996; Peffley, Shields, & Williams, 1996). When activated through a media prime, the link may then inform subsequent (and typically immediate) cognitive, attitudinal, or behavioral decisions. Much of the early experimental research in the media stereotyping domain relied on the priming/accessibility paradigm to investigate effects (Ford, 1997; Valentino, 1999).

In several cases, studies relying on priming and accessibility revealed disturbing findings regarding the reinforcement of media stereotypes about people of color by White audience members. For instance, exposure to “the Black criminal” stereotype leads (mostly White audience members) to make harsher culpability judgments of subsequent criminal suspects and increases support for conservative policies (Dixon, 2006; Gilliam & Iyengar, 2000; Hurley, Jensen, Weaver, & Dixon, 2015). Other studies found that priming “the Black female jezebel” stereotype decreased support for a subsequent hypothetical Black female job applicant or welfare recipient (Givens & Monahan, 2005; Monahan, Shtruliss, & Givens, 2005). Furthermore,

exposure to TV-mediated messages reinforcing the Asian American “model minority” stereotype resulted in more positive stereotyping of Asian Americans but more negative stereotyping of African Americans among White audience members (Dalisay & Tan, 2009). Recent studies increasingly relied on implicit measures, such as recall tasks, to investigate priming effects (Burgess et al., 2011; Oliver, Jackson, Moses, & Dangerfield, 2004).

Cultivation, Long-Term Effects, and Chronic Accessibility

Whereas priming suggests short-term activation of a cognitive linkage used to make an immediate subsequent judgment, the repeated activation of such a link can increase its accessibility (Shrum, 1996, 2009). The chronic accessibility concept structures our current understanding of media cultivation. For example, if a news viewer encounters an individual cognitively related to a previously encountered mediated stereotype, he or she might make a judgment about them based on repeated exposure to this stereotypical depiction over time. As an illustration, a White news viewer repeatedly exposed to “the Muslim terrorist” stereotype may conclude that most Muslims must be terrorists. Reaching this conclusion repeatedly over time would lead to the chronic accessibility of the stereotype (e.g., automatic association of an individual with a stereotypical trait due to prior repeated activation; Bargh, Bond, Lombardi, & Tota, 1986; Price & Tewksbury, 1997). In other words, cultivation refers to the long-term shaping of social reality from repeated prior media exposure (see Chapter 5 in this volume). Many media effects studies rely on the cultivation/chronic accessibility perspective. For instance, Gilliam and Iyengar (2000) and Dixon (2008a, 2008b) found that long-term exposure to news programming led to increased support for conservative crime policies among mostly White news consumers. These policies included three-strikes legislation, the death penalty, decreased support for Black crime victims, and increased anti-Black sentiment (Dukes & Gaither, 2017). Other media stereotyping scholars found that daily television consumption among largely White samples cultivates anxiety towards Asians (Atwell Seate, Ma, Chien, & Mastro, 2018).

Social Identity Theory/Social Categorization Theory

A growing number of scholars note that group identity can determine both media consumption patterns and potential effects (Atwell Seate, Cohen, Fujioka, & Hoffner, 2012; Fujioka, 2005; Harwood, 1997; Mastro, 2003). Our personal identities can become tied to our perception of our own group in relation to other groups. Social categorization theory argues that the higher the salience (e.g., importance) of a particular category to an individual, the greater the ingroup favoritism he or she will demonstrate (Biernat & Dovidio, 2000; Billig & Tajfel, 1973; Tajfel, Billig, Bundy, & Flament, 1971). Media scholars have demonstrated that exposure to a mediated outgroup member can increase ingroup favoritism (Mastro, 2003). The higher the group identification, the more television choices and related effects might be influenced. As a result, television selections in which one’s ingroup fares worse than an outgroup may be avoided or explained away (Mastro, 2003). In other situations where outgroup members fare worse than ingroup members, one may use it to categorize these members as threats or as subordinate (Atwell Seate et al., 2012; Atwell Seate & Mastro, 2016). In the third situation where one’s ingroup may be positively or benignly portrayed, strong ethnic identification may mediate the potential effects of such a depiction.

Social Identity Theory's Explanation of White Viewer Effects

Much of the work in this area has been spearheaded by Mastro and her colleagues. For instance, Atwell Seate and Mastro (2017) found that those with strong ingroup identification exposed to immigrant-threat stories expressed active (e.g., direct, perceivable) and passive (e.g., indirect, difficult to perceive) harming behaviors against immigrants. These authors used social identity/social categorization theory to advance the notion of intergroup emotions that might result from such media exposure. This notion states that group members with high group identification levels will experience the same emotions. Mastro, Behm-Morawitz, and Kopacz (2008) performed an experiment in which Whites were exposed to either White or Latino characters in a script. They found that exposure to the White characters increased racial identification and the predicted academic success of the character. Similarly, Mastro (2003) found that White audience members exposed to Latino criminals in a fictitious program reported higher self-esteem, but they offered more justifications for bad behavior when exposed to a White criminal.

Social Identity's Role in People of Color's Mediated Stereotype Resistance

Researchers have also increasingly explored the role of ethnic and social identity in how people of color respond to mediated stereotypes about themselves (Abrams, 2010; Abrams & Giles, 2007, 2009; Fujioka, 2005; Knobloch-Westerwick, Appiah, & Alter, 2008). First, it should be noted that audiences of color's media consumption patterns indicate high media usage levels (Nielsen and the National Newspapers Publishers Association, 2013; Rideout, Foehr, & Roberts, 2010). Blacks and Latinos consume 13 hours of media a day, whereas Whites consume only 8 hours.

Second, ethnically targeted media may strongly influence audience members of color (Bleakley et al., 2017). Some studies have found that Black television exposure lowers perceptions of science competence among Black youth, while mainstream media lower Black children's overall self-esteem (Gordon, 2016; Martins & Harrison, 2011). However, a number of studies have considered the role of moderators in these effects, especially ethnic identification.

Numerous studies specifically looked at rap music and found ethnic identity to be a crucial variable for understanding the potential influence of rap on Black audiences (Dixon, Zhang, & Conrad, 2009; Epps & Dixon, 2017; Zhang, Dixon, & Conrad, 2009). For instance, Black women with strong ethnic identification (e.g., the belief that Black women are beautiful) showed fewer negative effects (e.g., body dissatisfaction) after viewing thin models in music videos compared to Black women with weak ethnic identification. New media platforms such as Facebook and other social media sites allow one's ethnic identification to drive music sharing behavior. As a result, Black users with strong ethnic identification tend to share music containing positive themes (e.g., political awareness) rather than negative themes (e.g., misogyny). Finally, Abrams and Giles (2009) found that Latinos' views of their status in society positively predicted their use of media consumption for ethnic identity reinforcement.

Conclusion and Future Directions

Digital media platforms present a ripe area for future exploration by scholars. Much of the prior work in this area investigated representations in video games, finding that many gender and race related stereotypes continue to pervade gaming systems (Burgess et al., 2011; Waddell, Ivory, Conde, Long, & McDonnell, 2014; Williams, Martins, Consalvo, & Ivory, 2009). At the same time, digital news overly associates Blacks and Latinos with poverty, emphasizing a connection between

Latinos and immigration policy (Josey, Hurley, Hefner, & Dixon, 2009). As traditional media migrate to digital platforms, emerging media will continue to be the focus of researchers' attention.

Social media might be particularly ripe for future investigations. Many users receive, consume, and share entertainment and news content via social media. Social media's unique characteristics may contribute to stereotype proliferation while preventing positive, social, personal, and public intergroup contact. For instance, social media algorithms that dictate what appears in one's newsfeed based on user preferences facilitate greater self-reinforcement of users' biased stereotypical perceptions (Knobloch-Westerwick, 2012; Knobloch-Westerwick et al., 2008). Given what we know about social identity, this suggests new media may create significant barriers to stereotype reduction. In fact, such processes likely facilitate greater stereotyping of race and ethnic groups in the digital media environment compared to traditional media (Dixon, 2017c; Melican & Dixon, 2008).

Conversely, social and traditional media may also offer a kind of virtual intergroup contact that has the potential to reduce stereotyping under certain circumstances (Dixon, 2017c). As the world becomes transformed through emerging media, more of our social interactions will be mediated. Work on curbing traditional media stereotypes found that media-based strategies can serve to reduce stereotyping and prejudice (Ramasubramanian, 2007, 2011). Much more work needs to be undertaken to explore both of these possibilities.

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17

Eudaimonia as Media Effect

Arthur A. Raney, Mary Beth Oliver, and Anne Bartsch

In the first edition of this volume, Zillmann and Bryant (1994) offered one of the earliest overviews of the burgeoning field of entertainment theory. In “Entertainment as Media Effect,” the scholars both summarized what was then known about the entertainment experience and further validated—even elevated—the exploration of media enjoyment as a pursuit worthy of intellectual energy. Since then, numerous studies have added to our understanding of how and why we consume media entertainment (see Chapter 21 in this volume). Overwhelmingly, this research has assumed and explored the *hedonic motivations* for selecting entertainment and *enjoyment* as the outcome of doing so.

In the past decade, though, scholars have increasingly turned their attention to responses to and outcomes of the entertainment experience that move beyond “mere pleasure” to those involving the pursuit of meaningfulness, connectedness, and well-being. Such experiences often arise from encounters with content such as moving cinema, inspirational viral videos, poignant novels, and touching songs. Increasingly, researchers refer to this work as “positive media psychology.” In this chapter, we aim to follow in Zillmann and Bryant’s (1994) footsteps to offer a snapshot of this emerging area, with particular emphasis on *eudaimonia*¹ as a media effect.

To that end, we begin with a brief overview of the research area. We then focus on variables that predict emotional and cognitive components of, and outcomes associated with, eudaimonic media experiences. Next, we identify various moderators of those experiences, before concluding with a discussion of avenues for future research.

Beyond Pleasure: Eudaimonic Motivations and Appreciation

Scholarly interest in eudaimonic entertainment experiences has its roots in attempts to resolve the “paradox” of “enjoying” media content that, on its face, does not appear to be “enjoyable.” For example, sad or tear-jerker films clearly gratify audience members (e.g., Oliver, 1993), but they appear to do so without the positively valenced affect typically associated with enjoyment (see affective disposition theory; Zillmann & Cantor, 1976). Similarly, somber songs hold a particular appeal for individuals who are feeling blue or melancholic already (e.g., Gibson, Aust, & Zillmann, 2000), a phenomenon seemingly in contrast to the well-supported predictions of mood management theory (e.g., Zillmann, 2000).

To address this “paradox,” some scholars hailed the functional benefits that such experiences might provide for audiences, including the opportunity to “purge” negative emotions (i.e., catharsis; Cornelius, 1997), participate in downward social comparisons (Mares & Cantor, 1992; see also Festinger, 1954), or acquire information that may assist with resolving or coping with distressing circumstances in the future (Nabi, Finnerty, Domschke, & Hull, 2006). Other scholars approached the “problem” by reconceptualizing enjoyment to better capture the breadth of audience responses, including a focus on intrinsic need satisfaction (Tamborini, Bowman, Eden, Grizzard, & Organ, 2010), the importance of meta-emotions in media reception (Bartsch, Vorderer, Mangold, & Reinhold, 2008), and considering entertainment as a form of “play” (Vorderer, 2001). Regardless of the explanation, though, the assumption that users and viewers are primarily motivated to consume entertainment for hedonic reasons remained generally unchallenged.

In contrast, we proposed that individuals are, in fact, intrinsically motivated to consume entertainment for reasons other than pleasure (Oliver & Raney, 2011). We thought it important to acknowledge and explore ways that media users intentionally consume content to encounter meaningful and poignant portrayals of the human condition, providing fodder for grappling with questions of life purpose and meaning. We joined scholars who made similar pleasure-meaning distinctions in other contexts. For example, Keyes, Shmotkin, and Ryff (2002) distinguished between subjective and psychological well-being, in which the former is associated with feelings of positive affect and the latter with feelings of personal growth and meaning in life. Similarly, Waterman (1993) differentiated two types of happiness: hedonic happiness conceptualized in terms of pleasure, and eudaimonia conceptualized in terms of personal expressiveness, self-realization, and personal development. Extending this thinking to media selection, we argued that meaningfulness-seeking (i.e., eudaimonic motivations) and pleasure-seeking (i.e., hedonic motivations) represented distinct dimensions of media selection, with the former “reflect[ing] an emphasis on ... the gratification of greater insight concerning the human condition” (Oliver & Raney, 2011, p. 988). Findings from four studies were offered in support of this claim, which together showed that hedonic and eudaimonic motivations for consuming entertainment were distinct, common, invariant across gender, and consistent across the life span.

Using the same reasoning, we also argued that the pleasure-centric term *enjoyment* was extremely limited when applied to eudaimonic entertainment (Oliver & Bartsch, 2010). As an alternative, we offered the term *appreciation* “to help account for the domain of more serious, poignant, and pensive media experiences and gratifications” (p. 54).² In a series of studies, we demonstrated the close relationship between enjoyment and hedonistic responses (e.g., fun, good time) to various films and film genres, as well as the relationship between appreciation and meaningful responses (e.g., moving, thought provoking). As expected, enjoyment ratings were higher for light-hearted and comedic films, whereas appreciation was higher for somber fare (particularly dramas). Appreciation was also strongly related to perceptions of artistic quality and lasting impression on the viewer, as well as to various eudaimonic concerns.

Importantly, enjoyment and appreciation have not been conceptualized as mutually exclusive or as opposite ends of a continuum, but rather as orthogonal outcomes of entertainment reception. As a result, the experiences are not confined to a specific genre or type of media content. For instance, although participants in our earlier studies rated action films lower in appreciation and higher in enjoyment than dramas, they still appreciated the action films and enjoyed the dramas to some degree (Oliver & Bartsch, 2010). Thus, appreciation and enjoyment can (and regularly do) co-occur in entertainment experiences. Because of this, it is difficult to speak of eudaimonic media *content* in absolute terms.

Without a doubt, some media messages are more likely to promote reflection on the human condition and life's meaning than are others. But, even the most light-hearted fare often includes meaningful content—such as depictions of love, hope, or kindness—which can trigger eudaimonic reactions and appreciation. Thus, we find it more useful to speak of eudaimonic media *experiences*. Such experiences can be thought of as arising from an interaction between content and user. For instance, when some insight into the human condition is symbolically encoded in a television sitcom, audience members may engage with and appreciate that insight. Alternatively, they may find the insight too complex, confusing, or painful to process in situ, perhaps storing the scene in memory to engage (and appreciate) at a later time. Or they may find the “insight” boring, overly sentimental, emotionally manipulative, or simply out of place, thereby rejecting without appreciating—or perhaps even enjoying—the message. Thus, eudaimonic media experiences require some level of effortful interaction with an element of the content on the part of the audience member, similar to a “reflective” response to a piece of artwork, which is characterized as a slower, more deliberative, and interpretive process (as opposed to a “reactive” response, which tends to be immediate, arousing, and pleasure-centric; see Cupchik, 1995). Recent dual-processing models of entertainment also reflect this perspective (e.g., Bartsch & Schneider, 2014; Lewis, Tamborini, & Weber, 2014).

Predictors of Eudaimonic Media Experiences

Meaningful media experiences can emerge from a host of genres, portrayals, and media formats. Moreover, media audiences are heterogeneous, varying by demographic characteristics, life experiences, and traits. As such, it is important to recognize that not all individuals prefer or seek out meaningful content.

Trait Predictors

Our initial research differentiating hedonic and eudaimonic motivations for media consumption employed a number of trait-like measures in establishing the validity of our measures (Oliver & Raney, 2011). For example, higher levels of reflectiveness, need for cognition, searching for meaning in life, and need for affect were positively associated with eudaimonic motivations for entertainment consumption. In contrast, hedonic motivations were associated with higher levels of optimism, playfulness, and humor. These results parallel additional research showing that liking of sad films and melancholy music is associated with higher levels of empathy (Kawakami & Katahira, 2015; Oliver, 1993). Similar research also has shown that more stable dispositions are associated with *actively selecting* meaningful content. Specifically, Oliver et al. (2017) assessed individuals' selections of and time spent viewing short YouTube-style videos. Higher levels of empathy and lower levels of Machiavellianism and psychopathy were associated with greater viewing of the meaningful videos but were unrelated to viewing of humorous or informative videos.

State Predictors

Whereas prior research leaves little doubt that some individuals simply prefer meaningful media more than do others, evidence also highlights the importance of within-individual differences. For example, although a person may have a tendency to seek out more eudaimonic than hedonic films in general, there may be times when that same person has an appetite for more

comedic or less contemplative content. Perhaps the most commonly studied state-like variable is an individual's mood or affective state. In this regard, a considerable amount of research suggests that people in more somber or negative states, at times, appear to have a preference for sad or tragic entertainment (again, which may seem at odds with mood-management considerations; Zillmann, 2000). These preferences have been demonstrated in a variety of contexts, including the selection of movie rentals (Strizhakova & Krmar, 2007) and preference for sad or mournful music (Gibson et al., 2000). However, Oliver (2008) suggested that these types of preferences may not reflect the idea that "sad" people prefer "sad" entertainment, but rather that feelings of tenderness or compassion (often accompanied by sad affect) give rise to interest in entertainment that is meaningful or poignant. Such an interpretation is echoed in similar research regarding the role of mortality salience on entertainment preferences. In particular, Khoo (2017) reported that individuals who had been tasked with thinking about the personal implications of their own deaths reported a greater interest in viewing sad or tragic films over comedic offerings. Khoo interpreted such findings as reflecting "a desire for self-knowledge through entertainment" (p. 744).

Components of Eudaimonic Media Experiences

Eudaimonic media experiences are characterized by numerous affective and cognitive components, many of which can simultaneously be thought of as *responses to* and *effects of* the content. In a broader discussion of media effects, Valkenburg and Peter (2013) acknowledge this as a reality, noting that "media effects themselves can be the cause of other media effects" (i.e., second-order effects; p. 224); Reinecke and Oliver (2017) applied the tags "short-term" versus "long-term" effects to make a similar distinction. Because of this, we discuss responses to and effects directly arising from media use together below. In a subsequent section, we differentiate those experience-related components from second-order/long-term media effects (or outcomes), which the former facilitate and which only arise after the experience.

Affective Components

Affect plays a crucial role in motivating and describing eudaimonic media experiences. Initial studies of meaningful media often focused solely on negatively valenced reactions, such as sadness or grief. But scholars now acknowledge that such experiences involve *mixed affect*, or the complex co-occurrence of both positive and negative emotions (Slater, Oliver, & Appel, 2016). For example, in an early study, viewers reported feeling both happy and sad at the conclusion of the film *Life is Beautiful* (Larsen, McGraw, & Cacioppo, 2001). Often such mixed-affective experiences with media are characterized as meaningful, touching, moving, tender, poignant, or even nostalgic (e.g., Ersner-Hershfield, Mikels, Sullivan, & Carstensen, 2008; Oliver, 2008; Sedikides, Wildschut, & Baden, 2004). Regardless of the descriptor, several studies indicate that moral considerations and depictions instigate these responses (e.g., Oliver & Bartsch, 2011; Oliver et al., 2018). As a result, mixed-affective responses to eudaimonic media often involve moral emotions (see Haidt, 2003); we highlight a few of the more prominent ones found in the research.

Empathy

One key affective component of eudaimonic entertainment experiences is the moral emotion of empathy, an "other-oriented emotional response congruent with another's perceived welfare"

(Batson et al., 1997, p. 105). Empathy can be elicited by the observation of a real or fictional person in need. It motivates individuals to shift their focus of attention from their own ego-centric concern to the needs of others, such that the well-being of others becomes a priority in both their thinking (empathic perspective taking) and action (prosocial behavior). For example, feelings of empathy elicited by moving stories have been found to result in positive effects on attitudes and behavioral intentions towards stigmatized social groups such as immigrants, prisoners, elderly persons, or persons with mental or physical disabilities (Bartsch, Oliver, Nitsch, & Scherr, 2018; Oliver, Dillard, Bae, & Tamul, 2012). Moreover, empathic feelings were associated with heightened interest and information seeking about the target group (Bartsch et al., 2018; Oliver et al., 2012).

Elevation

Elevation is a self-transcendent emotion triggered by witnessing moral beauty, virtue, and humanity's better nature, such as acts of selflessness, love, kindness, and generosity (Algoe & Haidt, 2009; Haidt, 2003); the experience is often described as uplifting, moving, and warm. Elevation is associated with heightened motivation to do good for others or to be a better person (Schnall, Roper, & Fessler, 2010). Numerous types of media content have been shown to elicit elevation, including news stories highlighting selflessness in the face of tragedy (e.g., Aquino, McFerran, & Laven, 2011), inspiring clips from television programs such as *The Oprah Winfrey Show* (e.g., Schnall et al., 2010), and various film depictions (e.g., Oliver, Hartmann, & Woolley, 2012). The experience of elevation through media seems to have particular impacts on one's sense of connectedness to others, including feelings of closeness and perceived goodness of humanity (Haidt, 2003), an openness to other people in general (Algoe & Haidt, 2009), greater feelings of optimism about humanity (Schnall et al., 2010), and more favorable attitudes about diverse others (Oliver et al., 2012).

Hope

Hope is the belief that things can change for the better, whether in our own lives, in the lives of others, or for the world (Fredrickson, 2009). Circumstances that appear to be less favorable than desired can give rise to hope, providing one with the sense that the circumstances can (and will) improve. Hope motivates commitment and action toward goals and other desired outcomes. Persuasive media messages that evoke hope have been found to influence health, energy, and environmental behaviors and policy support (e.g., Arpan, Xu, Raney, Chen, & Wang, 2018; Nabi & Prestin, 2016). Little work has been conducted on hope and entertainment, though content analyses reveal a great deal of hope-related elicitors (e.g., overcoming obstacles, demonstrating perseverance) in films and television programs (e.g., Dale et al., 2017a), social media (e.g., Rieger & Klimmt, 2019), and online videos (e.g., Dale, Raney, Janicke, Sanders, & Oliver, 2017b). In one of the first examinations of hope and entertainment, Prestin (2013) demonstrated that narratives featuring an "underdog" character can promote feelings of hope and increase motivation to pursue one's own life goals.

Awe

Awe is the amazement elicited by a perceptually vast stimulus, which exceeds one's ordinary frame of reference or experience in some domain (e.g., size, power, perfection; Keltner & Haidt, 2003). Awe can be elicited by literal vastness (e.g., natural landscapes), symbolic vastness (e.g., personal transitions like childbirth), and even *perceptions* of vastness (Piff, Dietze, Feinberg, Stancato, & Keltner, 2015; Saroglou, Buxant, & Tilquin, 2008). Awe-inspiring news stories are

more likely to be shared with other people (Berger & Milkman, 2012). Furthermore, awe has been proposed as a key component of meaningful experiences during video game play (Possler, Klimmt, & Raney, 2018). In particular, advanced visual gaming technologies (e.g., augmented reality, virtual reality, 3D, 360° perspectives) are thought to increase a player's sense of presence leading to deep immersion in the game world, thereby bringing the vast elements of that world experientially "closer" to the player, triggering awe. However, even slow-motion footage (e.g., colored drops of liquid falling into milk) and video montages of threatening natural phenomena (e.g., volcanoes) have been shown to elicit awe (Piff et al., 2015).

Cognitive Components

Eudaimonic entertainment experiences are also linked to a distinctive pattern of cognitive responses. In contrast to hedonic entertainment experiences that are positive, absorbing, and tending to divert attention away from everyday concerns, eudaimonic entertainment experiences are characterized by serious contemplation of painful, complex, and challenging aspects of the human condition.

Meaning-Making

The content of eudaimonic entertainment often deviates from the just-world scenario of hedonic entertainment fare, where conflicts and problems raised in the narrative are resolved in accord with the viewer's sympathies and moral judgments (Zillmann & Cantor, 1977). Audiences' seemingly paradoxical attraction to entertainment dealing with unjust negative events and hardships of the human condition can be understood within the context of psychological research on the processes by which individuals strive to make meaning out of negative experiences (Anderson, Kay, & Fitzsimons, 2013; Park, 2010). According to this literature, a need for meaning-making is aroused by negative events that violate an individual's belief in a just world, where bad things don't happen to good people (including the self). In some cases, the cognitive dissonance resulting from unjust negative events is easily resolved by focusing on good things that later happen to the same person, such that the negative event is "balanced out" by a happy ending. In the absence of material compensation, however, the process of dissonance reduction tends to focus on compensation by immaterial rewards such as deeper insight, social connection, and personal growth (Anderson, Kay, & Fitzsimons, 2013). The concept of meaning-making through immaterial compensation bears a resemblance to typical themes and lessons observed by audiences of meaningful entertainment (Oliver & Hartmann, 2010), including the value and fleetingness of life and the importance of human virtues such as care, courage, love, and persistence that can help individuals to persevere in times of hardship, loss, and pain. Hence, in addition to challenging audiences' just world beliefs, eudaimonic entertainment also seems to address the need for meaning-making aroused by such content in that it focuses on human virtues, values, and loving relationships. To the extent that a story highlights the compensation of characters in terms of such immaterial rewards, audiences' engagement in the cognitive challenge of meaning-making may be facilitated and gratified.

Cognitive Emotion Regulation

Cognitive processes of reappraisal and meaning-making have also been described as an adaptive emotion regulation strategy (Gross, 2002). In research on emotion regulation and well-being,

individuals' ability to reinterpret emotionally negative situations in more positive and meaningful ways has been found to promote emotional stability, relationship quality, and general well-being (Gross, 2002; Ryan, Huta, & Deci, 2008). In line with general research on the psychological function of meaning-making, studies of eudaimonic entertainment have found that, despite the initial experience of negative or mixed affect, such experiences ultimately contributed to individuals' well-being in more complex and sustainable ways. For example, eudaimonic entertainment has been linked to increased well-being in terms of mastery experiences and higher levels of vitality after media use (Rieger, Reinecke, Frischlich, & Bente, 2014). Moreover, Khoo and Graham-Engeland (2014) found that exposure to tragic drama was associated with increased cognitive processing, which in turn led to increases in emotional self-efficacy, self-compassion, and psychological well-being over time. These findings provided initial evidence that the cognitive challenges and meaning-making processes involved in eudaimonic entertainment experience might serve important functions for cognitive emotion regulation and psychological well-being.

Cognitive Challenge

Additional sources of cognitive challenge might arise from the processing of complex story lines and moral conflict. For example, Bartsch and Hartmann (2017) found that movies presenting viewers with cognitive challenges were rated higher on eudaimonic appreciation. In addition, the model of intuitive morality and exemplars (MIME; Tamborini, 2013) assumes that eudaimonic entertainment often presents audiences with moral dilemmas, in which values from one domain of intuitive morality must be violated so that values from other domains can be upheld. In line with the assumption that moral dilemmas are both cognitively challenging and conducive to eudaimonic appreciation, Lewis et al. (2014) found that morally conflicted content took longer to process and that it was rated higher on appreciation than content that did not involve moral conflict.

Elaboration and Involvement

The notion of eudaimonic entertainment as a cognitively engaging experience is also compatible with research that has linked eudaimonic appreciation to a reflective and elaborate mode of information processing, whereas hedonic enjoyment has been linked to superficial, heuristic processing (e.g., Bartsch & Schneider, 2014; Lewis et al., 2014). The phrase “dual-process model of entertainment”—which has come to be used as a synonym for the hedonic/eudaimonic framework—highlights the parallels of entertainment theory with dual-process models of cognitive information processing (e.g., Petty & Cacioppo, 1986). In line with dual process models of entertainment, an emerging line of evidence supports the assumption that eudaimonic entertainment can encourage processes of cognitive elaboration, attitude change, and information seeking about social and political issues (Bartsch, Kalch, & Oliver, 2014; Bartsch & Schneider, 2014; Knobloch-Westerwick, Gong, Hagner, & Kerbeykian, 2012).

Outcomes of Eudaimonic Media Experiences

Numerous outcomes (or second-order media effects) have been associated with eudaimonic media experiences; several of these are discussed below. To date, scholars have offered few phenomenon-specific models or theories to explain these effects (for a notable exception, see the

mediated wisdom of experience perspective; Slater et al., 2016). Instead, most studies rely on broader theories of media reception (e.g., MIME, as noted above; the TEBOTS model, see Chapter 12 in this volume) and basic human psychology (e.g., social cognitive theory, see Chapter 7 in this volume; broaden-and-build theory, Fredrickson, 2001; various theories of emotion, see Chapter 11 in this volume) as explanatory mechanisms of the following outcomes.

Well-Being

As noted above, scholars generally differentiate between two types of well-being: subjective (or hedonic) and psychological (or eudaimonic). The impact of entertainment on the former is discussed in Chapter 21. Eudaimonic media experiences have been shown to promote numerous aspects of psychological well-being. For example, studies have observed post-media use increases in general life satisfaction (e.g., Janicke-Bowles, Dale, & Hendry, 2018), insight and intrinsic need satisfaction leading to personal growth (e.g., Oliver et al., 2016), self-affirmation and self-worth (e.g., Toma & Hancock, 2013), self-actualization (e.g., Shao, 2009), and vitality (Rieger et al., 2014). Moreover, these well-being outcomes serve other beneficial purposes; for instance, eudaimonic media experiences can trigger nostalgic feelings (e.g., Furno-Lamude & Anderson, 1992), which have been shown to (among others) help diminish loneliness (Wildschut, Sedikides, Arndt, & Routledge, 2006) and buffer death anxiety (e.g., Juhl, Routledge, Arndt, Sedikides, & Wildschut, 2010). In fact, well-being outcomes have been shown to have wide application and benefit across different life contexts, including social relationships, work-home balance, spirituality, politics, and health. In the interest of space herein, we recommend Reinecke and Oliver (2017) as an excellent volume exploring the many facets of media and well-being.

Connectedness and Social Perceptions

One important outcome associated with viewing meaningful, inspiring, or self-transcendent media pertains to how it affects our perceptions of and interactions with others. In this regard, research generally supports the idea that when exposure to eudaimonic media elicits elevation, individuals report more favorable perceptions of other people, with intensified feelings of connection. For example, Zickfeld et al. (2019) introduced the concept of *kama muta* to refer to feeling moved or touched in response to witnessing the display of love or communal relationships. In validating a measure of the concept across 19 countries, the authors reported that individual viewing or writing about moving content reported higher levels of various feelings, including the motivation to hug or to express love towards another person. In their study, feeling connected to others was operationalized in terms of a specific relationship. However, additional research has suggested that feelings of connection transcend perceptions of any single person and are frequently felt toward humankind overall. For example, Aquino et al. (2011) demonstrated that reading an inspiring news story about the generosity of an Amish community after a mass shooting resulted in more favorable views of humanity (e.g., “There is still some good in the world,” “The world is full of kindness and generosity,” p. 706).

Some scholars have noted that general feelings of connectedness with humanity may have important implications on feelings toward specific others who may be oppressed or stigmatized. For example, Oliver et al. (2015) reasoned that feelings of connection with humans per se should include feelings of connection with diverse cultural and ethnic groups, a finding supported among the white participants in their research. Researchers have reported similar

findings with regard to perceptions of people with physical disabilities (Bartsch et al., 2018) and to perceptions of gay men (Lai, Haidt, & Nosek, 2014).

Prosocial Behaviors

Decades of research on children's television use clearly has shown that exposure to mediated prosocial behaviors can increase their adoption by young viewers (e.g., Mares & Woodard, 2005). For adults, though, the picture is more complicated. Past research shows that many of the factors that predict prosocial behaviors are associated with an attraction to eudaimonic media experiences: empathy, religiosity, spirituality, as well as positive, moral, and self-transcendent affect, to name a few. Thus, isolating the relative influence of eudaimonia as a media effect on, for instance, altruism is difficult, especially since traits, exposure, and prosociality are all thought to symbiotically contribute to an upward spiral of human flourishing (e.g., trait empathy leads to positive media exposure, which promotes prosociality, leading to trait empathy development; see broaden-and-build theory; Fredrickson, 2001).

The emotional components of eudaimonic media experiences—feeling elevated, hopeful, in awe, empathic, etc.—are all associated with increased prosocial motivations and actions (e.g., Pohling & Diessner, 2016; Stellar et al., 2017). Moreover, viewing touching films has been shown to increase a viewer's desires to be a better person and to do good things for others (e.g., Oliver et al., 2012). Viewers of inspiring YouTube videos reported a greater intention to share them (as opposed to funny ones) with other people (Clayton et al., 2018). In a nationally representative survey of American adults, Raney et al. (2018) found that those who reported being inspired by more media content were the most likely to self-report prosocial and altruistic behaviors, even after controlling for a variety of demographic characteristics. Finally, in a series of studies, participants reported greater intention to help (Study 1) and devoted more time to actually helping (Study 2) a researcher following exposure to elevating television content (Schnall et al., 2010); similar findings were recently reported with elevating online videos (Zhao, 2018).

Political Engagement

Research on eudaimonic entertainment has also offered a new perspective on the controversial relationship between entertainment and political communication. Can entertaining forms of political communication be useful to reach audience groups who are less interested in politics, or do they rather distract audiences from serious consideration of political issues? Dual-process models of entertainment suggest that the contribution of entertainment to political involvement depends on audiences' entertainment motivations and experiences: Entertainment consumption can either be driven by hedonic, escapist motivations that are associated with a superficial mode of information processing, or by eudaimonic, truth-seeking motivations that can prompt more elaborate forms of information processing. The potential of eudaimonic entertainment experiences in stimulating issue elaboration, political interest, information seeking, and participation has been examined in a recent line of studies (e.g., Bartsch & Schneider, 2014; Weinmann, 2017). For example, after viewing a moving film scene about a politically relevant issue, individuals reported more reflective thoughts about the issue and higher levels of issue interest, and spent more time reading news articles about the issue (Bartsch & Schneider, 2014).

Moderators of Eudaimonic Media Experiences and Associated Outcomes

The evidence is mounting that people routinely seek out, feel moved by, and find meaning in entertainment media, with positive benefits to them personally and to those around them. But it is also increasingly clear that eudaimonia is in the eye of the beholder; that is, not everyone is inspired by the same content or touched by media at the same frequency. In our research, we routinely find variation in levels of eudaimonic responses to meaningful content, with a host of variables moderating when people may or may not be moved.

Perhaps an obvious moderator of feeling moved by many types of eudaimonic entertainment is gender, with women typically reporting higher levels of feeling touched, tearing up, and feeling inspired by moving media portrayals (Raney et al., 2018). In many respects this makes sense, as public displays of sadness are generally socially discouraged for males (Brody & Hall, 2000). However, other data suggest that males report equal—and perhaps even higher—levels of eudaimonic media motivation than do women, suggesting that self-reported feelings of elevation may reflect some level of social desirability (Fisher & Dubé, 2005).

Cultural background is another important moderator of responses to eudaimonic media that is only beginning to gain scholarly attention (see Chapter 27 in the current volume). For example, Kim (2017) pointed out that Eastern and Western cultures often differentially define what is meant by “happiness,” with Western cultures placing a greater emphasis on positive valence and Eastern cultures placing a greater emphasis on social harmony. As a result, happiness or pleasure for the self may not be experienced as positive among people in Eastern cultures unless that happiness is shared among the collective. Furthermore, Eastern cultures are more likely to accept contradictory states or forces (e.g., happiness and sadness) as complementary, whereas Western cultures often see them as opposing. There are several implications for these cultural differences on media experiences, including the possibility that mixed affective responses (e.g., bittersweet feelings) to media may be more readily appreciated in some cultures than in others.

Political ideology is another characteristic that may play an important moderating role in responses to eudaimonic media content. Although some U.S.-based research has found small or no differences among Democrats and Republicans in terms of feeling inspired by moving entertainment (Oliver et al., 2017), it is important to note that many experimental studies have employed stimuli that would be expected to appeal to a wide diversity of audiences. In contrast, when the stimuli are more targeted or focus on specific values more closely aligned with some political ideologies over others (e.g., loyalty, deference to authority), differences in feelings of elevation have been observed. For example, Seibt, Schubert, Zickfeld, and Fiske (2018) found that touching political advertisements elicited feelings of inspiration but only when the ads featured a candidate from the same political party as the viewer.

Finally, research is beginning to explore the role of personality traits in moderating the relationship between exposure to inspiring media and resultant feelings of self-transcendence. Prior research has shown that traits such as dimensions of the Dark Triad (i.e., Machiavellianism, narcissism, and psychopathy) serve to reduce attraction to inspiring media portrayals. Consequently, it seems reasonable to conclude that for viewers scoring high on such traits, meaningful media may fail to elicit the same feelings of tenderness typically experienced by the average viewer. However, simply failing to feel touched by eudaimonic portrayals may not fully capture the disdain that some viewers experience. Specifically, Appel, Slater, and Oliver (2018) recently reported that higher levels of Machiavellianism and psychopathy were

associated with seeing eudaimonic film clips as particularly corny, inauthentic, overly sentimental, and silly.

Concluding Thoughts and Future Directions

From our perspective, the growing body of scholarship on eudaimonia as a media effect represents a welcomed “response” to the decades of negative-effects research chronicled in most of the other chapters in this volume. But these are still early days in the study of positive media. Eudaimonic media experiences are complex, multi-faceted, and idiosyncratic. As with most content, viewers are active in their media selections, and they experience a diversity of responses ranging from elevation to disgust. As scholars proceed, a nuanced understanding of how viewers receive and perceive meaningful messages is necessary, especially as we consider how experiences therewith can result in personally and socially beneficial outcomes.

As scholars continue to examine how heightened connectedness may forge stronger and more compassionate ties with others, several directions of scholarship may be worthy of our attention. First, research is still lacking on what feelings of inspiration may imply about feelings between groups who are decidedly antagonistic. Given current political fragmentation, this direction of research seems particularly pressing. Another potentially fruitful direction of research concerns feelings of connection, not just with other people, but to animals, nature, or to the planet overall. This direction has important theoretical implications for the boundary conditions of elevation outcomes, but also for scholars and activists who may be interested in harnessing such feelings for purposes of social change (e.g., climate-change activists).

Similarly, researchers must grapple with the access to and selection of meaningful media in a “permanently online, permanently connected” world (see Chapter 1 in this volume). On one hand, one might argue that media users may become less compelled to search for meaning when their desire for pleasure can be so easily and varyingly fulfilled. On the other hand, we note the rise in user-generated media, which provides unique opportunities for both the individual and collaborative creation of content. Initial work suggests that feelings of elevation are more enhanced when individuals create meaningful media content than when they merely consume it. Future studies may benefit from examining how the creative process afforded by emerging technologies can provide further avenues for social good.

Advances in virtual reality (VR; see Chapter 26 in this volume) technology offers another avenue for ongoing meaningful-media research. First, VR environments can be incredibly intricate, complex, and vast, offering new or otherwise impossible opportunities for individuals to experience positive emotions (e.g., awe). Second, the immersive and interactive nature of VR environments promote the feeling of presence, or the sense of “being there” socially, spatially, and sensorially. Thus, VR has the potential for people to explore situations in which they, for instance, can experience the world through the eyes of someone else, perhaps fostering (among others) empathy and stereotype reduction.

To conclude, the landscape of entertainment fare and entertainment experience is vast and highly heterogeneous. In highlighting eudaimonic responses, we have zoomed in on a unique experience that may reflect only a small slice of audience reactions. However, we believe that this small slice represents deeply meaningful, inspiring, and elevating feelings that can leave a lasting impression, and one that holds promise for addressing issues of social good. As such, we look forward to future scholarship on media entertainment, and we celebrate acknowledging

both the pleasure that entertainment can bring, as well as the insights it affords into the human condition.

Notes

- 1 The term *eudaimonia* is most often associated with Aristotle's *Nicomachean Ethics*. Etymologically, it is the combination of two Greek words: *eu* ("good") and *daimon* ("spirit"). In ancient philosophy, the *daimon* is the potential within all humans to be good and ultimately fulfilled; it provides motivation, direction, and meaning to one's life. *Eudaimonia*, then, is that which you do in accordance with your *daimon*. It is the striving for the highest human good and fulfillment.
- 2 The term *appreciation* has previously appeared in the entertainment literature, specifically in humor research (e.g., Goldstein & McGhee, 1972). Similar to its use herein, appreciation for humor scholars reflected reactions that were beyond enjoyment: recognition of a clever witticism, satisfaction in mastering the cognitive hurdles required to "get" a complex joke, etc.

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18

Advertising Effects and Advertising Effectiveness

Louisa Ha

Advertising is a deliberate attempt at persuasion by an identified sponsor, using controlled messages displayed in a media outlet not owned by the advertiser (Ha, 2018a). Advertising is one of the many promotional tools of marketers. Although it is most frequently a paid message by a business (Thorson & Rodgers, 2012), advertising can also be free, such as public service announcements (e.g., “Don’t text and drive!”). Advertising tends to be brief and repeatedly delivered with a clear intent to influence perceptions of the advertised brand or cause. This persuasive and repetitive nature annoys us and makes us weary of advertising. At the same time, some ads provide high information or entertainment value for us. As a result, advertising is both loved and hated. But as Berger (2007) stated, the first rule of advertising is to attract our attention.

Advertising is the primary (or in some cases, the sole) source of funding for many mass media outlets including television, websites, search engines, online videos, to name a few. In addition to being a source of funding, advertising itself is an important part of media content. It defines the “newshole” for newspapers and serves as “commercial time” or “paid programs” for television and radio. Different advertisements contribute to our perceptions of consumption and consumerism, as well as the relationships between products, individuals, family, and friends. But one commonality of all advertising is its goal to appeal to consumers to create the desired belief or understanding of the brand.

Some people assume advertising has powerful effects, viewing consumers as passive users being manipulated by advertisers. Others argue that advertising effects are limited because consumers are active, will act in their own best interests, select messages that they agree with, and will resist persuasion. There is an irony that advertisers and agencies complain about lower-than-expected effects of advertising on sales or other advertising goals; they say consumers are hard to persuade and that they resist persuasion. In a meta-analysis of advertising effects on young people’s attitudes, comprehension, and product selection, Desmond and Carveth (2007) indeed found low explanatory power from advertising exposure. Nevertheless, consumer activists (e.g., Adbusters, n.d.; Makhijani, 2013) and many scholars (e.g., Berger, 2007; Pollay, 1986) have expressed concern about the powerful, negative effects of advertising on society. Rotzoll

and Haefner (1996) explained this debate on advertising effects well: “Because of its cultural boundness, its complexity of forms and functions, and the difficulty in ascertaining its outcome, advertising is highly prone to disparate interpretations” (p. 9). We can begin to resolve this dispute by understanding the difference between *advertising effects* and *advertising effectiveness*.

Broadly speaking, advertising effects refer to the influence exerted by advertising on individuals and society. Such effects can be deliberately caused or unintended by the advertiser. To an individual brand or advertiser, the sole purpose of advertising is to advance the marketing communication goals of the brand. These goals can range from creating brand awareness, developing a favorable attitude toward the brand, building a brand’s identity, to inducing the purchase of the brand. From the advertiser’s perspective, advertising’s effects on its consumers focus on the benefit of advertising to the brand as a business. Because the persuasive communication goals are clear to the advertiser, measuring how much the persuasive goals have been achieved should be counted as the effectiveness of advertising, not advertising effects. Yet, for the convenience of emphasizing the influence of advertising on brand image and sales, most scholars still refer to such research as advertising effects research. Such microscopic, advertiser-centered perspectives on advertising effects on a brand’s success are of little concern for social scientists, advertising critics, and policy-makers who are more interested in the broader societal effects of advertising.

Social Effects of Advertising

The social effects of advertising are collective, cumulative, and mostly unintended by the individual advertisers. It is likely that few or no advertisers or advertising creators will say their ads are intended to create a materialistic society. But what their ads portray is a materialistic society that uses products to meet consumers’ social and psychological needs, such as gaining the respect and admiration of people who own those advertised products. The blame on advertising for various negative social effects such as racial and sexual stereotypes, materialistic values, body image and social comparison, or addiction and consumption of health-hazardous products is not the problem of one advertisement or one advertiser. Various advertisements with similar themes and appeals, encountered repeatedly, cultivate those perceptions and values. Because advertisements are short and simple and have to compete for consumers’ attention with other ads and editorial content, communication strategies that are easy to comprehend (e.g., stereotypes, eye-catching and attractive images) will be commonly used, though this reality should not be used to excuse advertisers’ social responsibility.

Advertising and Materialistic Consumer Culture

Since the late 1950s, advertising has frequently been the target of critical scholars for promoting consumer culture and materialism in society (Nelson, 2008), often criticized through books such as Vance Packard’s (1957) *The Hidden Persuaders*, Stuart Ewen’s (1976) *Captains of Consciousness: Advertising and the Social Roots of the Consumer Culture*, and Michael Schudson’s (1984) *Advertising: The Uneasy Persuasion*. Packard’s work focused on research demonstrating how advertising influences consumers through psychological motivation and how children are taught to become “consumer trainees.” Ewen offered a history of the development of advertising as a tool for American corporations to exploit human instincts and to mobilize people to become consumers for mass-produced products. To Schudson, advertising is “capitalistic realism,” which is “part of the establishment and of a common symbolic culture” shared and celebrated by consumers. Advertising is “thoroughly optimistic, providing for any troubles that it identifies a solution in a particular product or style of life”

(p. 215). He also argued that singularity in the themes and pervasiveness of advertising as a popular culture has profound impacts on society. Similarly, Richard Pollay (1986) called advertising “a distorted mirror of the society” with its value “heavy on the seven deadly sins but light on the seven cardinal values” (p. 20). Most of these and related studies rely on neo-Marxist or political-economic critiques and perspectives.

Because advertising’s goal is to encourage the use of certain products/brands, it is expected that consumption of products and advertising exposure are related. Many researchers have used large-scale content analyses to show how advertisements glorify and glamorize consumption using images and symbols (e.g., Messaris, 1997; Pollay, 1985). The value commonly conveyed in advertising is that owning products can produce peer recognition, admiration, or social acceptance. This is especially true for products that have high social functions, such as those related to beauty and fashion.

Research on advertising’s effect on consumer culture assumes all advertisers are motivated by profit and sell their products and services in advertising to their advantage. Many of these products may even be hazardous to health such as tobacco, alcohol, fast food, and unhealthy snacks. Indeed, these are the industries with the largest advertising spending-to-sales ratios (Radio Advertising Bureau, 2017). The use of advertising bans and regulations on certain products manifests the recognition of the power of advertising in influencing consumption of these products. Luxury brands build their images and status symbols through heavy advertisements. Because non-profit advertisements are a minority in the advertising world, the effect of advertising on consumption indulgence and materialism in society is almost a consensus among most scholars researching the social effects of advertising. However, Holbrook (1987) argued that advertisers have diverse targets and use different themes to influence consumers, with some being for wholesome goals such as family values and helping others. Hence, Holbrook warned against a monolithic approach to interpreting advertising content. While materialism is considered a negative social effect of advertising, the increase in consumption can stimulate the economy as a positive economic effect of advertising. Though beyond the boundaries of this chapter, it is important to note that there is a rich body of literature on the economic effects of advertising regarding market power and competition (e.g., Albion & Farris, 1981), product price (e.g., Steiner, 1978), media price (e.g., Ha, 2018a), and product category consumption (e.g., Saffer & Chaloupka, 2000).

Advertising Effects on Children

Researchers have also focused on advertising’s effects on children as a vulnerable population. In general, children are understood to not yet have the developed cognitive and emotional systems to identify the persuasive intent of advertising or to resist the influence of advertising (Laczniak & Carson 2012). Through a meta-analysis of studies conducted from 1972 to 1994, Martin (1997) found that the older the child, the more able he or she was to distinguish advertising from editorial content. Children aged eight or under were less able to differentiate ads from editorial content (Stephen, Stutts, & Burdick, 1982). With regard to effects, a 12-month study of Dutch children aged 8–11 found that advertising exposure increased materialism through increased desire of the advertised products (Oprea, Buijzen, van Reijmersdal, & Valkenburg, 2014). Other studies have shown how advertising affects children through implicitly acquired affective associations rather than cognitive processing (Nairn & Fine, 2015). Consequently, it is not just that children lack cognitive ability but also that their affective associations with the advertised product serve to heighten consumer culture. Together, research findings on advertising’s effect on children have important policy implications. For example, some countries such

as Sweden have banned advertising to young children, and the United States has restricted advertising shown in children's programs.

Advertising Effects on Media Content

The commercialization of media content due to increases in advertising presence is another important social effect of advertising. Media critics have long lamented how advertising influences media content by appealing to the popular taste of the masses in order to maximize viewership. There is a considerable body of media economics literature examining the effect of advertising on quality of editorial content. For example, Einstein's (2004) study of U.S. commercial-broadcast networks' programs found that advertising drove program development and reduced the diversity of program content. Likewise, Picard (2004) found that advertising-supported newspapers placed less emphasis on content related to social value, and instead featured content that was sensational or that employed other questionable practices. However, other studies have identified positive effects of advertising on editorial and content quality. Sun and Zhu's (2013) study showed that despite shifting toward popular topics to attract audiences and advertisers, blogs participating in an ad-revenue-sharing program did not decrease in quality. Thus, it is possible that advertising as a revenue may actually professionalize media content, improving quality and popularity by adding funding to the media.

Psychological/Individual Effects of Advertising

Psychological-effects research typically focuses on the intended effects of advertising; so, most such studies belong to the world of advertising effectiveness. In discussing the individual effects of advertising, researchers typically differentiate between cognitive, affective, and conative effects. Cognitive effects refer to the knowledge and brand accessibility or top-of-mind awareness effect of advertising on consumers. Affective effects include brand preference, affinity, and attitude toward the brand. Conative effects are the behavioral effects of advertising on brand purchase, referral, and advocacy of the brand.

The Hierarchy of Advertising Effects model is the most classical and dominant model in the study of advertising. Developed by E. St. Elmo Lewis in the late 1800s and advocated by Strong (1925), the model assumes the process of advertising effects begins with the cognitive effect (A—awareness/attention) of advertising, which arouses the audience's interest (I—interest) in the product, creating a demand (D—desire) for the product, and leads to a purchase decision (A—action). Given the presumed sequence of effects, the model is more commonly referred to as the AIDA model and is adhered to by many advertising practitioners. However, different views exist regarding whether the sequence of advertising effects follows this route necessarily. Barry and Howard's (1990) review and critique of the research on the Hierarchy of Advertising Effects model and other alternative sequences of the cognitive, affective, and conative effects shows that, in fact, it is hard to separate one effect from the other. They argued that it is better to acknowledge the existence of the different cognitive, affective, and conative effects rather than imposing an order of the effects. Nevertheless, recent studies on advertising still use the AIDA model to examine advertising effectiveness (e.g., Venkatraman et al., 2015). However, scholars have suggested that the model be expanded to include responses such as search, like/dislike, share, and love/hate to accommodate the new technology affordances for consumer searches of information online and post-purchase activities (Wijaya, 2012). With the AIDA model in mind, it might be useful to briefly consider each of the three types of advertising effects in more detail.

Cognitive Effects

Among the three types of individual effects, cognitive effects have received the strongest empirical support, especially with regard to how repeated exposure to advertising can increase brand accessibility and top-of-mind awareness (Nan & Faber, 2004) and low-involvement learning of the ad (Krugman, 1965). There is little dispute that advertising creates awareness of the advertised brand or the message it promotes. Heightened awareness is especially likely when advertisements are repeatedly shown to consumers. Additionally, low-involvement learning is common, with people learning advertising messages without conscious effort but rather through passive, repeated exposure. When consumers need to make a purchase decision, top-of-mind awareness is crucial; thus, advertisers need to make their brand the most accessible in memory to the consumer.

Because advertisements are usually not solicited by consumers, people rarely spend much effort to remember them. Krugman's (1965) three-exposure theory argues that with a minimum of three exposures, people will remember ads even when they do not pay much attention to them. This theory is embraced by advertising practitioners who believe that repeated exposure to ads will generate the necessary memory for ad effectiveness. It has also resulted in various propositions concerning the minimum threshold for effective frequency of advertising exposure (Schmidt & Eisend, 2015). At the same time, brand accessibility also benefits from other promotion strategies, such as product placement (Ham, Park, & Park, 2017).

Attitude Change Effects

Studies of the effects of advertising on attitude change are more inconclusive. The Elaboration Likelihood Model suggested by Petty, Cacioppo, and Schumann (1983) offers a comprehensive explanation for how attitudes are formed and changed through advertising. It posits two routes to persuasion. Attitudes formed through the central route are more likely to be resistant to counter-arguments or change because of the elaboration of thoughts through systematic processing and evaluation of information. In contrast, attitudes formed through the peripheral route involving cues unrelated to the argument of the message (e.g., jingles, attractive sources) are less resistant to counter-arguments (Schumann, Kotowski, Ahn & Haugtvedt, 2012). Research has shown that people with strong attitudes and higher elaboration are more resistant to persuasive attempts, whereas those who have ambivalent or weak attitudes are more likely to be persuaded by peripheral cues (Petty & Krosnick, 2014).

Another attitude-change theory is affect transfer, which posits that a positive attitude for a general object will transfer to a specific object. In advertising, this means that a positive attitude toward an advertisement is likely to transfer a positive attitude toward the advertised brand. In other words, when consumers like the ad, they will tend to like the advertised brand. However, research on such direct attitude transfers has not provided consistent support. MacKenzie and Lutz's (1989) comparison of the affect transfer model with other models found that there is a dual mediation of attitude toward the specific ad and attitude toward the brand. The attitude toward the ad (A_{ad}) affects cognition about the brand as well as attitude toward the brand (A_b). A subsequent meta-analysis of studies on the effect of A_{ad} on A_b found that cognition of the brand plays a more important role than attitude toward the ad in influencing attitude toward the brand (Brown & Stayman, 1992). However, it must be remembered that the cognition of the brand can be influenced by other factors such as prior brand-consumption experience and familiarity with the brand.

To appeal to the audience, different message strategies are utilized, which can broadly be categorized into rational (hard-sell) and emotional appeals (soft-sell) by their emphasis (Okazaki, Mueller, & Taylor, 2010). Rational appeals include information about the product and the functional benefits to the consumer about the brand. Emotional appeals include various types of content that arouse the emotion of the consumers such as happiness, humor, fear, anger, love and erotism (sex), and nostalgia; these are the bases of creative philosophies in many advertising agencies (West & Ford, 2001). Researchers have found that both rational and emotional appeals can be effective in generating favorable responses to advertisements, including for example social media advertising (Lee & Hong, 2016). Many advertising practitioners (Nyilasy & Reid, 2012) and some researchers such as Morris (2012) and Geuens, De Pelsmacker, and Faseur (2011) argue for the stronger effect of emotional appeals than rational appeals in the persuasive power of advertising. However, the effectiveness of specific appeals such as humor, fear, love, and erotism vary by product and execution. Further, cultural norms regarding the appeals can also generate a backlash effect.

In terms of specific types of appeals, research shows that humor generally reduces resistance toward a persuasive message and increases preference for the ad, but it may also distract a consumer's understanding of the ad's main message. A meta-analysis of the effect of humor as an advertising appeal showed that humor primarily enhances positive attitudes toward the advertisement, but less for the advertised brand (Eisend, 2011). In addition, humor is found to be the main factor for effective television advertising and viral advertising spread by consumers (Porter & Golan, 2006). The use of humor represents the expectation of advertising to entertain the audiences (Beard, 2008).

Fear appeals are commonly used in health-related advertising by emphasizing the negative consequences of having health problems or bad habits. However, fear appeals are associated with many questions. For example, some question the ethicality of arousing fear and posing threats to consumers, whereas others argue that high fear can result in high effectiveness (LaTour, Snipes, & Bliss, 1996). The effects of fear appeals also vary by culture. A meta-analysis of more than 60 years of research found that fear appeals are effective only up to a certain point when consumers feel able to make the change, but high levels of fear result in incomppliance (Ruiter, Kessels, Peters, & Kok, 2014).

Sex appeals are prevalent in the advertisement of products, such as fragrance and clothing, associated with the attraction of a romantic or sexual partner (Reichert & Lambiase, 2014). However, the effectiveness of these appeals varies by culture (Liu, 2014). They can attract the consumer's attention and recall of the ad, but they can also lower the memory of the advertised brand by distracting the consumer's focus from it (Wirtz, Sparks, & Zimbres, 2018).

Finally, nostalgia can arouse consumers' fond memories of the past, increase involvement in the ad, and create a liking of the ad as well as the brand (Muehling & Sprott, 2004). More recent research on nostalgia in advertising focuses on responses to specific moments (e.g., childhood brand exposure; Muehling, Sprott, & Sultan, 2014) and the "reminiscence bump" years, when consumers were 15–24 years old (Ju, Choi, Morris, Liao, & Bluck, 2016).

Conative Effects of Advertising

The most common conative (or behavioral) effect of advertising is purchase of the brand. Because most effects studies are conducted in a lab setting rather than at the actual point of purchase, purchase intention or brand selection among choices is often used as a proxy for purchase. However, interest in consumer engagement, especially on social media, has recently become another common behavioral outcome measure of advertising effects (Ashley & Tuten,

2015). The typical measures of consumer engagements are the clicking of likes, sharing of posts, and posting comments on social media.

Resistance to Advertising and Advertising Avoidance

In addition to examining the intended psychological effects of advertising, several theories have also sought to explain how individuals resist persuasive advertising and the intrusiveness of advertising clutter. Verklein and Kanner (2007) estimate that people (in cities) are exposed to 3,000 ads per day in various shapes and forms, including outdoor signages, flyers, and commercials. The addition of social media sponsored posts and other emails implies even more exposure to advertising.

Three major approaches explain users' avoidance of advertising: reactance theory, the persuasion knowledge model, and goal impediment theory. Reactance theory argues that audience members resist attempts at external control and react negatively toward efforts to persuade them (Brehm & Brehm, 1981). Advertisers violate individuals' freedom to consume the media content they want to watch because ads are not solicited by the consumers, with advertisers often forcing consumers to watch ads via commercial interruption or compulsory online ads (Edwards, Li, & Lee, 2002).

Another theory commonly used is the persuasion knowledge model (PKM) proposed by Friestad and Wright (1994). Persuasion knowledge is a loose set of beliefs held by the target (the consumer) about how marketers attempt to influence his or her decisions, including beliefs that may not be correct (Yoo, 2009). Consumers learn about the tactics used by advertisers who have a clear intention to persuade them to buy the product. They then resist persuasive attempts by being critical of the message and not trusting the advertiser. According to the PKM, the consumer is an active participant, coping with the persuasive tactics and interacting with the persuasion agent, such as a salesman or an advertisement (Kirmani & Campbell, 2004). In the context of advertising, consumers will try to understand the advertiser's persuasive tactics, and then consider whether the persuasion is effective and appropriate. Thus, consumers are both goal seekers that utilize the persuasion agent to achieve their own goals, and sentries that guard against unwanted marketing persuasion.

Several studies of the PKM have found that being repeatedly exposed to persuasive information causes people to resist persuasive materials (Henrie & Taylor, 2009). For example, one study showed that different ways of delivering product information (e.g., editorials, advertorials, advertisements) impacted the perceived credibility of the sources of information, perceived selling intentions, and consumers' purchase intentions (Attaran, Notarantonio, & Quigley, 2015). People perceived that the editorial had lower levels of selling intention than the other two information delivery formats. Editorials and advertorials were perceived as containing more product information than advertisements, resulting in consumers being more likely to buy a product based on editorial content and advertorials rather than advertisements.

One final theory used to explain the resistance to and avoidance of advertisements is the goal impediment theory. According to this theory, the interruption of media consumption by advertising clutter results in consumer resentment. As a result, consumers will choose to skip or ignore advertisements and continue their media content consumption, even though they may still be physically exposed to the ads. However, because they do not pay attention to the ads, advertising will not achieve its intended effect of creating a positive image or memory of the brand. Further, Ha and McCann's (2008) integrated model of advertising clutter proposed that users' task orientations affect perceived advertising clutter levels. Namely, task-oriented consumers engaged in informational searches perceive higher levels of ad clutter than entertainment, exploration, or shopping-oriented consumers. Their propositions were supported by

Zanjani, Diamond, and Chan (2011) in an experiment that found that information seekers were more likely to be affected by ad clutter than were surfers.

Next Steps in Advertising Effects Research

As discussed at the beginning of the chapter, researchers have to determine their path in studying advertising effects, be it in terms of advertising effectiveness or as a form of cultivation of social and economic outcomes. Practitioners and applied advertising researchers will likely be more interested in advertising effectiveness research, whereas academic and critical researchers will probably be more interested in the broader social consequences of advertising. Regardless, the recognitions of emerging technologies is central to future scholarship in this area.

Impact of New Media Technologies on Advertising Effectiveness Research

New media technologies enable customization and personalization of communication messages, making it easier to find the target audience for advertisers and allowing consumers to escape exposure to irrelevant messages. Technologies can also optimize a message through global positioning system (GPS) locationing and through the avoidance of repetition within a short period of time to the same audience (Ha, 2018b). How this strategy improves consumers' receptiveness to advertising and the overall advertising environment is a fruitful area for researchers. Sundar, Kim, and Gambino (2017) used their theory of interactive media effects (TIME) to explain how interactive advertising can be more effective than traditional advertising by increasing consumers' trust and user agency, including the avoidance of advertising. They argued that the technological affordances represented by different attributes and features of new media technologies create cues that affect consumers' perceptions of advertising content and facilitate purchase behaviors or sharing information with others. The cues and actions can be positive or negative depending on consumers' use of the cues as heuristics in judgments and the consumers' engagement with the advertising content. Below are a few important future directions that researchers should consider in studying advertising effectiveness related to new media.

Big Data, Algorithms, and Personalization of Advertising

One major contribution of new media technology in the improvement of advertising effectiveness is the ability to compile user data through computer network systems. Each company can generate its own user-data analysis in correspondence with different advertising campaign messages. Advertisers can change their advertising messages easily through the use of programmatic advertising, which is the use of algorithms to place targeted advertisements in media content, generate automatic responses, and customize advertising messages to the user. With a record of consumers' past behaviors and purchase experiences, the technology can further increase the effectiveness of communicating to the audience. For example, consumers who are bargain hunters should be responsive to ads that feature discounts and sales announcements, and companies can identify this type of consumer through their previous use of discount codes on their website via their online purchases. On YouTube, for example, the same ad will not be shown to the same consumer on the same day because of its algorithm. The extent to which consumers respond more favorably to personalized advertising than standard mass advertising requires more controlled experiments to see whether the absence

or presence of personalization changes their attitude toward the ad and the advertised brand. Likewise, researchers may also consider studying the challenges that personalization presents. Namely, as advertising becomes more individualized, different consumers will not see the same ad at the same time. Consequently, such personalization may threaten the power of advertising to create popular images and symbols, necessitating a comparison between brand cognitions in mass versus programmatic ads.

Recommender Systems and Machine Learning

Another related personalization technique afforded by computer technologies is the use of machine learning to recognize the preference pattern of consumers through their past purchases or searches. E-commerce giants such as Amazon.com and online streaming services such as Netflix and YouTube track the digital footprint of their consumers to discover genre or product category preferences and to identify complementary products and accessories for the consumer. Recent research has shown that consumers primarily follow recommendations (Ha, 2018b). Further, advertisements are presented as recommendations to the consumers based on what they are looking for. Thus, the nature of advertising as an image builder is changed to a recommended option, based on the consumer's need and the automatic generation of advertisements.

Consumer Responses to New Forms of Advertising

New media technologies facilitate the development of new advertising formats such as branded mobile apps, augmented reality ads, native ads, paid search listings, mobile ads, TrueView skipable video ads on YouTube, and content marketing. Branded mobile apps keep a brand on the screen of the mobile device as an app icon. Augmented reality ads can show users what the various advertised items would look like in their homes before they purchased them. Native ads are those resembling editorial content, such as promoted tweets and sponsored posts similar to news feeds on social media. Paid search listings come in different forms after a consumer types a word on a search engine or maps directions, highlighting the advertiser's paid listing on the result page. Mobile ads are those that pop up when consumers arrive at a certain location near the advertiser, or ads that are displayed on the screen when the consumer uses advertiser-supported free apps. Skippable video ads are those that one can choose to skip after five seconds. Content marketing is content created by marketers of interest to the consumers in the form of branded magazines, newsletters, or video channels. Although blurring the boundary between advertising and editorial content raises the ethical issues of editorial integrity and independence from commercial influence, mixing advertising with editorial content may remove the nuisance of advertising. More studies should be conducted on how receptive consumers are toward these new ad formats and how effective the formats are for different products. It is also imperative to examine the complementary or substitutional role of these new ad forms in advertising campaigns versus traditional display ads.

Additionally, it is important that future research recognizes the synergy of pull and push communication made possible by new media technologies (Ha, 2008). Most advertising is based on a push model in that advertisers display the ads to the consumers without their request. But search engine advertising uses a pull strategy based on the initiative of the consumer using an engine to obtain more information on a product or brand. On the one hand, the effectiveness of pull strategies should be measured in terms of how useful the

information is for the consumers and how accurate the algorithm is in finding the target audience which has an interest in and need for the brand. Push strategies, on the other hand, will encounter resistance and avoidance from consumers unless advertisers create enough value to the consumers to accept the unexpected and even unwanted advertising messages.

New Measures of Advertising Effectiveness

Traditional advertising-effectiveness measures are mostly about brand awareness, brand preference, and purchase intentions or sales. But as discussed in the latest development of the AIDA Hierarchy of Effects model, advertising-effectiveness measures must now include how ads arouse interest and induce greater searching for information about the advertised brand. Because searching for product information and reading reviews of products are now easily in reach for most consumers, measures of searching and immediate online purchases after ad exposure are reasonable measures of ad effectiveness. In addition, behavioral-effectiveness measures of consumer behavior should now include additional indicators, such as consumers sharing information with family or friends. Indeed, consumer advocacy is one of the best indicators of consumer loyalty. Some alternative measures of advertising effectiveness based on consumer engagement can also include visits to brand pages and websites, brand channels on YouTube, sharing brand postings, consumer advocacy for the brand in the form of posting one's own experiences to friends on social media, writing product reviews, or creating consumer-generated advertising.

Impact of New Media on Advertising Effects Research

The social effects of advertising will continue to shed light on public policy regarding advertising and help advertisers to reflect on their role in society. Given the advent of different media technologies, the following areas of research will take advertising effects scholarship to the next stage.

Relationships between Advertisers and Consumers: Cat and Mouse or Partners with Mutual Interest?

Is advertising a zero-sum game only benefitting the advertiser, or can advertising foster a win-win relationship between advertisers and consumers? Must consumers be the mouse for the advertiser cat to catch, while consumers try to escape from advertisers through avoidance or banning advertising all together? Because search advertising has changed the push model of advertising to a pull model of advertising on demand, research needs to also consider whether or not these changes improve relationships between advertising and audiences. Brand channels can provide much useful information about products including product-demonstration videos and tutorials, as well as product topics of interest to consumers from other sources. Although such videos are created by the advertisers with vested interests, its content is often helpful to consumers and can gradually become a standard for all companies as a service to its customers and to the general public (Ha, 2018b). From this perspective, advertising can be part of the media content rather than a nuisance. In a new media environment that customizes ads and makes relevant information easily accessible, advertisers and consumers can benefit from each other. Advertisers inform and persuade consumers with relevant and entertaining ads, and consumers can make their choice based on their needs. How advertisers and consumers perceive their relationship with one another

and whether emerging technologies enhance or reduce mutual trust between advertisers and consumers should be examined further.

Advertising's Effect on Consumer Expectations

Advertising is about meeting the needs of consumers with promises about how a product will address their needs. Consequently, it is important to assess how advertising affects consumers' expectations of the product performance and how often consumers feel the product meets or exceeds their expectations or disappoints them after actual consumption experiences. Hence, studying the extent to which advertising affects customer satisfaction and repeat purchase via setting expectations should be an important direction of research.

Comparing Media Content with and without Advertising Support

Because most new media technologies such as social media and mobile apps offer free content through advertising, it is imperative to continue to examine the positive and negative effects of advertising on new media content. A cross-sectional study comparing media content with or without advertisements can illuminate how advertising affects consumers' perception of the editorial quality of media content and media performance (e.g., professional quality, content diversity). Another approach to ascertain advertising's effect on editorial quality is through the longitudinal study of advertising intensity and the editorial quality and content changes in new media content. This direction may be particularly helpful because many new media platforms such as social media start with little or no advertising because of their low number of users. Once they become popular, however, they receive more advertising. How the increase in ad presence changes the perceived quality in social media such as YouTube, Snapchat, and Instagram is an important advertising effects question.

Longitudinal Studies of Advertising's Effect on Cultural Values in Society

The social effect of advertising is a long-term effect which requires longitudinal studies to examine changes and to confirm causal relationships. For example, to establish advertising's cultivation effect on consumer culture and the morphing of consumer culture over time, it is necessary to examine the alignment of consumer values with the values presented in advertising across diverse media outlets. If the values of consumers and advertising are similar, then at least researchers can confirm advertising reflects consumer values. Causation can be deduced through tracking the changes in values over time. Further, it is important to borrow from cultivation research in differentiating people who are heavy users of advertising versus those who are light users to determine the contribution of advertising to those cultural values of the consumer. Finally, Pollay (1986) called for the use of seven cardinal values (wisdom, justice, temperance, courage, faith, hope, and love) and seven deadly sins (greed, lust, sloth, pride, envy, gluttony, and anger) as standards for measuring the values presented in advertising. How to operationalize and measure these values reliably in new advertising formats will be the challenge to research in advertising effects in the future.

Concluding Thoughts

To conclude, the big data compilation capability and tracking of digital footprints and our behavior online make websites, emails, messaging apps, search engines, and social media

platforms the new Big Brother(s) of our lives. Every webpage a consumer visits is logged and can be analyzed for patterns for profiling. However, not all sites are equal in their knowledge of consumers. Social media and messaging-app sites know our preferences by what we have watched and read in the past, who we have connected with on social media, what we have “liked” and shared, and our frequency of responding to offers. Big Brother is indeed watching us. But we must remember that the data collected are partial (e.g., we do not use the same devices and platforms) and behavioral only. Using behavioral data to determine preference, attitudes, and knowledge is prone to errors, although Google and Facebook are trying to perfect this induction process. Search engines may make us depend on the ranking of the listing to determine what is good and bad, and thereby make us lazy by following their recommendations. More research is necessary to assess this cultural shift of consumers from relying on themselves to relying on search engines and social media sites which master the compilation of big data to influence the decisions of consumers. Because of the unequal distribution of data and data-management capability among various organizations and advertisers, how big and small companies may benefit or be disadvantaged in the age of big data is another social effect to be studied by advertising effects researchers.

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19

Educational Media for Children

Amy B. Jordan and Sarah E. Vaala

This chapter focuses on children and their experiences with educational media in their earliest years—ages zero to eight. Though educational media remain important throughout childhood and into the adolescent years, caregivers typically have more control over younger children’s exposure to media content and more often direct them to that which they perceive as educational. In addition, more educational content is created for and directed at younger audiences, increasing the amount of research available and offering a stronger empirical and theoretical foundation on which to draw conclusions.

Media are a ubiquitous presence in children’s lives from the time they are born. Common Sense Media, which has been surveying U.S. parents since 2011, provides insight into how children’s use of media has evolved over time (Rideout, 2017). Their study of more than 1,400 parents of all regions of the U.S. highlights the fact that today nearly all children age eight and under live in a home with some type of digital media device, such as a smartphone or tablet. While in 2011 the amount of time zero to eight-year-olds spent with mobile devices on an average day was just five minutes, by 2017 that number had climbed to 48 minutes. Add to that other media with which children are engaged (including television, computer, video games, and DVDs/videotapes) and they are spending, on average, two hours and 19 minutes a day with screen media. Older children are spending more time with media than younger children, and lower-income children are spending more time with it than higher-income children.

In 2011, the American Academy of Pediatrics (AAP) issued a policy statement discouraging screen media use with children younger than age two (AAP, 2011). This recommendation came at a time when the market was being flooded by DVDs that claimed, without evidence, that they were educational for babies (Campaign for a Commercial-Free Childhood, 2006; Fenstermacher et al., 2010). The AAP recommendation was quite controversial and was criticized for creating guidelines that had no empirical support. It did, however, have the effect of bringing greater attention to the fact that very young children are spending significant amounts of time with media. Moreover, advocacy groups began criticizing so-called educational baby-directed media for their claims of teaching to the extent that one group, the Center for a Commercial Free Childhood (CCFC), filed a complaint with the Federal Trade Commission on the basis that such claims are false and misleading. Ultimately, the company behind Baby Einstein

(Disney) revised its marketing materials for videos and DVDs and voluntarily offered to refund purchasers of their product (Lewin, 2009).

The success of media aimed at babies and toddlers has led to the expansion of offerings such that there is a plethora of new digital media products aimed at very young children (Barr, 2013). Claims of being “educational” have now migrated to the digital space. Fisher-Price’s “Laugh and Learn” is an app intended to be used by very young children and which claims to teach “numbers, counting, 1–10, animals, first words and action/reaction,” though according to the CCFC, no available research confirms such benefits (reported in Singer, 2013). Advocacy groups continue to complain about the misleading nature of these unfounded educational claims, but companies continue to make and market such products, and parents continue to buy them.

The latest guidelines from the AAP (2016) urge parents to limit viewing among older toddlers and preschool-age children to “one hour per day of high-quality programming” (p. 3) while incorporating consistent parental involvement such as watching with children, pre-testing apps and other interactive products before giving them to the children, and interpreting and extending educational content outside of their viewing experience. Because producers and app-developers make unsubstantiated educational claims about older children’s media as well, the AAP (2016) calls on industry representatives to test the educational efficacy of their programs and products before making such claims and to incorporate child development and education experts in the design of these media. Thus, while the foremost professional pediatric association in the U.S. perceives the benefits of well-designed educational media for children—which “can improve cognitive, literacy, and social outcomes for children” (p. 2)—they qualify those benefits with calls on parents to actively mediate children’s experiences with even higher quality programming.

In this chapter we examine what we know about young children’s learning from media, and the conditions under which they learn best, including theories of development and studies of production features that encourage or discourage learning by young children. We also identify gaps in knowledge that result from technological changes that outpace researchers’ abilities to keep up. We conclude with recommendations for future research that is needed in this area.

Key Questions

In this section we lay out three key questions about educational media for young children that have emerged over the decades. They are (1) How does development impact children’s learning from media? (2) What factors impact children’s learning from media? (3) Are interactive media better at teaching than passive media?

How Does Development Impact Children’s Learning from Media?

One may ask whether there is, in fact, an age at which most children start to actually benefit from exposure to educational media. The answer may depend in part on what else is available to the children in their environment and the extent to which the content is supported and reinforced by caregivers. To date, more research has been conducted on infants’ and toddlers’ learning from television and video programs, compared to newer digital media. The bulk of that research suggests that children glean very little, if any, educational benefit from these sources before 18 months or two years of age (Courage & Setliff, 2010; Krcmar, 2010). Studies

indicate that babies and young toddlers do not readily use information from video sources to imitate behavior (Barr & Hayne, 1999; Meltzoff, 1988), solve problems (Schmitt & Anderson, 2002; Troseth & DeLoache, 1998), or learn new language skills and vocabulary (DeLoache et al., 2010; Robb, Richert, & Wartella, 2009).

Notably, the literature suggests a gap between what young children *can* learn, versus what they *do* learn from video sources. The studies that have evidenced video-based learning among children under two have used video content created by the researchers (e.g., Barr, Muentener, & Garcia, 2007; Barr, Muentener, Garcia, Fujimoto, & Chavez, 2007; Troseth, Saylor, & Archer, 2006). These videos often use simple subject matter and context (e.g., an adult holding an object and repeating its name), and lack the fancy production elements found in commercially produced videos (e.g., cuts, pans, zooms, and sound effects; Goodrich, Pempek, & Calvert, 2009). As described below, touchscreen devices such as apps on iPads may enhance learning—in part because of their interactive nature—but research is lacking about whether and how very young children are actually benefiting, cognitively, from these experiences (Barr, 2013).

The Limits of Young Children's Learning from Media

Young children learn best when they can explore their environments and receive feedback—whether in the form of cause-and-effect or a parent/caregiver's socially contingent response—as they manipulate their surroundings. According to the American Academy of Pediatrics, “Because of their immature symbolic, memory, and attentional skills, infants and toddlers cannot learn from traditional digital media as they do from interaction with caregivers, and they have difficulty transferring that knowledge to their 3 dimensional experience” (AAP, 2016, pp. 1–2). This difficulty has been labeled the “transfer deficit,” which reflects “perceptual impoverishment or contextual mismatch” in early childhood, and a “lack of symbolic understanding” in later toddlerhood (Barr, 2013, p. 206). With regards to symbolic representation, infants and toddlers are not yet adept at understanding how one representation (a photo of an object) relates to another (such as the same object in real life), limiting their ability to understand and apply the information they see onscreen. Children over the age of 18 months are better able to imitate and learn from screen media than younger babies, and those abilities improve throughout the next year (Barr & Hayne, 1999; Courage & Howe, 2010).

The Importance of Curriculum-Based Content

Studies of media content geared to preschool-age children, such as *Sesame Street* (Zill, Davies, & Daly, 1994) and *Blue's Clues* (Crawley, Anderson, Wilder, Williams, & Santomero, 1999) in the U.S., *Akili and Me* in Tanzania (Borzekowski, 2018), and *Jalan Sesama* in Indonesia (Borzekowski & Henry, 2010), have found that preschool programs with a clear curriculum can be successful at teaching young children a variety of skills and knowledge. Indeed, the most frequently researched television program in the world has been *Sesame Street* (and its international co-productions), which in the U.S. targets children ages two to five. A 2013 meta-analysis of *Sesame Street*, which has a clearly articulated set of learning goals for each of its programs, found that “significant, positive effects on cognitive, learning, and socio-emotional outcomes observed in the current meta-analysis represent real educational benefits for the millions of preschool-age children around the world who visit *Sesame*

Street via their television” (Mares & Pan, 2013, p. 149). In fact, research indicates that academic benefits of preschool-age viewing of educational programming can persist into adolescence, particularly among children from low-resource homes. Anderson and colleagues (2001) found that adolescents who had viewed educational programs during the preschool years, including *Sesame Street* and *Mr. Rogers’ Neighborhood*, tended to spend more time reading books for leisure, participated in more academic and creative extracurricular activities, and had higher grades in high school.

The Paucity of Educational Content for School-Age Children

We know somewhat less about whether and how school-age children (compared to preschoolers) learn from educational media, in part because there has tended to be somewhat less content available to them. However, one program—*Between the Lions*—designed for kindergarteners and first graders was created with the intent of teaching young children “emergent literacy” skills such as phonemic awareness and letter-sound correspondences. Researchers found gains across almost all areas of literacy featured in the program (Linebarger, Kosanic, Greenwood, & Doku, 2004) compared to children not exposed to the program.

However, truly educational television programs for school-age children are rare, despite the fact that in 2007 the Federal Communications Commission issued a mandate that commercial broadcasters provide at least three hours of educational television per week for children aged 16 and under in order to be eligible for expedited license renewal (Jordan, 2013). Unfortunately, content analyses of the resulting influx of so-called “educational and informational” (E/I) programs indicated that few had strong educational value (Jordan, 2004, 2013). Moreover, the vast majority of the E/I programs had “prosocial” lessons (e.g., sharing, being a good friend, honesty) as their educational objective, which Jordan (2003) has argued may not be teaching anything new to a school age audience.

What Factors Impact Children’s Learning from Media?

Even among children of equivalent developmental stages, the rate and nature of their learning from media are not universal. Rather, different children glean differing amounts from the same content, and various content features and contextual strategies can be used to encourage their learning from media sources. In a review of the television literature, Guernsey (2007) dubbed these influences “the 3 C’s”: child, content, context. As described below, we have amassed the greatest body of research on children’s learning from television programming; more recent studies of newer technologies indicate that some of these principles may apply to how children learn from those media as well.

Child

With regards to child factors, the existing body of literature indicates that children learn best from content that draws on their prior knowledge and interests and when they perceive the medium and the content to be more demanding. As described in greater detail under Schema Theory below, content that incorporates information children already know, about topics in which they are already interested, is more easily integrated into the mental representations those children already possess (e.g., Alade & Nathanson, 2016). Children also bring

preconceived expectations regarding the ease or difficulty of a medium, otherwise conceptualized as the amount of purposeful mental effort they will need to apply to extract information (termed “amount of invested mental effort” or AIME; Salomon, 1981). When they are engaged with a program and also expect it to be challenging, they will pay greater attention to the content, invest more mental effort into it, and learn more from it, compared to content they expect to be “easy” (Salomon & Leigh, 1984).

Content

Though television is often decried as a “mindless” and completely passive activity for children, a series of studies by Daniel Anderson indicated that children actively attend to content cues about comprehensibility. That is, if media content does not make sense to them, they do not watch. For example, preschool-age children look away from the television set when the scenes of a program are in a random order, or the soundtrack is dubbed in a different language or played backwards (Anderson, Lorch, Field, & Sanders, 1981). Additionally, Huston and colleagues contend that children learn most from television when the content is challenging to them but still within their capacity to understand (i.e., moderately novel and complex; Rice, Huston, & Wright, 1982). Formal production techniques, such as sound effects, visual cuts and transitions, and onscreen movement, can be used strategically to draw children’s attention to the educational content and limit the distraction of incidental content (Kirkorian, Wartella, & Anderson, 2008; Rice et al., 1982).

In general, high-quality educational programs that are designed around a specific educational curriculum and include formative and evaluative research testing have evidenced the greatest learning gains among children. Particular aspects of educational content that encourage young children’s learning from media include incorporating language and social cues that mimic real-life communication. For example, embedding social relevance cues, such as onscreen characters talking directly to the viewer and modeling conversational turn-taking, seem to aid learning among toddlers and preschool-age children (Cleveland & Striano, 2008; Lauricella, Gola, & Calvert, 2011; Linebarger & Vaala, 2010; Piotrowski, 2014; Troseth et al., 2006). The manner with which educational content is portrayed also has implications. Research by Mares and Acosta (2008, 2010) shows that young children often have trouble inferring moral lessons from television programs with pro-social curricula, though their comprehension of the lesson is improved when more emphasis is placed on the resolution of a conflict than the conflict itself, and when explicit explanatory statements are inserted within the program. Findings suggest that children may learn language and literacy information more readily when the educational content is portrayed redundantly through multiple modalities (e.g., aurally and via text; Linebarger, Piotrowski, & Greenwood, 2010). Finally, Fisch’s Capacity Model (2000), described below, contends that children learn educational content more readily from a narrative-style program when it is woven into the storyline.

Context

Repeated viewing of the same educational content has been found to help children, including infants, toddlers, and preschoolers to learn and imitate information from video sources (Crawley et al., 1999; Krcmar, 2010; Linebarger & Vaala, 2010). Findings suggest further that very young children glean more from these media when they co-view content with parents or other caregivers (Fender, Richert, Robb, & Wartella, 2010). Through co-viewing, caregivers can

interpret and enrich the content by explaining difficult concepts and extend the material to the child's real life, much like they do during shared book-reading (e.g., "See the red wagon? You have a red wagon too!"; Fender et al., 2010).

Are Interactive Media Better at Teaching than Passive Media?

Although theoretically there are reasons to expect that interactive media (such as video games and interactive apps) would engender greater learning through more direct participation from the child, research directly testing children's learning from interactive versus passive media is not keeping pace with the changing media environment. The boundaries around what classifies as "interactive" and "passive" are constantly blurring, making this question all the more difficult to answer. For example, numerous television programs—typically considered a "passive" medium—such as *Dora the Explorer* and *Blue's Clues* are interactive in the sense that they invite children to find clues on the screen and "help" the protagonists by yelling out answers. On the other hand, children's mobile apps—typically considered interactive—can play video content much like viewing a typical, non-interactive television show.

E-Books vs. Traditional Print Books

All forms of interactivity are not created equal. E-books, for example, may feature interactive "hotspots" that make noise or movement when tapped; however, this content may tie in and advance the educational content, or be simply a distraction. And in fact, some research has indicated that children's learning from interactive e-books may be similar to or worse than their learning from non-interactive books (Kelley & Kinney, 2017; Strouse & Ganea, 2017), whereas other findings have shown slightly superior learning from interactive e-books, depending on design (Bus, Takacs, & Kegel, 2015; Takacs, Swart, & Bus, 2015). The impact of interactive features can also vary between children. With regard to mobile apps that teach numeracy and math skills, Moyer-Packenham and colleagues (2016) found that pre-school, kindergarten, and second grade children made learning and task efficiency gains from one-time app use. That is, they developed particular math skills and became faster at completing others. Particular affordances of the apps, such as special effects for correct or incorrect response, served as aids or hinderances to children's learning depending on how children interacted with them.

Interactive vs. Non-Interactive Screen Media

With regards to very young children, recent research has explored whether interactive features can overcome the "video deficit effect" described above wherein infants and toddlers show impoverished learning from screen media compared to live presentations (Anderson & Pempek, 2005). Several studies have found enhanced learning among toddlers when content is taught through socially contingent online conversations (such as Skype or FaceTime platforms), compared to non-contingent video presentations of the same information (Myers, LeWitt, Gallo, & Maselli, 2017). Similarly, Kirkorian, Choi, and Pempek (2016) showed that toddlers (24 months) were able to learn novel words from a touchscreen device when they were required to touch the screen in a specified place, compared to touching the screen anywhere (general interaction) or passively watching the screen (non-interaction). However, slightly older toddlers (30 months) performed better when instructed to touch anywhere on the screen, and the oldest

toddlers (36 months) showed no differences between the three conditions. These findings were also replicated using an object retrieval paradigm (Choi & Kirkorian, 2016).

Interactive media enable not just children's exposure to educational media properties, but also the production of their own content. Though the literature base is nascent, theory and early research suggest that children likely learn a variety of skills, including literacy, computer science, and self-expression, by activities that allow them to become active creators of media (Kafai & Peppler, 2011; Kucirkova, Messer, Sheehy, & Panadero, 2014). In a qualitative study of 40 four to five-year-olds in Spain, Kucirkova and colleagues (2014) introduced children to a story-making mobile app (*Our Story*). While using the app in classroom free-time over six months, children applied and extended their literacy skills (such as typing their names) and collaborative problem-solving abilities (helping each other learn and use the software), and demonstrated additional competencies and interests in story creation through use of the app. Moreover, simplified programming platforms for creating digital games and stories, such as GameStar Mechanic and Scratch, provide youth with means for creating their own media as well as an introduction to programming and computational thinking (Kafai & Peppler, 2011). Such media-creation opportunities can leverage children's natural affinity for digital media in order to teach technical computer skills, critical thinking, creative expression, and problem-solving (see Kafai & Peppler, 2011).

Young Children's Ability to Transfer Knowledge

The ability of preschoolers to transfer their learning into new contexts similarly highlights the challenges of learning from media. Schroeder and Kirkorian (2016) as well as Alade and Nathanson (2016) found that preschoolers showed superior ability to apply concepts to settings or problems outside of the content (learning transfer) from a digital game when they watched a recording of an experimenter playing the game rather than playing it themselves. These studies suggest that watching rather than interacting with content may be most beneficial when the educational content is especially challenging to the child. In this scenario, the decision-making and tasks associated with interaction would tax the child's cognitive resources too far (Schroeder & Kirkorian, 2016).

In sum, interaction can take many forms in digital media, varying greatly with regards to degree of physical and social contingency (Troseth, Russo, & Strouse, 2016). After examining the state of knowledge regarding children's learning from interactive media, Troseth et al. (2016) assert the great need for more research into how and for whom various interactive features are optimal. In their words, "Key questions for the coming decade involve how the effects of physical and social interactivity overlap and differ, as well as children's need for one or both kinds of support for learning and development" (Troseth et al., 2016, p. 55).

Theoretical Paradigms and Children's Learning from Educational Media

In this section we review three major theoretical streams that have informed researchers' understanding of how children learn (or do not learn) from educational media: Developmental Theories, including Theory of Mind, the Capacity Model, and Schema Theory.

Stage and Age-Based Developmental Theories

Some of the earliest theories of how and when children understand and learn from media were informed by developmental theories, such as Piaget's genetic epistemology. From this

perspective, children's cognitive capacities are organized around age-based stages, and their ability to understand content is examined through this lens (Wackman & Wartella, 1977). In an investigation of three and four-year-olds' understanding of television, Flavell, Flavell, Green, and Korfmacher (1990) found that three-year-olds do not understand the concept of symbolic representation—specifically, that they lacked the ability to conceptually differentiate between images on television and the objects that they represent. For example, when asked if a bowl of popcorn shown on TV would spill if the TV were turned upside down, many three-year-olds said it would. A study conducted by Wright and colleagues (1994) examined five and seven-year-olds' understanding of factuality and social realism of favorite television shows. They argued that although children's experiences with the medium shaped their judgment of the social realism of the program, age and cognitive development (not experience) predicted their ability to accurately judge the factuality of the content.

The concept of Theory of Mind (ToM) posits that as children develop, they acquire an understanding of others as having mental states, including intentions and beliefs, distinct from their own (Fenstermacher & Saudino, 2006). Lapiere (2015) tested whether children's ToM capabilities predicted their advertising knowledge. Understanding the nature of persuasion means that children must first understand that others have motivations that may be different from their own—an ability which develops throughout childhood as cognitive skills become more complex. His study with school-age children (ages six to nine) found that although ToM did not predict children's knowledge of persuasive intent, it did predict understanding of advertisers' selling intent. He writes "The better children performed on measures of ToM the more likely they were to know that commercial messages are designed to encourage the audience to purchase consumer goods (or encourage them to ask their parents)" (2015, p. 436). Furthermore, researchers have examined whether exposure to different forms of media influence the development of children's ToM. Mar, Tackett, and Moore (2010) assessed four to six-year-olds' exposure to children's literature, television, and film as well as their theory of mind development. After controlling for age, gender, vocabulary development, and parent socio-economic status, they found that book reading predicted ToM development whereas television viewing did not. They hypothesized that parent-child book reading may foster conversation around mental states, and that "talking about story characters and their desires, beliefs, and emotions appears to guide a child's growing understanding that people possess mental states" (p. 75). They also found that movie watching predicted ToM whereas television did not, and conjecture that the lack of association may be the consequence of the shorter duration and/or frequent interruption by commercials of TV shows. Alternatively, parents may be co-viewing movies more than television with their preschoolers.

Critics of the developmental approach to understanding children's learning from media highlight that children often have more knowledge about media than is assumed within a developmental framework. Grace and Henward's (2013) study of children's talk about television revealed a complex relationship, and the authors emphasized that "young children can and do learn about the workings of the media through their interactions with others in the home, school, and in their everyday social worlds" (p. 151). In their qualitative research, they found, for example, that a majority of the six and seven-year-olds involved in a discussion about a television clip could make sense of advertisements (e.g., they knew that making commercials involved directors, actors, camera people, and companies) and could articulate the nature of persuasion and manipulation (e.g., "they try to make things look fun so you will buy them") (p. 145). However, they also saw a range in the sophistication of their understanding. They argue

for the need to move from a deficit view of the child to a strengths-based approach to acknowledge children's agency in making sense of their experiences and connecting them to their real-life experiences of the world.

Capacity Model

The capacity model (Fisch, 2000) posits that characteristics of the viewer such as verbal ability and short-term memory influence narrative comprehension and, in a distinct parallel process, educational content comprehension. Given the limited cognitive resources children have available at a given time to process media, this theory contends that children's understanding of the narrative (storyline) and educational components of the content will benefit when the educational content is tightly woven within the narrative. In instances where the educational content is more distinct from the narrative, cognitive process priority tends to favor the narrative over the educational.

Fisch's model has been tested with preschoolers, and has been empirically supported. Alade and Nathanson's (2016) study of preschoolers' understanding of a television series designed to teach science and math concepts to preschool-age children (*The Cat in the Hat Knows a Lot About that!*) found support for the capacity model. Viewer characteristics, as proposed in the model, explained 30% of the variance in narrative comprehension and 63% of the variance in educational content comprehension. Piotrowski (2014) found that preschool-age children showed greater learning from an educational program when they were already familiar with it. Ostensibly, program familiarity relieves the cognitive demands needed to process the narrative, leaving sufficient resources for comprehending the educational content.

Schema Theory

A related theory of children's understanding of media is schema theory (Collins, Wellman, Keniston, & Westby, 1978). Schemata are "conceptual structures stored in memory that represent our knowledge, our interpretation of what we have experienced and learned" (Luke, 1985, p. 95) which act to bridge internal knowledge with external data (such as television content). As children's experience with the world grows, and as their exposure to media expands, children will make use of their schemata to understand content. From this perspective, children's prior knowledge is an important and critical influence in their ability to comprehend what they are seeing, reading, or listening to (Luke, 1985). Narvaez, Bentley, Gleason, and Samuels (1998) found that children with less developed moral schemas tended not to recall story content related to more advanced moral reasoning. In a later study, Narvaez and colleagues (1999) had third and fifth graders (vs. undergraduates) read stories that contained a moral dilemma and then identify the moral theme of the story. Third graders were only able to choose the correct answer 11% of the time, compared to 45% of the fifth graders who were able to do so. Undergraduates answered correctly 91% of the time.

A necessary component of children's understanding lies with the way in which content is presented, and whether the educational message is central to the plotline, or narrative scheme. Mares and Acosta (2008) conducted an experiment in which kindergarteners watched an episode of *Clifford the Big Red Dog* that sought to encourage tolerance of difference. When characters were shown as being afraid of the "different" character (a three-legged dog), they were significantly less likely to correctly extract the pro-tolerance lesson than when characters' fear reactions were

removed from the plotline. As with previous studies, they found that when young viewers focused on salient content (in this case, fear), they were less likely to remember the main lesson.

Familiarity with the stimulus program facilitates comprehension. Alade and Nathanson (2016) found that familiarity with the general concepts presented in the program can facilitate greater comprehension.

Rather than learning completely novel concepts, which might require repeated exposure, children who had some prior knowledge related to the program were able to retain the concepts and information ... because they had a pre-existing mental structure for storing the new information.

(Alade & Nathanson, 2016, p. 423)

The authors suggest that producers consider the importance of prior knowledge when designing content and that when they present new material they do so “within structures that are familiar to children” (p. 425). Likewise, other studies have found that content delivered by familiar, socially relevant characters is more easily processed than content delivered by unfamiliar characters (e.g., Lauricella et al., 2011).

Limitations and Future Research

In this section we review some of the limitations of the literature on children’s learning from media and the need for future research. We focus specifically on the need to develop new methodological approaches to understanding children’s learning in the digital age and the necessity of expanding our recognition that children bring diverse learning abilities and styles in their uses of media.

Measuring Children’s Media Exposure

Measuring children’s time spent using media and the nature of that media use has consistently been a challenge for researchers in the field. Given young children’s limited cognitive and language abilities, parents are usually required to provide estimates of their children’s media use. Amidst the busy life of a parent, accurately recalling each instance of a child’s media use, as well as the content and amount of time, is a difficult task. Add to these challenges the difficult nature of classifying children’s media content and engagement as “educational” or not, and the traditional measurement strategy becomes even more inadequate. Most studies utilize parent-reported global estimates of children’s media use, where a parent reports the “typical” amount of time their child uses a particular medium in a day or week. A minority of studies employ time or media-use diaries, for which parents are asked to prospectively or retrospectively account for their child’s full day, including for each the exact time, content, and length of each instance of media use. Compared to global estimates, diaries tend to yield more accurate data, though they are time-consuming and tedious for parents. The demanding nature of this measurement also raises questions about sampling bias.

As families’ entertainment, education, and work increasingly occur on various digital devices, our methods for measuring children’s media use need to catch up with technologies themselves. The near-ubiquity and consistency of access to smartphones in U.S. families and internationally makes ecological momentary assessment (EMA, also known as “experience sampling”) a possible avenue for improved measurement. Studies that use EMA methods use mobile

technology, often cellphones, to solicit and receive numerous measurements from participants that are embedded in real-time contexts and less prone to recall error (Heron, Everhart, McHale, & Smyth, 2017). Participants are prompted to complete brief surveys regarding their behavior, emotions, attitudes, or experiences, often at multiple time points per day over the course of several days. Thus, this technique also enables analyses of within-person variation in media use over time. A study of associations between adolescents' (12–15 years) media use and depressive symptoms found relationships when media use was measured via EMA, but not self-report time-use diaries or global estimates (Bickham, Hswen, & Rich, 2015). With the continued evolution of technology, EMA strategies may be able to circumvent self-report completely when capturing an individual's media exposure. The Electronic Activated Recorder (EAR), for example, uses a small wearable device to capture snippets of ambient sound throughout the day, and has been used successfully with children as young as three years old (Mehl, 2017).

Similarly challenging is the need to develop measures of learning that assess the diverse skills and knowledge children may gain from engaging with interactive technologies, particularly as that engagement may include multiple technologies simultaneously or occur across settings as children carry mobile technologies with them. More and more, researchers are using studies of the brain to understand how content is being processed by children and adolescents. Anderson and Subrahmanyam (2017) argue that research must also investigate the neural mechanisms that underlie children's learning from media. Citing work by Green and Bavelier (2003, 2010), they write that "videogame play may produce processing changes because of physiologic arousal, changes in task difficulty and input variability, the activation of brain regions that are sensitive to reward and reinforcement, and the shaping of neural networks" (p. S60).

Measuring the Media Landscape

The proliferation and diversity of new media content for children, particularly mobile apps, prohibits testing of each entity purporting to be educational. In light of this quandary, Hirsh-Pasek and colleagues (2015) created a framework for selecting and evaluating children's mobile apps, guided by decades of research and theory of how children learn best in other settings. The authors advocate for the application of "four pillars" of learning within educational mobile apps: (1) active, minds-on learning (e.g., incorporating mechanics beyond simply tapping that require children to engage their minds and their bodies); (2) engaged learning (e.g., recruiting and maintaining children's attention to the primary educational content without the distraction of peripheral sounds and movements); (3) meaningful learning (e.g., incorporating content that is relevant to a child's real life and interests); (4) social interaction (e.g., an app promotes synchronous or asynchronous participation of a parent or peer). Although the research base regarding children's apps is small, empirical evidence has supported these general guidelines.

Advising Parents about Media Use

Parents and caregivers of young children, who are often stressed and overwhelmed by the enormous choices available for their children, may rely on surface cues to determine whether something is beneficial for their child's learning. For example, Vaala and Lapierre (2014) found that parents perceived a children's DVD to be more or less educational based only on the title. Moreover, survey research indicates that parents believe that even babies can learn from media, and such a belief is associated with higher levels of viewing among babies and toddlers (Zimmerman, Christakis, & Meltzoff, 2007).

In addition to working with parents to identify quality content, it is important to highlight parental-mediation practices that are associated with beneficial outcomes. Parental-mediation research examines the ways that parents intervene between their children and the media and examines largely protective effects of those efforts. Researchers typically divide parental behaviors into three broad categories: restrictive mediation (using rules or devices to limit time or media content), co-viewing (viewing or using media together with a child), and active mediation (explaining or discussing media content with a child; Nathanson, 1999; Valkenburg, Krcmar, Peeters, & Marseille, 1999). Although these studies have practical applications, additional efforts should move towards a better understanding of the benefits of digital media for learning and not just the potential problems. In the words of Clark (2011), “scholars have tended to be concerned primarily with the negative effects of media on information processing and cognitive development. They have therefore largely overlooked the ways in which parents utilize media for positive familial and developmental goals” (p. 324). Particularly as digital media have become increasingly interactive, diverse, and open-ended, they enable greater capacity for parents and children to communicate, play, and learn together through their use. To that end, Clark proposes a fourth dimension of parental mediation: participatory learning. Participatory learning encompasses activities in which parent and child are co-engaged in media use (such as playing a video game together or searching for information together on the internet), facilitating collaboration and mutual learning (see also Takeuchi, 2011).

Children with Learning Differences

It is estimated that approximately 9.7% of U.S. children ages 3 to 17 have a learning disability, affecting 2.7 million children (Altarac & Saroha, 2007). Learning disability (LD) is a term used to describe significant difficulties in listening, speaking, reading, writing, reasoning, and memorization, among other things (2007, p. S77). The implications of LD for children’s learning from media are not well understood or often researched, but the widespread access of digital devices such as iPads suggests new opportunities. Several studies have examined the use of new technologies in helping children with autism spectrum disorder to learn to write (Lorah & Parnell, 2014) and autism and cerebral palsy to speak (Alper, 2017); however, they are limited by their small samples. Moreover, we know very little about optimizing learning for children with LD, and given the diversity of this population it is difficult to generalize from what is known. The use of videos as a tool for learning to supplement classroom teaching has received some attention, and there is evidence that, when dealing with challenging content, students are able to replay and pause segments to enhance understanding (Gardner, 2000). Additionally, videos may enhance learning by providing multi-sensory dimensions to content (Flewitt, Kucirkova, & Messer, 2014; Hampton, 2002). A recent study of middle school age students in a science classroom found that students with LD retained more information when watching shorter videos compared to longer videos. The authors write that “shorter videos may help to reduce the cognitive load ... and focus on the germane cognitive load (i.e., the construction of schema)” (p. 476). More research is needed that looks at the interaction of learning styles with the presentation of media via various platforms.

Conclusion

In this review we have sought to provide an overview of the role of educational media in enhancing young children’s learning. The emergence of new technologies and software has

changed the nature of children's media use, yet the rapid evolution of the platforms and the content has presented challenges to the ability of scholars to keep pace with changes. In many ways the theoretical paradigms established in our study of "traditional" media provide guidance about how to study digital media technologies, though the field needs more empirical studies of when, how, and under what conditions optimal learning is realized. Moreover, there are still important gaps in our understanding of how technological affordances, such as interactivity, intersect with child characteristics, such as preferred modalities of learning.

We live in an exciting time when more and more children have access to technologies that have the capacity to deliver truly enriching content. Current and future generations of children will never know a world without these diverse technologies at their fingertips—delivering media that their parents and teachers could have never imagined as children. As our research and design-oriented understanding catches up with the available technologies, media will undoubtedly continue to provide children with new tools for entertainment, communication, and, most importantly, learning.

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20

Media Effects and Health

Jessica G. Myrick

Since the beginning of the formal study of message effects on audiences, health information and health-related outcomes have played a crucial role in advancing research on media effects. For instance, public concern in the 1930s that movies were harming children's health led psychologists to design special beds that measured how much children tossed and turned at night after watching different genres of films (Southwell & Thorson, 2015). In the 1950s, psychologists at Yale used messages about oral health in their early tests of the interplay between emotional responses to messages and subsequent behavior change (Janis & Feshbach, 1953). These are only a couple of examples of how issues of health have long been intertwined with the study of media use and its effects on users and on society. As such, it is worthwhile to explore the theoretical perspectives, message features, psychological processes, and individual differences associated with health media effects given that insights into this area can benefit the field as a whole.

Despite their wide relevance to the development of media effects theory and empirical findings, health-related media effects are also notable for the ways in which the context differs from other subfields. First, there may not be an area of media effects research with a more practical link to shaping how humans go about their individual and collective lives. A real applied need exists to generate findings to identify aspects of media that may harm health, as well as to better understand how media can help individuals live healthier, happier lives. Second, health-related media effects deal directly with conceptual issues of personal relevance, uncertainty, and risk more so than some other media effects contexts. If someone does not see the latest blockbuster movie or misses the broadcast of a big sports game, the consequences are not as grave as missing the news story about a new infectious disease in one's geographic area. Perhaps its closest cousins—environment and science-related media effects—also deal with issues of uncertainty and risk, but often do not generate the same level of perceived personal relevance (that is, unless they emphasize the health implications of their topics).

Given that the topic of health has relevance across media effects subfields, as well as unique attributes that separate it from other areas, researchers have a lot to consider when trying to grasp the nature of health-related media effects. What follows is an examination of some of the important issues, typically applied theories, notable studies, current controversies, and emerging trends facing researchers interested in this area of media effects scholarship and its applications

to the real world. By reviewing and engaging with these topics, future work in this area can advance our understanding of the interplay between health and media.

Types of Health Media and Their Effects

Not all health messages share the same goals. Strategic messages aim to persuade audiences to change their health behaviors. Such health messages often come in the form of public communication campaigns, which are

purposive attempts to inform or influence behaviors in large audiences within a specified time period using an organized set of communication activities and featuring an array of mediated messages in multiple channels generally to produce noncommercial benefits to individuals and society.

(Atkin & Rice, 2013, p. 3)

Advertisements are another, more specific form of strategic health messaging, and are not always noncommercial in nature. For example, the U.S. and New Zealand are two of very few countries in the world that allow direct-to-consumer advertisements for pharmaceuticals (Ventola, 2011). As such, research suggests that advertisements by for-profit pharmaceutical companies can lead audiences to ask their healthcare providers for potentially unnecessary prescriptions (Mintzes et al., 2003).

News reporting typically does not aim to persuade consumers to adopt particular health behaviors, but instead to inform them. Journalists strive to inform audiences about various health topics, and health/medicine has become a common beat at major news outlets across the globe (Myrick, 2014). Besides informing the public about health topics, news coverage of health issues can also influence public support for health-related policies (Coleman, Thorson, & Wilkins, 2011). How effectively health news informs individuals about health topics and health policies is a debatable issue (Schwitzer, 2014), but recent evidence suggests that the quality of coverage of medical interventions (as judged by standards of completeness, accuracy, and usefulness) has generally improved (Walsh-Childers, Braddock, Rabaza, & Schwitzer, 2018).

In addition to strategic campaigns, advertisements, and news reporting about health, entertainment media also serve as a form of health communication. When content creators purposefully integrate health topics into entertainment messages, the practice is known as “entertainment education” and relies on social modeling and narrative persuasion theories to subtly influence audience health behaviors (Singhal & Rogers, 1999). Entertainment media can also shape public opinion when health topics are introduced into a storyline or featured in celebrity news coverage, even if there was no intention to change the public’s health-related behaviors. For instance, Quick (2009) analyzed viewers of the popular television drama *Grey’s Anatomy*. Based on tenets of cultivation theory, he found that heavy viewers of the show perceived the program as more credible than lighter viewers, and that credibility perceptions were positively associated with viewing real-world doctors as courageous.

Across these different types of health messages, the effects on audiences can vary in a number of important ways. Health message effects can be either personal or public (i.e., focused on individual-level or society-level change), they can be either intended and purposeful or unintended and accidental, and they can be beneficial or damaging to health (Brown & Walsh-Childers, 2009). Any one health message could potentially have multiple types of effects.

For instance, a news story informing readers about the importance of their own dietary choices could also persuade legislators to develop policies encouraging fruit and vegetable consumption, thereby having both personal and public influence. Furthermore, one person could read the same news article and start eating more vegetables—a beneficial change to her health—whereas another could read the same article, dismiss the content, and decide to eat fewer vegetables just to spite the people who insist they're so important—a harmful behavioral change. The actions of the person who dismisses the news story were likely not an intended outcome of the journalist who wrote it, whereas educating the individual who did change, and maybe even educating the legislator, could have been desired, intentional outcomes. Across the various health message types and their effects, theories have helped researchers better understand and predict outcomes associated with health messages. Below, theories popular in this area of research are reviewed.

Theoretical Perspectives

Much of the theory that is applied to health message effects research did not originate with communication scholars. That is, social psychological and health behavior theories form an important constituency of the conceptual frameworks applied to health-related media effects studies. Of these theories, three in particular stand out. First, Bandura's social cognitive theory (SCT), an outgrowth of social learning theory, has a number of components arguing that personal, behavioral, and environmental factors are interrelated and reciprocally influence each other to determine human behavior (Bandura, 1986; see Chapter 7 in this volume). However, the aspects of SCT typically applied to health media effects research are the propositions that (a) one's self-efficacy, or confidence in one's ability to perform a behavior, and (b) one's belief that more positive than negative outcomes will occur (outcome expectations) both predict the likelihood of performing a behavior (Bandura, 2004a). SCT has also been applied to contexts where real-life celebrities or fictional characters model health-related behavior via messages, and when viewers see that behavior as rewarded, they may be more likely to copy the behavior than when they see it being punished (Bandura, 2004b).

Another prominent health behavior theory applied to media effects research is the health belief model (HBM) (Janz & Becker, 1984; Rosenstock, 1974). In this model, the likelihood of engaging in a health-related behavior is predicted by multiple variables: perceived benefits of and barriers to enacting the behavior, perceived threat, and perceived self-efficacy. Additionally, the HBM posits that additional "cues to action" can motivate behavior, one such cue being media. Work in health communication applying the HBM typically assumes that messages that emphasize the threat, benefits for enacting a behavior, ways to overcome barriers to that behavior, and self-efficacy information for enacting the behavior will persuade audiences to take action. However, it is less clear how each of these message components should be ordered in a message, and, conceptually, if perceptions of these four variables all mediate, or if some moderate, effects on post-message attitudes, intentions, and behaviors (Jones et al., 2015).

The third health behavior theory frequently applied to explanations of health message effects is actually a group of theories with similar variables and proposed interrelationships. Originally conceptualized as the theory of reasoned action (Ajzen, 2011; Ajzen & Fishbein, 1980), scholars now often apply the "reasoned action approach" (RAA) to their work, with this framework including the theory of planned behavior (TPB) and the integrated behavioral model (IM) (Head & Noar, 2013). The most recent iteration of these related theories, the IM argues that although behavioral intentions are the most immediate precursor to behavior, the intentions-behavior link can be

moderated by environmental factors such as skills, abilities, and/or environmental constraints (Fishbein, 2008). Moreover, the TPB and IM state that attitudes, self-efficacy, and social norms (both injunctive and descriptive) each predict intentions. Fishbein and Yzer (2003) state that in order to effectively apply the IM to health interventions, researchers must first identify the target population's beliefs that undergird their attitudes, self-efficacy, and social norms. Once appropriate beliefs are identified, messages can help change those beliefs and, through their impacts on attitudes, self-efficacy, and social norms, shift intentions that should influence behavior (depending on audience abilities and their environment).

Together, these three health behavior theories (SCT, HBM, and IM) are frequently applied to the crafting of persuasive health messages and campaigns. Yet, additional theories from communication scholars have also influenced the field. One of note is the extended parallel process model (EPPM). Witte (1992) proposed the EPPM as a merger of two previous theories related to fear appeal effects: the parallel process model (Leventhal, 1971) and protection motivation theory (Rogers, 1975). Whereas previous models focused on cognitive responses to fear appeals, the EPPM also included the emotion of fear. According to the EPPM, after audiences assess the topic of the message as threatening (i.e., the audience perceives a severe threat to which they are susceptible), they then experience fear.

A crucial component of the EPPM is determining if the threat appraisals of severity and susceptibility are more or less dominant than corresponding efficacy appraisals of self-efficacy to perform a behavior and response-efficacy that the target behavior will actually work. When threat appraisals are stronger than efficacy appraisals, the model predicts that individuals will seek to diminish their fear through maladaptive behaviors, such as source denigration or rationalization of unhealthy behaviors. However, when efficacy appraisals are stronger than threat appraisals, the EPPM posits that individuals will feel capable of addressing the threat and will then enact adaptive, danger-control behaviors (for a detailed overview of the EPPM and comparisons to prior fear appeal theories as they relate to health messages, see Myrick & Nabi, 2017). The full EPPM comprises 12 propositions, but existing work has yet to support most of them, including a consistent interaction between perceived threat and perceived efficacy (Popova, 2012). Nonetheless, multiple meta-analyses have found a positive and significant linear relationship between fear arousal and persuasive outcomes such as attitudes and behavior change (Mongeau, 1998; Tannenbaum et al., 2015; Witte & Allen, 2000), and the EPPM, as well as extensions of it, continue to form the conceptual basis for many message effects studies.

Another notable theory applied to studies of health message effects is exemplification theory (Zillmann, 2006). This theory posits that the use of exemplars in messages has a stronger impact on audience risk perceptions than do statistics because exemplars activate heuristics related to risk perception. Plus, exemplars are more likely to evoke emotions than are numbers alone. Exemplification theory has helped to effectively predict audiences' risk perceptions about a number of health topics, such as insect-borne illnesses (Gibson & Zillmann, 2000) and skin cancer (Zillmann & Gan, 1996), graphic labels on tobacco products (Bigman, Nagler, & Viswanath, 2016), and to digital weight-loss messages (Knobloch-Westerwick & Sarge, 2013).

Additional Theoretical Perspectives, Notable Programs of Research, and Important Studies

As the broad field of health communication has grown, scholars focusing on the role of the media in shaping health behavior have established important, theoretically informed programs of research.

In some cases, individual studies stand out as points where innovative ideas or compelling empirical evidence caused others to start investigating and theorizing in a specific area of health-related media effects. In other cases, the body of research accrued over time, building a convincing argument for a new way of examining how media influence health behaviors. Below, a few examples of notable programs of theory-based research in this area are described.

Emotions and Health

Emotional appeals are increasingly of interest in health media effects research. Notably, many public communication campaigns rely heavily on emotional appeals, especially fear appeals, in their attempts to sway the public's health behavior. Witte's (1992) work on the EPPM, mentioned above, forms the foundation for much of the health-related fear appeal research. Additional work by Dillard and Peck (2000) helped health communication researchers integrate research on dual-process models of attitude formation with the burgeoning work on the role of emotions in health message effects. This work also examined unique effects for different emotions, motivating increased study of discrete emotions as important responses to health messages. Furthermore, Nabi's conceptualization of the cognitive functional model (Nabi, 1999) and the emotions-as-frames model (Nabi, 2003) nudged the field to think about how different types of emotions impact health information processing and other message outcomes. By emphasizing the ability of emotions to persuade and motivate, these researchers have advanced health media research into an era where message designers know it is not enough to simply inform audiences about health threats, as many already know they exist. Instead, understanding the different types of emotions that lead to selective exposure, message elaboration, and motivation to pursue often difficult health behavior changes is an important development in health media research that continues to grow in popularity (Myrick, 2015).

Adolescents and Sexuality

Another example of a program of research that influenced our understanding of health-related media effects is Brown and her colleagues' work on how adolescents' media use shapes their sexual behaviors. Brown (2000) developed the Media Practice Model with three central features: (1) media use is active; (2) a reciprocal (i.e., non-linear) relationship exists between media use and effects; and (3) identity, sense of self, and aspects of one's psychological development influence media selection, media interaction, and application of lessons from media to one's own life. Brown and her colleagues found in multiple studies that exposure to sexual content in music, movies, television, and magazines accelerated adolescents' sexual activity, with some differences based on demographics (Brown et al., 2006; Pardun, L'Engle, & Brown, 2005). Additional work found that mass media were just as influential on adolescents' sexual behavior as were other socialization factors, such as family, religion, school, and peers (L'Engle, Brown, & Kenneavy, 2006). This body of work contributed a great deal of empirical evidence about the nature of mediated portrayals of health-related behaviors, as well as the role of media use, in socializing adolescents and shaping their views on what is and is not normal, acceptable, or even expected sexual behavior.

Entertainment

Research on the effects of entertainment media on health outcomes is another important area of study. Slater and Rouner (2002) developed an extended version of the elaboration likelihood

model (E-ELM) to explain how entertainment messages influence viewers beyond modeling of rewarded behaviors or avoidance of punished behaviors. The E-ELM focuses on the absorption potential of a narrative and posits that entertainment messages can be particularly influential when audiences are immersed in a narrative, thereby making them less likely to counter-argue and more likely to shift their attitudes than if they were consuming non-entertainment media. The entertainment overcoming resistance model (EORM) has also been proposed as a conceptual framework for understanding how entertainment messages influence attitudes and behavioral outcomes, including health-related outcomes (Moyer-Gusé, 2008). The EORM integrates multiple theoretical perspectives on audience involvement (including the E-ELM and social cognitive theory) to provide a comprehensive explanation as to why entertainment messages can shift behaviors. Together, this work linking entertainment media to health outcomes helped spur increased interest in entertainment education and the effects of narratives related to health.

Social Norms

In the mid-2000s, a conceptual article (Lapinski & Rimal, 2005) and an empirical test of the theory of normative social behavior (Rimal & Real, 2005) turned many health communication scholars' attention to the role of social norms in shaping health message effects. Rimal and his colleagues demonstrated that descriptive norms, or our beliefs about how common a behavior is in our social network, influence behavior, but are also moderated by norms of social approval, outcome expectations, and group identity. In a later update to their initial theorizing about the role of social norms, Rimal and Lapinski (2015) noted that additional moderators may impact the role of social norms on health behaviors (e.g., involvement, group proximity) and that studying specific attributes of target behaviors is crucial for continuing to advance our understanding of how social dynamics shape message effects.

Psychological Reactance

Another concept that became prominent in the health communication literature during the mid-2000s was that of reactance. Dillard and Shen (2005) published a multi-study paper describing the nature of reactance and how reactance theory can be applied to health communication contexts. Building on work by Brehm (1966) defining reactance as a threat to one's freedom, Dillard and Shen demonstrated that both anger as well as negative cognitions were important components of reactance. They found that messages that included threats to freedom evoked greater anger and negative cognitions, which in turn influenced attitudes and intentions (related to flossing and alcohol consumption). Shen (2010) later investigated ways to mitigate reactance, finding that inducing state empathy is a helpful tactic. Together, this work on reactance helped advance the field's understanding of when and why persuasive health messages may backfire with some audience members. Since health messages typically focus on threats, the research on reactance reminds scholars that persuasion and post-message health behavior change is not as simple as telling audiences that a threat exists. Instead, audience resistance to the message and the messenger, as well as to the target behavior, must also be considered when investigating health message effects.

Limitations and Controversies

The programs of research and notable studies mentioned above are all evidence of the rich quality of scholarship in this area of media effects research. However, the subfield is not without

its limitations and ongoing controversies. More broadly, health communication scholarship has been criticized for its frequent lack of attention to or advancement of theory (Beck et al., 2004; Freimuth, Massett, & Meltzer, 2006). One contributing factor is the interdisciplinary nature of much of the work on health media effects, whereby communication scholars partner with researchers from public health and medical sciences who are often less concerned with theory than they are with practical outcomes and securing grants to achieve those outcomes (Hannawa et al., 2013). However, even when theory is applied, it is sometimes done incompletely or without careful attention to the dynamics of media and audiences.

For example, most studies that apply SCT focus on the role of self-efficacy in predicting message outcomes while ignoring the role of outcome expectations, another central part of the theory. When researchers do add outcome expectations to work applying SCT in health contexts, the explanatory power of their models increases (Noar et al., 2015), making a case for the need to more thoroughly apply existing theories in order to improve our ability to predict health message effects. In another example, Nabi and Clark (2008) found that some audiences may still model negatively reinforced behaviors performed by mediated characters, even though SCT would predict that people would not want to try behaviors they saw as punishable. That is, audience expectations related to scripted television dramas resulted in an outcome opposite to the original tenets of SCT, which should motivate additional work in this area to better understand when and why SCT does or does not predict health message effects.

O'Keefe (2012) made another case for using caution when applying outside theories to research about the effects of health messages on audiences. He noted how the application of prospect theory (Kahneman & Tversky, 1979) to health-related media effects has been problematic. Specifically, this approach is based on the argument that audiences are more likely to be persuaded to perform disease-preventing behaviors if they see a loss-framed message (i.e., one that emphasizes potential costs) because prevention contexts are low risk. However, audiences will be more likely to be persuaded by gain-framed messages (i.e., ones that emphasize potential benefits) when the target behavior is about detecting a disease, which is a higher risk context than prevention (Rothman & Salovey, 1997). Yet, these suppositions have not been supported by meta-analyses, which find almost no relationships between gain or loss message framing and the type of target behavior (prevention or detection) on message outcomes (O'Keefe & Jensen, 2007, 2009). O'Keefe (2012) suggests that the lack of support for this application of a theory from another field to the health message effects context is likely due to different definitions of key terms: the behavioral economists who developed prospect theory conceptualized risk as uncertainty (with more uncertainty of an outcome indicating greater economic risk), and not as the likelihood of a bad outcome occurring, which is how risk is typically applied in health communication contexts.

Moreover, theoretical propositions as to the role of risk perceptions themselves in shaping health message outcomes have received mixed support. Fishbein and Yzer (2003) note that across applications of different health behavior theories, perceived risk is not a consistent immediate predictor of behavioral outcomes. One potential explanation for the lack of direct connection between perceived risk and behavioral outcomes is that simply putting risk-related information in a message is not necessarily enough to change risk perceptions, and that more work is needed to understand the interplay between message factors and audience identities, beliefs, and personality traits in shaping risk.

Some theory does exist trying to link features of health narratives with risk perceptions. So and Nabi (2013) proposed and tested their risk convergence model, finding that in addition to

perceived personal relevance of a health threat, common psychological processes related to narratives—character identification, parasocial interaction, perceived realism, and transportation—can each influence audiences' social distance with mediated personae facing health threats. Lower social distance, in turn, is positively related to audiences' personal risk perceptions. Future work could apply this model in multiple domains and continue to test the ways in which different message features and psychological processes associated with them impact risk perceptions, and then how risk predicts behavioral change. Additional work could advance our understanding of the role of risk in health message effects by testing risk perceptions as both moderators and mediators of behaviors, not just message outcomes.

Given their connection to risk perceptions, another notable controversy in the field of health-related media effects has been how best to utilize emotional appeals to promote behavior change. As noted above, meta-analyses of EPPM and fear-related message effects have not supported the predicted interactions between perceived threat and perceived efficacy (Popova, 2012). However, meta-analytic evidence does support a positive linear relationship between fear arousal and persuasion (Tannenbaum et al., 2015). Yet, researchers still do not fully understand the moderators or boundary conditions as to when and for whom fear-arousing messages lead to attitude and behavior change. Recently, Dillard and his colleagues have returned to earlier theorizing on fear appeal effects to argue for the importance of looking at within-person shifts in fear arousal to understand its persuasive power, with the fear curve being a better predictor of persuasion than end-message fear (Dillard, Li, Meczowski, Yang, & Shen, 2017). Although this within-subjects research points to the persuasiveness of fear in laboratory settings, more work is needed to understand the best placement of threat components in a message in order to evoke the ideal fear curve (or curves) for persuasion, and how these shifts in fear compare to messages that do not evoke fear.

Even if fear is positively related to persuasion, ethical concerns arise when using scare tactics to persuade audiences to change their health behaviors, especially when targeting high-risk populations who may not have the resources to effectively deal with the fear aroused by a health message (Hastings, Stead, & Webb, 2004). If fear causes distrust of a message source or if audiences become desensitized to fear-arousing messages, then fear appeals could easily backfire and cause more harm than good. Studying audiences' multiple emotional responses (Dillard, Plotnick, Godblod, Freimuth, & Edgar, 1996), mixed emotional responses (Myrick & Oliver, 2015), coactive affective states (Keene & Lang, 2016), and their shifts in emotional responses across message components (Nabi, 2015) are also encouraging strategies for overcoming current limitations in understanding the role of emotions in health-related media effects.

The above examples all demonstrate the need for media effects researchers interested in health-related message effects to develop deeper understandings of the other fields from which they draw theory and to then critically analyze the role of media and media affordances in applying those theories. Health messages have had unintended negative effects on audiences, potentially due to a lack or misspecification of theory. For instance, multiple anti-drug public service announcements have been found to be perceived as ineffective by the target audience (Fishbein, Hall-Jamieson, Zimmer, von Haefen, & Nabi, 2002); others have even associated anti-drug campaign exposure with lower intentions to avoid drugs (Hornik, Jacobsohn, Orwin, Piesse, & Kalton, 2008). Increased critical application of theory could help health communication scholars better explain the role of media and audience factors in shaping health outcomes. Moreover, theory could help prevent the dissemination of messages that inadvertently harm public health. The task of better integrating theory into health message design will likely require media

researchers to be persuasive advocates for theory's ability to improve predictive power with both their interdisciplinary colleagues and with funding organizations at early stages of these projects.

Perhaps more than in other subfields of media effects research, message effects on actual behaviors (and not just on attitudes or behavioral intentions) are crucial in the context of health messages. If attitudes or intentions shift but not behaviors, then public investments in large-scale health campaigns may be unwarranted. As noted above, existing theory in health media effects posits a specific relationship between attitudes, intentions, and behaviors, whereby attitudes are one predictor of intentions, which then predict behavior (Fishbein & Yzer, 2003). However, the message design formula suggested by the integrated model may need additional testing and further refinement in order to better encapsulate the dynamic interplay of these variables. For example, Nabi and Myrick (2019) found that feelings of hope and of fear after viewing sun-safety messages predicted both intentions and actual behavior, but neither emotion predicted or even correlated with attitudes toward sun-safety behaviors. They posited that when messages target unpleasant behaviors (e.g., the time-consuming task of putting on sunscreen, which many people also find uncomfortable), attitudes may be less important than motivational factors (like emotions) in shaping behavioral outcomes. Additional research is needed to better assess how audience and message factors determine the interrelationships between attitudes, intentions, and behaviors.

Opportunities for Advancement

The above limitations and controversies offer a number of opportunities for advancement of health-related media effects research. Additionally, many other possibilities exist for researchers to advance this area of work. For instance, health communication as a field has long included both mass communication and interpersonal scholars, making it an area of research that fosters interconnections between these two areas (Kreps, Bonaguro, & Query, 1998). Research on the effectiveness of public health campaigns has recognized the role interpersonal interactions about media messages can have in either promoting or preventing desired message outcomes. Southwell and Yzer (2007) argue that interpersonal communication can directly shape media campaign outcomes, can mediate campaign outcomes by facilitating subsequent behaviors, and can moderate campaign outcomes. Other researchers have applied social network theories and analysis techniques from interpersonal communication contexts to better understand how health interventions disseminate through schools via social talk (Choi, Hecht, & Smith, 2017) and how people support each other, share information, and seek information related to health via online support groups (Kim et al., 2012; Kim, Shah, Namkoong, McTavish, & Gustafson, 2013) and social media platforms (Myrick, Holton, Himelboim, & Love, 2016).

Another area of advancement for health-related media effects research is in increasing our understanding of how messages in one's existing media environment shape responses to subsequent health messages. Hypothetically, while a laboratory experiment may find a particular type of message highly persuasive in convincing the public to get vaccinated against influenza, if the vaccination campaign launches at the same time as news reports about the low levels of effectiveness of the vaccine, then that campaign may not be effective. Additionally, research on the effects of competing political frames and counter-frames could provide guidance to health communication researchers interested in understanding this real-world phenomenon (e.g., Chong & Druckman, 2013). Gaining deeper insights into inter-media effects and the dynamics of exposure to different types of health media content will require creative, multi-method, and longitudinal designs in future research.

Understanding social determinants of health and their interrelationships with message effects was an additional advancement in the field that took place during the mid-2000s and continues to offer opportunities for advancement of media effects research. Viswanath and colleagues demonstrated how social determinants such as race/ethnicity, social class, and neighborhood location or structure could impact the effectiveness of health messages (Viswanath & Emmons, 2006). Niederdeppe, Bu, Borah, Kindig, and Robert (2008) suggest purposeful message framing, use of narratives, and visual images are all promising message design strategies for raising awareness of social determinants of health.

Implications of Newer Communication Technology

The affordances of newer communication technologies offer many additional research opportunities for scholars interested in health-related media effects. Thanks to these technologies, it is now easier than ever for algorithms to create and deliver health messages that are specifically designed for particular individuals. Health communication researchers have repeatedly found such message tailoring to be an effective health behavior-change communication strategy (Kreuter, Farrell, Olevitch, & Brennan, 2000; Rimal & Adkins, 2003). Research suggests that tailored messages are more persuasive than generic ones because tailored messages increase the perceived personal relevance of the content (Jensen, King, Carcioppolo, & Davis, 2012). Notably, though, simply tailoring health messages on demographics or previous behavior may not be the most persuasive approach to message tailoring. A meta-analysis of the effects of print tailored health messages found that tailoring messages based on theory-related variables resulted in stronger effects sizes than did messages tailored on behavior alone (Noar, Benac, & Harris, 2007). This finding accentuates the need to apply theory when studying health media effects and when crafting algorithms to supply tailored health information to individuals.

Another affordance of communication technology is the ability of individuals to search online for health information themselves anytime and anywhere, all without having to visit a trained healthcare professional. Online health information seeking is associated with important health outcomes, from an increased likelihood of making an appointment with a healthcare provider (Eastin & Guinsler, 2006) to gains in knowledge, improved social support, enhanced coping abilities, and stronger self-efficacy (Galarce, Ramanadhan, & Viswanath, 2011; Morahan-Martin, 2004; Shim, Kelly, & Hornik, 2006). In an experimental study of the effects of online health information seeking, a number of important mediators of post-search attitudes and behaviors were found, including how relevant the search seemed to the user and how scared as well as how hopeful they felt once the search was over (Myrick, 2017). Additional work is needed to understand how and why online health information motivates some people to take action while it causes others to avoid information.

While online health information seeking is associated with many positive outcomes, as mentioned above, it has a darker side. The internet is filled with inaccurate health information, myths, and falsehoods, which can spread across social networks faster than ever due to digital technologies and the popularity of social media platforms (Southwell & Thorson, 2015). For instance, even though medical science has repeatedly disavowed the falsely reported link between vaccinations and autism, many websites continue to warn parents away from vaccinating their children (Kata, 2012). In 2014, dangerous untrue rumors spread in west Africa via the social media platform Twitter among communities affected by the Ebola virus (Oyeyemi, Gabarron, & Wynn, 2014). Fortunately, preliminary work suggests that posting corrections to health

misinformation on social media can help correct users' misbeliefs about health threats (Bode & Vraga, 2018). Additional work testing theoretical mechanisms of correction effects and how best to counteract health misinformation, perhaps with tailored counter-messages, is needed.

Furthermore, the affordance of interactivity makes understanding the effects of websites, video games, wearable health/fitness trackers, and mobile applications an important developing area of research. Interactivity can be defined as receiving information or feedback that is contingent upon the previous message or action (Rafaeli, 1988). Users have rated interactive health websites more favorably, and as having more comprehensible material, than websites with fewer interactive features (Lustria, 2007). While each of the aforementioned platforms—websites, games, trackers, and mobile applications—can be interactive, they may differ in other facets that shape how they impact users. For instance, narratives can be interwoven into exergames, which are games designed to increase physical activity (Lu, 2015), whereas it may be more difficult to make an informational website or fitness tracker into a narrative experience. Another consideration is that social cues and design features allow users to compare their tracked exercise with others or seek social support, resulting in a mix of human-computer and computer-mediated health communication. Additional work is needed to continue assessing the psychological mechanisms of interactivity's role in health message design and effects.

Conclusion

We know a great deal about the ways in which media affect individual and public health. We know that there are a number of potential theoretical frameworks to explain message effects in this area, many of them dealing with the role of psychological processes such as threat and efficacy perceptions, emotions, and social norms, to name only a few. We know that newer communication technologies may potentially increase the spread of health misinformation, but they also offer great promise for reaching different populations and motivating sustained behavior change. We know that there is a great deal of impressive research in this area of media effects, but also that much remains to be done. If societies want to use media to combat growing health crises related to poor diets, lack of clean water, increased stress levels, infectious diseases, and other serious threats to health and well-being, then improved application of theory and advances in methodology, as well as creative integrations of the two, are needed to continue to advance health-related media effects research.

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21

Entertainment and Enjoyment as Media Effect

Arthur A. Raney and Jennings Bryant

The scientific study of media entertainment has grown considerably since the first edition of this volume was published (Bryant & Zillmann, 1994). The reasons for this are surely numerous, from the unprecedented proliferation of content and platform development to the global growth of graduate programs in communication, just to name a few. As a result, the picture we can now paint of why people seek out and are satisfied by media entertainment is complex and multifaceted. But it is also not yet complete. In this chapter, we render our version of that picture and offer a few thoughts on work still to be done.

Conceptualizing Entertainment and Enjoyment

Entertainment can be defined as “any activity designed to delight and, to a smaller degree, enlighten through the exhibition of the fortunes or misfortunes of others, but also through the display of special skills by others and/or self” (Zillmann & Bryant, 1994, p. 438). Media entertainment researchers generally acknowledge that humans actively decide what “activity” is or is not entertaining to them. That is, although the term *entertainment* is often used to describe content, in truth what is *entertaining* to one may not be so to another. Ultimately, perceptions of entertainment are in the eyes of the beholder.

As the definition portends, feelings of delight—typically conceptualized as *enjoyment*—have been a central concern of this work; in fact, Vorderer and colleagues refer to enjoyment as the “heart of entertainment” (Vorderer, Klimmt, & Ritterfeld, 2004, p. 388). During the first several decades of study, researchers generally adopted a hedonistic perspective of media audiences (akin to the subjective approach to well-being; e.g., Diener, 1984). As a result, enjoyment typically has been defined using terms associated with pleasure and measured as a positive emotional reaction to content. However, scholars now understand enjoyment to involve more than positive affect, with cognitions, behaviors, and social interactions also important dimensions of the entertainment experience.

Researchers have begun to explore the appeal and function of entertainment experiences beyond pleasure, with particular emphasis on the ways that audiences use media for meaning-making, insight, and exploration of the human condition (i.e., eudaimonic motivations and gratifications;

e.g., Oliver & Raney, 2011). The result has been the emergence of dual-processing perspectives on entertainment that reflect both hedonic and eudaimonic considerations (e.g., Lewis, Tamborini, & Weber, 2014). The remainder of this chapter will explore the approaches associated with the former; the latter are discussed in Chapter 17 of this volume.

The study of (hedonic) entertainment has developed along two primary lines of inquiry: (1) what motivates people to seek out media use and to select particular content (i.e., entertainment selection processes), and (2) how content and audience factors interact in the reception process to facilitate enjoyment (i.e., entertainment theory). We dedicate a section to each below.

Motives for Selecting Media Entertainment

Entertainment serves various social and psychological functions in the lives of audience members. Over the past five decades, studies of media use motivations and selection have largely fallen under two broad research traditions: uses and gratifications (e.g., Blumler & Katz, 1974) and selective exposure (e.g., Zillmann & Bryant, 1985). A close look at these two perspectives is offered in Chapter 10 of this volume, although we would be remiss to not briefly discuss entertainment-specific findings herein.

In many respects, the *motivations* to select entertainment can also be thought of as *outcomes* of exposure, presumably related to enjoyment. Selective exposure theory argues that media users come to learn—via classical conditioning, excitation transfer, mere exposure, and implicit memory (see Bryant & Davies, 2006)—to associate particular content with positive outcomes. Thus, we generally select entertainment because of the positive outcomes we anticipate (and desire) from doing so, with those expectations based on our past experiences with similar content. Some of those motivations are consistent among audiences, whereas others vary across situations and individuals. Furthermore, the needs discussed below are not mutually exclusive; media selection is a complex phenomenon, motivated by numerous factors simultaneously.

Foundational Needs

Several scholars have argued that our drive for media entertainment can, on one level, be tied to persistent basic or foundational human needs arising from evolutionary, biological, or core psychological processes.

Need for “Play”

Various forms of play—locomotor, social, and manipulative, to name a few—are common among all mammals and are thought to promote the development of skills that serve important adaptive functions: predation/predator-avoidance, learning of social rank, and social communication, among others (see Smith, 1982). Hominid evolution made it possible for humans, through imaginative play, to create and interact within safe, secondary realities wherein they could learn to cope with and compensate for, among others, the limits to power and control they experience in their own lives. Vorderer (2001) argued that media entertainment offers a similar alternate reality. That is, media entertainment facilitates temporary shifts in our perceptions of reality during which we access narrative worlds filled with jubilant, disappointing, suspenseful, challenging, and rewarding situations. By “playing” in these safe and controlled secondary environments, we learn how to cope with and compensate for our material and

existential problems and shortcomings. For example, narratives featuring antihero protagonists like HBO's *The Sopranos* have been shown to provide viewers with a "moral sandbox" in which they can ponder morally questionable responses to social situations (Eden, Daalman, van Ommen, & Weljers, 2017). Ultimately, because of such opportunities, humans today are intrinsically motivated to frequently seek out various forms of (media) entertainment as "play."

Life Balance

The human body comes equipped with internal, automated regulation systems designed for optimal functioning and survival. For instance, the sympathetic and parasympathetic nervous systems work together to regulate heart rate, returning the body to a state of homeostasis. Over time, as our social and physical environments became more complex, humans developed non-automated systems (e.g., decision-making, reasoning) to support the struggle for a balanced life and well-being externally and socially (see Damasio, 2003). These systems allow us to manipulate and arrange our environments, when necessary, to promote positive emotions and cognitions, moving ourselves (back) toward life balance. It is thought that one environmental manipulation that can achieve this goal is the selection of media entertainment (Vorderer & Hartmann, 2009). That is, entertainment can function as one of the many means through which we govern the balance of our lives for well-being and survival.

Autonomy, Competence, Relatedness

Self-determination theory contends that people are intrinsically motivated to pursue goals and activities that help to satisfy three basic needs essential for psychological growth and well-being: autonomy, competence, and relatedness (Deci & Ryan, 2000). Media entertainment consumption is thought to be one such intrinsically motivated activity. Thus, individuals can satisfy the basic needs of autonomy, competence, and relatedness to the extent that, for instance, they are free to select aspects of content to encounter (autonomy), can comprehend the content (competence), and can relate to the characters within the content (relatedness). In support of these claims, Ryan and colleagues (2006) demonstrated that playing video games by oneself was related to autonomy and competence needs satisfaction, whereas players of multiplayer online games reported satisfaction of all three basic needs. Tamborini and colleagues (2010) provided similar evidence and, in fact, argued that the satisfaction of these needs is foundational to the experience of media enjoyment.

Situational Needs

Research suggests that, in addition to these persistent needs, audience members are motivated to select media entertainment based on situational factors. Awareness of or cognitive elaboration on the need–selection relationship is neither assumed nor required.

Mood Regulation

Negative mood states—such as boredom, stress, frustration, anger, fear—are unavoidable. Mood management theory (Zillmann, 1988; see also Chapter 10 in this volume) explains how individuals as pleasure-seekers and dissonance-avoiders often select media content to disrupt and overcome negative mood states, as well as to maintain and prolong positive ones. Moods

differ in a variety of ways, including arousal level (e.g., stress vs. calm) and hedonic valence (e.g., pleasant vs. sad). Zillmann (1988) argued that media contents differ similarly by way of their excitatory (or arousal) potential, hedonic valence, and absorption (or engagement) potential. Furthermore, content can either match or not an audience member's current mood (particularly in terms of valence); that is, content can have a high or low semantic affinity with one's current mood state.

Mood management theory states that media users come to learn associations between content and impacts on mood. Thus, bored individuals (low arousal) may choose to listen to fast-paced music (high excitatory potential) to increase their arousal, whereas stressed individuals (high arousal) may select slow and soothing music (low excitatory potential). Similarly, an angry person (negative state) might select more engaging fare like a complex mystery (high absorption potential) to interrupt rumination on thoughts related to the anger-inducing event, thereby overcoming the negative mood. Also, someone saddened by a romantic breakup might pass on the somber love tale (high semantic affinity) and instead choose a light-hearted program (low semantic affinity) for the evening's viewing.

The predictions of mood management theory have received extensive empirical support (for an overview, see Knobloch-Westerwick, 2015). However, scholars acknowledge that mood optimization concerns do not always drive media selection. Other situational factors (e.g., information or other utilitarian needs, eudaimonic motivations, routine/ritual) can and often do override such concerns.

Escape

An oft-cited motivation for pursuing entertainment across a variety of media platforms is escape (or diversion, or to pass time). In general, the term describes an *escape from* (motivation to avoid) some current unsatisfying circumstance in the material world, although it can also refer to an *escape to* a media world (motivation to approach; see discussion of narrative engagement below). With regard to the former, Henning and Vorderer (2001) identified three escape motivations: sociological (driven by stresses and problems arising from work or work-life imbalance), social-psychological (driven by negative social interactions and situations), and individual-psychological (driven by situations not socially caused, like "having nothing to do"). Evidence exists that individuals seek out media for all three purposes, although individual-psychological escapism may be the most prevalent (Henning & Vorderer, 2001).

Recovery

Perhaps experientially related to both mood and need for escape is the motivation to use media for recovery. In this context, recovery is the replenishing of physical and psychological resources following their depletion through work or stress (Sonnentag & Zijlstra, 2006). This can take place through sleep, of course, but increasingly evidence suggests that media use can also promote recovery.

The process of recovery is thought to involve four dimensions: psychological detachment (from the stressor), relaxation, control (i.e., self-determining one's activities), and mastery (i.e., building internal resources through challenging activities). In a series of studies, Reinecke and colleagues (2009, 2011) demonstrated that video game play can address all four dimensions of recovery; similarly, Rieger and colleagues (2014) demonstrated that hedonically oriented film

clips can promote psychological detachment and relaxation. Furthermore, media-induced recovery experiences can lead to positive outcomes like self-reported feelings of vitality.

Learning

One reason some scholars avoided the study of media entertainment was a pervasive belief that it was trivial or of low cultural value. Although this point may still be debated in some circles, it is indisputable that some people turn to entertainment for learning. A prime example of this is prosocial children's television. *Sesame Street* and its heirs have provided a rich "learning through mediated fun" experience for several generations of children (e.g., Fisch, 2009). Mastery is one of the reasons children frequently watch an educational or even a "purely" entertainment program over and over, and mastery is based on the satisfaction of epistemic curiosity, one of the essential foundations of self-directed learning. Moreover, numerous immigrants claim to have learned the languages and cultural tokens of their adopted countries through children's programming, which often is designed to be both universally accessible and intellectually and culturally enriching. The documentary film and podcast industries also leverage the learning motivation for entertainment consumption, as do sports and serious games.

Social Utility

Much entertainment content centers on the inner thoughts and social lives of characters. Because of this, audiences encounter an unending stream of social information. At times, we are specifically motivated to consume entertainment to wade through that stream. Katz, Haas, and Gurevitch (1973) argued that media use can meet needs related to one's self (e.g., confidence, credibility) and those related to others (e.g., strengthening contact with family, friends, the world). Entertainment selection at times is driven by a desire to satisfy a wide range of such needs: watching a popular show to be prepared for the office "water cooler" discussions (e.g., McKeown, Thomas, Rhoads, & Sundblad, 2015), bingeing reality television for self-esteem enhancement (e.g., Nabi, Biely, Morgan, & Stitt, 2003), adolescents viewing horror films to perform emerging social roles (Zillmann, Weaver, Mundorf, & Aust, 1986), or viewing a drama to cope with a loved one's cancer diagnosis (e.g., Sharf & Freimuth, 1993), to name just a few.

Individual Differences in Motives and Selection

One could easily fill an entire chapter with a discussion of individual-level differences that impact entertainment selection. Given space limitations, we highlight only a few. Gender—almost exclusively measured and discussed as a binary construct to date in entertainment theory—is often implicated as one such factor. For example, numerous studies (and the "ratings" archives of television programming providers and exhibitors) reveal patterns of differential appeal and use of entertainment genres, typically along gender-stereotypic lines (e.g., females favoring drama, content with social interactions; males favoring violence, competitive games; for a review, see Knobloch-Westerwick, 2015). However, these differences are thought to likely be due to socialization rather than innate sex-specific differences. In fact, when researchers study fans of particular entertainment texts, gender differences tend to disappear; that is, fans tend to be fans, regardless of gender.

Entertainment media use and selection also varies across the age spectrum. For instance, television viewing to avoid loneliness has consistently (though not universally) been shown to be high for older viewers (e.g., Ostman & Jeffers, 1983) but mostly nonexistent for younger viewers (e.g., Austin, 1985). Some age-based differences appear to be related to variance in technology adoption. For example, Bondad-Brown, Rice, and Pearce (2012) found that older generations were more likely to use television, and younger generations were more likely to use and be motivated to experience entertainment through user-generated online videos.

Finally, a host of personality variables have been found to predict general media, as well as specific content, use, motivation, and selection. The majority of studies suggest that media decisions predictably reflect and correspond to personality dispositions. For example, extroverts are more likely to use social media (e.g., Correa, Hinsley, & De Zuniga, 2010). Persons scoring higher on neuroticism scales report greater affiliation for television viewing, especially for companionship (Weaver, 2003). Persons high in aggressiveness report greater enjoyment of violent entertainment (e.g., Bushman, 1995). High sensation seekers show a fondness for horror (e.g., Tamborini & Stiff, 1987) and sexually explicit content (e.g., Zuckerman & Litle, 1986).

Reception and Enjoyment of Media Entertainment

The second major line of entertainment research—often referred to as *entertainment theory*—explores how content and audience factors interact in the reception process to facilitate enjoyment. Contributing mightily to the boon in entertainment research that began in the latter quarter of the 20th century, this tradition has intellectual roots in speculation by Plato, Aristotle, and Freud on the place of entertainment in the lives of individuals and the populace at large (Zillmann & Bryant, 1986). However, the catalyst for the modern empirical and theoretical explosion in entertainment research was the fertile mind and active research institutes of Dolf Zillmann (Bryant, Roskos-Ewoldsen, & Cantor, 2003).

From its onset, entertainment theory featured a blend of original theories authored or co-authored by Zillmann—*affective disposition theory* (see below), *excitation transfer theory* (Zillmann, 1971), *misattribution theory of humor* (Zillmann & Bryant, 1980), and the aforementioned *mood management theory*—undergirded by a plethora of tightly controlled experiments, as well as evidence accumulated via other research methodologies. Because each of these research traditions has been summarized in dedicated chapters or books, we only highlight a few of the more prominent threads, with citations provided to synopses for further exploration.

Importance of Characters and Narrative Resolutions

Affective disposition theory (ADT) explains how and why we enjoy media narratives (e.g., Raney, 2006; Zillmann & Cantor, 1976). More specifically, ADT describes (1) how viewers take emotional sides with media characters (i.e., affective dispositions), (2) how doing so triggers anticipatory emotional reactions to the unfolding events involving those characters, and (3) how those emotional responses, along with the outcomes portrayed, result in enjoyment.

According to ADT, the emotional affiliations that viewers form and hold toward characters in a media narrative play a primary role in the process of enjoyment. Most entertainment—whether explicitly or implicitly—hinges on the existential clash between good and evil: superheroes and super villains, cops and robbers, armies at war, young lovers battling life's

unfairness, Barcelona and Real Madrid. Our social nature leads humans to side with some and against others based on moral considerations. ADT contends that audience members morally monitor and evaluate the behaviors and motivations of characters, leading to the formation of dispositions along a continuum of affect, from extremely positive through indifference to extremely negative. Other factors can influence our dispositions (e.g., attitudes about the actor, attractiveness, dialogue), but studies consistently demonstrate that moral considerations—especially empathy-related ones (see Zillmann, 2006)—are central to character liking. Given the variability in values, beliefs, and norms, it is unsurprising, then, that people differ on the characters they love and hate and, as a result, on the narratives they enjoy the most.

Once we like characters, we are inclined to empathize with their pain and struggles; we “feel for them.” The greater the liking, the stronger the empathic response. Furthermore, empathy prompts anticipatory emotions. We hope for liked characters to avoid suffering and to experience success and happiness; we wish for disliked characters to suffer downfall and demise (because they generally are to blame for the problems of beloved characters). Over the course of the narrative, characters encounter successes, struggles, victories, defeats, joys, and sorrows, ultimately leading to an outcome or resolution. According to ADT, enjoyment is experienced as the relative sense of pleasure that one experiences in relation to this resolution. If the resolution lines up with the outcome anticipated and desired by the audience member, then pleasure is experienced (relative to the intensity of those anticipations). If the resolution is counter to the anticipated and desired outcome, then less pleasure is experienced. Thus, enjoyment is a function of the affective dispositions held toward characters and the outcomes associated with those characters in the unfolding narrative. More specifically, ADT contends that enjoyment increases when liked characters experience positive outcomes and/or when disliked characters experience negative ones. Conversely, enjoyment suffers when liked characters experience negative outcomes and/or disliked characters experience positive ones. The intensity of enjoyment is in large part dependent upon the intensity of the affective dispositions held toward characters.

The basic ADT formula emerged from research into the enjoyment of, or at least the appreciation of, humor. An early experimental study of content and respondent factors in humor appreciation was a superiority-theory investigation by Wolff, Smith, and Murray (1934), who explored ethnic humor by varying the ethnicity of characters delivering a punch line, the ethnicity of those victimized, and the ethnicity of respondents to the jokes. They found that it was more enjoyable to see one’s own ethnic group triumph over a different group than to see one’s group suffer humiliation at the hands of a member of the unaffiliated group. Looked at with hindsight, the study supports what would later be called the disposition theory of humor and mirth (Zillmann & Cantor, 1976). Numerous studies supported and extended these findings (e.g., Cantor, 1976; Mundorf, Bhatia, Zillmann, Lester, & Robertson, 1988), revealing that we laugh discriminately based on who we are and with whom we identify, as well as according to the characteristics of those involved in the “joke work” (Freud, 1958) and their actions.

Support for ADT has spread much wider than humor research, with the basic formula also explaining enjoyment of drama (e.g., Zillmann & Cantor, 1976), sports (e.g., Bryant & Raney, 2000), fright-inducing entertainment (e.g., Hoffner & Cantor, 1991), action films (e.g., King, 2000), reality-based programming (e.g., Oliver, 1996), and news programming (e.g., Zillmann, Taylor, & Lewis, 1998), among others. The term *affective disposition theory* emerged over the past two decades as an umbrella term to describe all disposition-based approaches to media enjoyment.

A rise in the popularity of television programs and films featuring morally complex (or antihero) characters gave scholars reason to question and further explore the role of morality in disposition formation and narrative enjoyment (e.g., Janicke & Raney, 2018; Krakowiak & Oliver, 2012). Overwhelmingly, ADT as an explanation of the enjoyment process reliably withstands the “challenge” presented by such content.

Content Features

The research record explains the specific appeal of a variety of entertainment genres, including horror films (e.g., Weaver & Tamborini, 1996), pornography and other sexual portrayals (e.g., Brown, 2003), sports (e.g., Bryant & Raney, 2000), and video games (see Chapter 22 in this volume), to name a few. Relatedly, numerous broad content features found across genres have been associated with increased enjoyment, including frightening depictions (e.g., Cantor, 2006), interactivity (e.g., Klimmt, Roth, Vermeulen, Vorderer, & Roth, 2012), moral complexity (e.g., Raney & Janicke, 2013), and aesthetics (e.g., Cupchik & Kemp, 2000). A detailed review of this rich literature area is impossible given the confines of this chapter. However, space permits a brief discussion of two important and common narrative devices linked with enjoyment.

Violence

For as long as media have served as entertainment resources, their production and distribution outlets have been criticized for presenting excessive or gratuitous violence. The typical industry defense for the preponderance of violence has been that they just give people what they want. Entertainment-theory research has attempted to determine whether such claims for the appeal of media violence are valid and, if so, to explain the allure of symbolic violence.

The first empirical investigation to examine claims for the appeal of violence was a quasi-experiment into the effects of sports commentary on viewers’ perceptions and appreciation of play in televised professional ice hockey. Comisky, Bryant, and Zillmann (1977) chose and pretested two segments from a professional ice hockey game. One segment featured normal play, but the commentary incongruently stressed the violence and roughness of the game. The other segment featured aggressive play, which the commentary virtually ignored. The sports commentary substantially altered viewers’ perceptions of the roughness and violence of play, with the normal play with violence-accentuating commentary rated as more violent and aggressive than the actually aggressive play with the pacific commentary. More importantly here, the ratings of the enjoyment of play were directly in line with the *perceived* roughness and violence of play.

Two experiments soon followed this initial study. Diener and DeFour (1978) varied the amount of violence in an episode of a crime drama by presenting an intact version of the program (high violence) or a version in which the bulk of the violence had been edited out (low violence). Viewers liked the violent episode somewhat more than the nonviolent version, but the difference was not statistically reliable. Bryant, Comisky, and Zillmann (1981) varied the degree of violence or roughness of play in professional football (low, intermediate, high) and the gender of the viewer. For male viewers, the enjoyment of plays was found to increase with the degree of their roughness or violence. A similar pattern of enjoyment ratings was provided by female viewers, but these results did not obtain acceptable levels of statistical significance.

A number of theories have been proffered to explain our assumed or assessed predilection toward the enjoyment of media violence. The most popular notion, especially among laypersons, is that of symbolic catharsis, which asserts that audience members vicariously participate with media aggressors, which purges the audience members of the hostile coloration of their feelings; moreover, this vicarious purgation results in an experience of relief, which leads to enjoyment. Unfortunately, the catharsis proposal has been found to be conceptually troublesome, and it is challenged by a wealth of contrary empirical evidence (Geen & Quany, 1977; Zillmann, 1979).

A second theory posits that violence is an archaic index of intense conflict and competition, and intense conflict is the heart and soul of high drama (Zillmann, Bryant, & Sapolsky, 1979). In other words, increased interpersonal aggression serves to prove to audience members that the media protagonists are giving their all, thereby producing more powerful, engaging, and enjoyable drama.

As a third rationale, Adler (1927) claimed that humans are constantly striving to enhance self-esteem and power by asserting dominance over others. In as much as more intense violence achieves greater dominance, then the viewer, reader, listener, or gamer who fits the Adlerian scheme of motivation and is capable of sharing power vicariously, should enjoy violent media portrayals. It should be noted that this reasoning lacks direct empirical evidence.

Several summary treatments of the appeal of media violence are available, including Goldstein's (1998) comprehensive-but-somewhat-dated volume *Why We Watch: The Attractions of Violent Entertainment*. More recent sources include Miron (2003) and Sparks, Sparks, and Sparks (2009).

Suspense

Why should audience members willingly undergo the distress associated with witnessing a favored protagonist struggle against terrible odds and the imminent threats of harm if not almost-certain death and consider this enjoyable? The seeming paradox of suspense has been explored extensively by entertainment-theory researchers. Carroll (1990) described suspense in fictional drama as the emotional apprehension and anticipation experienced during a scene or event critical to the resolution of a narrative that offers the conflict between two potential outcomes: one morally superior but in doubt, the other evil and likely. When a beloved character is facing certain suffering and defeat, viewers experience suspense via empathic concern. Zillmann (1994) and Carroll (1990) both argue that suspense will be greater when the feared evil outcome seems more likely to occur than not.

The first empirical investigation of this phenomenon was undertaken with children. Zillmann, Hay, and Bryant (1975) created an audio-visual children's adventure tale. Degree of suspense (low, intermediate, high) was varied with resolution of the suspense (resolved, lingering). Under conditions of resolved suspense, enjoyment of the story increased with degree of suspense. When the source of the suspense lingered, enjoyment also increased with degree of suspense but to a significantly smaller extent. Physiological indices had also been ascertained; they revealed that increased suspense yielded increased sympathetic excitation, and excitation declined precipitously under conditions of effective resolution of the suspense.

Zillmann et al. (1975) interpreted their results as consistent with excitation transfer theory (Zillmann, 1971), now the most commonly used theory to explain the enjoyment of suspenseful entertainment. The essential tenets of the excitation transfer theory of enjoyment of suspense are (see Zillmann, 1991):

- (a) Individuals who witness an agent of drama they like potentially being victimized experience an elevation in sympathetic activity;
- (b) These viewers, readers, listeners, gamers, etc. appraise such actions as dysphoric (i.e., they experience empathetic distress);
- (c) The humoral portions of excitatory processes decay comparatively slowly, and some portion persists beyond the termination of the distress conditions;
- (d) If the resolution of the suspense is cognitively appraised as positive and satisfactory, as in the case of the stereotypical “happy endings” of mainstream drama, the residual excitation from the sympathetic distress transfers into the overall appraisal process, elevating the level of enjoyment of the suspenseful presentation relative to what it would otherwise be.

Vorderer and colleagues (1996) provided an excellent early review of the suspense literature; several summary chapters have appeared since devoted to explaining the enjoyment of suspense (e.g., Knobloch, 2003; Vorderer & Knobloch, 2000).

Reception Processes

Entertainment theorists have identified several additional processes that occur during media reception to a varying degree, based on the content and the audience. These processes are thought to differentially impact enjoyment. Several are discussed elsewhere in this volume, but mention here is warranted given their role in the entertainment experience.

Character Identification

Related to the formation of affective dispositions, character identification is an imaginative process in which an audience member merges with and takes on the perspective of a character (Cohen, 2001). When media users highly identify with a character, they are able to appreciate and understand the character’s motivations, emotions, thoughts, and actions, while maintaining their own sense of self. Character identification is thought to be a primary means through which audience members become immersed and engaged in a narrative world (see below); as such, it has repeatedly been shown to be positively correlated with enjoyment (e.g., Janicke & Raney, 2018; Trepte & Reinecke, 2010), as well as other outcomes (like attitude and behavioral change; see Chapter 12 in the current volume). As a related construct, wishful identification (i.e., the desire to be like or act like a character; see Hoffner, 1996) also predicts enjoyment, especially within video game settings (e.g., Hefner, Klimmt, & Vorderer, 2007).

Parasocial Interactions

Like identification, parasocial interactions (PSI) take place between audience members and media characters. The term describes the imagined, one-way social interactions between the two (Horton & Wohl, 1956); or, put another way, PSI describes the way audience members come to think of characters as friends or companions. PSIs are experientially similar to face-to-face interactions, although without expectation of a reciprocated response from the media character. Long-term, multi-encounter experiences can lead to the formation of a parasocial relationship (PSR). Factors such as attractiveness (of the character), sociability (of the user), and perceived

similarity (with the character by the user) are all related to the formation of PSIs/PSRs. Further, strong PSIs are associated with greater enjoyment of various contents (see Klimmt, Hartmann, & Schramm, 2006). In fact, PSIs are so important to media enjoyment that the loss of a character (i.e., “parasocial breakup”) can result in the same negative emotions as arise with romantic and other interpersonal breakups (e.g., Cohen, 2004).

Narrative Engagement

Viewers, readers, and players alike often share the common experience of becoming completely immersed inside a narrative world, losing track of time and of their material surroundings. This experience can broadly be described as narrative engagement. When media consumers experience a high degree of engagement, they feel as if they are actually present in the narrative world, with their emotional and cognitive capacities dedicated to experiencing the characters and events as if they were real. Several related constructs are involved in and associated with narrative engagement, including transportation (e.g., Green & Brock, 2000; see also Chapter 9 in this volume), presence (e.g., Lombard & Ditton, 1997), and flow (e.g., Csikszentmihalyi, 1990). In their model of narrative comprehension and engagement, Busselle and Bilandzic (2008) argued that perceptions of realism are key for narrative engagement to occur. Consumers of entertainment, by default, accept the fictionality of narratives and eagerly shift their sense of perspective from the material world to adopt that of the narrative world (i.e., deictic shift), leading to transportation, immersion, and character identification. However, engagement is interrupted when the audience perceives unexplained inconsistencies, incoherence, or implausibility between the narrative and the real world (external realism) or within the narrative itself (internal realism). Their model posits—as do others (e.g., Green, Brock, & Kaufman, 2004; Sherry, 2004)—that narrative engagement facilitates enjoyment.

Social Comparisons

Humans frequently engage in social comparisons as a component of ongoing identity formation (Festinger, 1954; see also Chapter 12 in this volume). At times, we judge ourselves in relation to those we perceive as having a characteristic we desire (upward assimilative comparisons); at other times, we judge ourselves against those we perceive as inferior to us on some dimension (downward contrastive comparisons). Media entertainment, with its wide cast of characters, offers a never-ending opportunity for both types of social comparisons. For instance, Lewis and Weaver (2016) demonstrated that viewers made both upward and downward comparisons during exposure to a reality television program, with subsequent impacts on enjoyment. But content facilitating comparisons that trigger discrepancies between one’s ideal and actual sense of self (see Higgins, 1987) is likely to be less enjoyed.

Reception Context

A final factor impacting enjoyment, which has received relatively less attention, is the social context in which entertainment is encountered. As media technologies have become less expensive and more portable, the entertainment experience has become increasingly personalized and solitary. Nevertheless, entertainment is still routinely enjoyed with others in living rooms, mini-vans, cineplexes, sports bars, arcades, and online. In some situations, the social context is required for enjoyment. For example, massively multiplayer online role-playing games involve

interacting with and against others in the game world, with the interactions themselves—at times without regard to success or failure in the game—playing a prominent role in enjoyment (e.g., Cole & Griffiths, 2007). In other situations, like posting real-time comments to Twitter during the airing of a much-anticipated television season premier, interactions with virtual others through a “second screen” may play a dynamic, supporting role in the enjoyment process compared to what is occurring on the “first screen” (see Raney & Ji, 2017).

In terms of the physical presence of others, shared emotional reactions can serve to facilitate enjoyment. Emotional contagion (i.e., the emotional convergence with another person through the automatic mimicry of and synchronization with their affective behaviors; Hatfield, Cacioppo, & Rapson, 1992) routinely occurs while consuming entertainment with others (e.g., Cohen & Lancaster, 2014). Of particular note is the facilitative influence of another person’s laughter on one’s own laugh response (e.g., Brown, Brown, & Ramos, 1981). In fact, the canned laughter or “laugh track” that often accompanies television sitcoms has been shown to enhance laughter and enjoyment in audiences (e.g., Fuller & Sheehy-Skeffington, 1974). Another’s applause has been shown to have a similar sway on one’s appreciation of, for instance, music (Hocking, Margreiter, & Hylton, 1977).

Challenges and Opportunities in Entertainment Studies

The scientific study of entertainment has revealed a complex set of factors and processes involved in the seemingly mundane and straightforward task of selecting and enjoying media. Building upon this work, scholars must continue to investigate the underlying psychological mechanisms involved in entertainment reception to more closely connect in situ media selection with the persistent foundational needs discussed above. Methodological innovation is likewise needed to move the science beyond its reliance on self-report measures to, for instance, unobtrusive, real-time data collection. Furthermore, continued refinement and standardization in the operationalization of terms is necessary for the field to systematically grow and mature.

But the greatest challenges and opportunities that await the study of entertainment are likely to come from the ever-changing development and use of media technologies. Early studies into binge viewing, transmedia use and migration, fan fiction, and second screening have begun to explore new(er) ways that audiences are interacting with and enjoying content. Others have, for example, started to consider how avatar customization may challenge our notions of character identification, how limitless choices in gaming worlds may force us to grapple in new ways with morality, and how advances in virtual reality may change our understandings of presence, transportation, and perceived realism. Scholars are also beginning to consider how unlimited, on-demand access to entertainment in a “permanently online and permanently connected world” (see Chapter 1 in this volume) may be shaping our social interactions and psychological well-being. Simply put: As entertainment inevitably evolves, media psychologists must continue to explore how, why, and with what effects we enjoy what we enjoy.

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22

Video Games

Christoph Klimmt and Daniel Possler

Without a doubt, video games represent the key manifestation of the intertwined dynamics of digitalization of the media landscape and the entertainization of societies. Starting with simple machines displayed in dedicated leisure centers (“arcades”) in the 1970s, the rapid progress in computer technologies enabled video games to conquer a key position in many households’ media equipment (Klimmt, 2014). More recent developments such as online, mobile, and virtual reality gaming have added important features to today’s highly diversified gaming culture. Gaming has become a primarily social activity (Quandt & Kröger, 2013) that involves several or even a multitude of players at the same time. Moreover, gaming has brought about various new phenomena of lifestyle and (youth) culture such as eSports (i.e., electronic sports) with leagues, competitions, and player markets, as well as games-related webcasts (e.g., “Let’s Play” videos) that attract large online audiences.

As a consequence, contemporary video games are a multibillion dollar business that serve millions of people who identify themselves as (at least occasional) players (ESA, 2017). The relevance of video games to society and to communication science is thus comparable to other, conventional media of mass entertainment, such as literature, television, or movies.

However, video games display several characteristics that differentiate them from conventional mass media and are therefore of primary theoretical and empirical importance for understanding their effects on individual users and society at large: (1) interactivity of use (players actively engage in, modify, and co-create the “content” of a video game), (2) sociality of use (use of video games often is a competitive and/or collaborative experience that involves close or distant others), and (3) the specific integration of narrative messages (including portrayals of social realities) with interactivity and sociality (“interactive storytelling”; see Murray, 1997). Most existing research on video game effects has departed from established theoretical approaches and included additional considerations on the listed unique features of games and gaming. Therefore, it is worthwhile to devote a separate chapter to video game effects within the present volume. With theory and research making further progress, however, it is both likely and desirable from a programmatic point of view that the review of video game effects be merged with media-independent, generalized theories on entertainment effects in the fifth edition of this book.

Driven by academic curiosity and calls for knowledge from concerned stakeholders in society, research on video game effects has evolved around key types of effects that game makers

intend and game users demand, as well as around types of effects that are feared to appear as unintended, undesirable by-products of using games. With regard to intended game effects, we focus on entertainment as the primary and most important outcome of playing, and on learning as the second kind of effect that producers of numerous games strive for (“serious games” or “edutainment”). In a second step, we address theory and research on the unintended “side effects” of games. This area of work in communication and psychology has primarily focused on the effect of violent content on player aggression. Smaller branches of research on unintended effects address the consequences of game portrayals of social realities (e.g., gender stereotypes). We conclude the review of these domains of games effects research with some programmatic extrapolations on the long-term, large-scale influence of video games on human development and (playful) societies.

Entertainment as Intended Key Effect of Playing Video Games

Despite the public controversy over potential negative effects of gaming, a large share of media effects research in communication science and media psychology studied a positive and intended consequence of playing video games: the experience of entertainment. The high amount of scholarly attention for this outcome can be attributed to two factors. On the one hand, gaming quickly developed from a niche activity that mostly attracted young men to a popular pastime for diverse player segments, including women and the elderly (ESA, 2017). In order to explain the immense popularity of games, scholars started as early as in the 1980s to study their motivational appeal and attraction (e.g., Selnow, 1984). Many of these works attributed a key role for games’ success to their capacity to provide rich entertainment experiences (e.g., Klimmt, 2003; Vorderer & Bryant, 2006). On the other hand, studying video games also proved to be a promising path to extend established theories of media entertainment (see Chapter 21 in this volume). As most traditional concepts have been developed to explain entertainment experiences stemming from non-interactive, “linear” media fare (e.g., crime drama), challenges occurred when scholars applied those models to interactive video games, which ultimately fueled new theorizing (Vorderer, Bryant, Pieper, & Weber, 2006).

As a result, video game scholarship can today rely on a large set of concepts and mechanisms to explain the formation of video game entertainment experiences (Vorderer & Bryant, 2006). In order to organize the multitude of theoretical and empirical perspectives, the existing research can heuristically be structured along two dimensions. First, it can be clustered with regard to the conceptualization of entertainment. Just like scholarship on media entertainment in general, most research equated video game entertainment with the pleasant media experience often termed *enjoyment* (Vorderer, Klimmt, & Ritterfeld, 2004). However, some of the more recent work also acknowledges video game entertainment experiences beyond enjoyment, such as the experience of meaningfulness (e.g., Oliver et al., 2016). Second, the works differ with respect to the extent to which they are based either on a bottom-up perspective that is driven by exploring players’ experiences and games’ characteristics, or pursue a more top-down approach to explain players’ responses. While exploratory (mostly survey-based) studies mark the one approach, the other can be found in applications of well-established theories such as self-determination theory (Deci & Ryan, 2000) to games. In between those two poles are studies that analyze game characteristics and link them to (conceptually plausible) audience responses known from conventional research on entertainment or related fields.

Studying the Formation of Video Game Enjoyment

Most research on the video game entertainment experience has focused on enjoyment. A bottom-up approach to understand the fun of gaming has been taken by exploratory studies in the uses-and-gratification tradition (see Chapter 10 in this volume). They uncovered a broad array of dimensions that may contribute to or constitute states of enjoyment in digital games in general (Sherry, Greenberg, Lucas, & Lachlan, 2006) and in specific genres (e.g., first-person shooter, e.g., Jansz & Tanis, 2007; massively multiplayer online role-playing games or MMORPGs, e.g., Yee, 2006). Moreover, research in this tradition also identified important differences in the preference for specific gaming gratifications across various player segments (e.g., dislike of competition among females, e.g., Lucas & Sherry, 2004; preference for relaxation in games among the elderly, e.g., Possler, Klimmt, Schlütz, & Walkenbach, 2017).

Although these results are informative, most research studied the dimensions and determinants of video game enjoyment with a combination of a bottom-up and top-down perspective. The logic of this research is to identify the unique characteristics of games and theorize connections to established concepts that help to explain how these features foster players' enjoyment. The works in this cluster can be structured along three unique characteristics of games (see Klimmt, 2003). First, due to *interactivity*, games depend upon players' decision-making and their actions. This feature has been linked to players' experience of having an influence on the game world (effectance; Klimmt, Hartmann, & Frey, 2007) and of mastery (Klimmt, Blake, Hefner, Vorderer, & Roth, 2009), which have been found to be highly enjoyable.

A second unique characteristic of games is the connection between *interactivity and narrative frameworks*. Most video games feature a specific storyline and a game world (e.g., a fantasy kingdom) in which players take an active role. This unique form of storytelling and presentation of a mediated space was found to foster a strong sense of "being" in the game world (spatial presence, e.g., Tamborini & Skalski, 2006) or "being" a character presented in a story (identification, e.g., Klimmt, Hefner, & Vorderer, 2009). Video game enjoyment thereby stems inter alia from the pleasant experience to try out new roles, explore new places, and temporarily escape from daily worries. Additionally, scholars have investigated several other links between interactive storytelling and enjoyment such as making moral decisions in the game (e.g., Hartmann & Vorderer, 2010) or experiencing suspense due to the unknown outcome of the narrative (Klimmt, Rizzo, Vorderer, Koch, & Fischer, 2009).

Thirdly, many video games allow cooperative or competitive *social interactions* with other players which may also impact enjoyment. For example, players who believe they play against humans (in comparison to a computer) experienced more immersion and enjoyment (Weibel, Wissmath, Habegger, Steiner, & Groner, 2008). Additionally, an important aspect of the attraction of multiplayer online games has been attributed to the possibilities to find new friends (Cole & Griffiths, 2007) or form enduring social groups (i.e., guilds, Williams, Ducheneaut, Yee, & Nickell, 2006).

Finally, a top-down approach has been pursued by scholars who applied general theoretical frameworks from related fields to predict player responses to gaming. For example, some scholars applied the concept of flow from motivational psychology and suggested that games ideally match the difficulties of presented challenges and the player's skill, which results in flow, a highly enjoyable experience (Sherry, 2004). Another prominent theory that has recently been applied to explain video game enjoyment with particular empirical success is self-determination theory (Ryan & Deci, 2000). It posits that humans have three fundamental psychological needs: competence, autonomy, and relatedness. Activities that satisfy these needs result inter alia in intrinsic motivation, interest and—most notable here—enjoyment. Several studies showed that

playing video games can indeed satisfy these three intrinsic needs, which in turn fuels players' experience of enjoyment (Ryan, Rigby, & Przybylski, 2006; Tamborini et al., 2011).

Video Game Entertainment beyond Pleasure

In line with a general “paradigmatic shift” (Vorderer & Reinecke, 2015, p. 448) in entertainment theory, scholars also began to investigate video game entertainment experiences that cannot simply be equated with pleasure or fun. Building on new conceptualizations (i.e., Oliver & Bartsch, 2010; Oliver & Raney, 2011), these works define video game entertainment as the experience of meaning resulting inter alia from the contemplation on existential topics such as life's meaning (Oliver et al., 2016; Rogers, Woolley, Sherrick, Bowman, & Oliver, 2017). Research in this domain is sparse, but also covers the full continuum of top-down and bottom-up approaches. For example, Rogers and colleagues (2017) used open-ended questionnaires to explore game characteristics and gratifications related to the experience of meaning and fun in a video game. Other work linked typical characteristics of games (e.g., interactive stories) and resulting player responses (e.g., identification) to the experience of meaning (Bowman et al., 2016). Finally, a few studies also draw on self-determination theory to explain meaningful video game experiences (e.g., Kümpel & Unkel, 2017; Oliver et al., 2016).

Conclusion and Programmatic Outlook

All in all, the multitude of perspectives and concepts implies that there is no one-approach-fits-all explanation for the experience of enjoyment and meaning resulting from playing video games. State-of-the-art models, thus, acknowledge various mechanisms that can fuel players' experience of entertainment (Klimmt, 2003; Ryan et al., 2006; Tamborini et al., 2011). Moreover, this suggests that a given game can entertain its users through various mechanisms, in particular those games that offer players large degrees of freedom on how to shape their playing experience (e.g., MMORPGs, see Banks, 2015). Therefore, games may best be understood as a sort of “buffet” that offers many different mechanisms to “feed” players entertainment experience.

Nevertheless, various blind spots still exist in video game entertainment research. Although recent works acknowledge that playing games is not only enjoyable but also provides meaningful experiences, scholars have just started to understand the complex constitution and formation of the latter. Additionally, future scholarship may also benefit from identifying and analyzing entertainment effects resulting from unique characteristics of games beyond interactivity, sociality, and storytelling, in particular the aesthetic experience. For example, due to their interactivity, games pose specific demands to the composition of soundtrack music, a topic which has received little attention in video game entertainment research (as an exception, see Zehnder & Lipscomb, 2006). Further, in conjunction with the progress of gaming hardware, developers constantly evolve the graphics of digital games. Thus, with a certain regularity players experience vast game worlds in a never-before-seen quality. This might evoke strong emotions such as awe, which can be theorized to have a strong impact on players' entertainment experience as well (Possler, Klimmt, & Raney, 2018).

In sum, the large and loyal audiences that video games continue to attract can be explained by the medium's powerful capacity to evoke entertainment experiences of vastly different qualities. Players can benefit from diverse kinds of experiences, co-create them through interaction, and combine multiple sources of fun and meaningfulness throughout the course of a given game. These features make playing video games an entertainment experience that is particularly

reliable, durable, and open for personalization. Hence, video games should be seen as one of the most effective entertainment media, and the many episodes of positive or appreciated experience they trigger every day to large numbers of people should be considered an important factor in people's daily lives, for instance, with regard to consequences for recovery and well-being (see Chapter 17 in this volume).

Learning and Persuasion as Intended Effects of Video Games

Communicators of "serious" messages such as educators and agents of social change discovered the potential of entertainment media to achieve their goals long ago. Strategies of so-called "entertainment education" have thus expanded to video games. In the education sector, this is typically referred to as "game-based learning" (Prensky, 2001); in the domain of communication for social change, the term "serious games" is more common (Ritterfeld, Cody, & Vorderer, 2009).

The intended effect of games for learning and for social change is that the entertainment capabilities of video games facilitate a greater likelihood that audiences will select and engage with the serious message, repeat exposure more often, process the message with greater tolerance, elaborate it more intensively during or after exposure, and participate in post-play exchange of the message with other players and non-players (Klimmt, 2009). Because games are often much more fun than "serious" alternatives for content delivery (e.g., brochures, lectures), the intention of communicators is to overcome well-known resistances to learning and attitude change through enjoyable media experiences (Malone, 1981; Moyer-Gusé, 2008).

Around these ideas, theoretical accounts of game-based learning and game effects on social change outcomes have been developed, and empirical research activities have spread in a highly cross-disciplinary environment. Beyond communication and psychology scholars, the entertainment computing community in computer science and other research fields have become involved (e.g., Bellotti, Kapralos, Lee, Moreno-Ger, & Berta, 2013). In the commercial context, advertisers have begun to use games, as well; so, persuasive effects of video games have also been studied in advertising research ("in-game advertising" or "advergames," e.g., Yang, Roskos-Ewoldsen, Dinu, & Arpan, 2006).

Given this diversity of academic stakeholders, a broad array of theoretical accounts of learning and persuasion effects of video games has been proposed (e.g., Ritterfeld et al., 2009, for an overview). Empirical studies typically address the effects of a single game, often as part of an integrated design and evaluation process (e.g., Peng, 2009). For example, Peng, Lee, and Heeter (2010) investigated the effects of playing an online game about a humanitarian crisis in South Sudan on users' willingness to donate, sign a petition, and engage in other activities related to social change. They traced perspective taking with crisis victims as an important mediator of serious game effects (see also Greitemeyer & Osswald, 2010). Likewise, studies on the effects of advertising in games typically find persuasive or memory effects for brands integrated in video games (e.g., Yang et al., 2006). Meta-analytic contributions corroborate these findings: Serious games often have effects on learning and thus can help communicators to achieve their goals of instruction or social change (e.g., Clark, Tanner-Smith, & Killingsworth, 2016; Wouters, van Nimwegen, van Oostendorp, & van der Spek, 2013).

In sum, video games have been found effective beyond the entertainment experience during exposure. Given the many facets of games, numerous theoretical ideas on why such prosocial or advertising effects occur are being discussed, including fundamental processes such as priming and accessibility and more medium-specific mechanisms such as interactivity-based perspective taking. In real-life settings, such video game effects are likely not to make massive differences to

people's attitudes and behaviors, as serious or educational games compete with many other media for audience attention (Sherry, 2002).

Aggression as Unintended Effect of Violent Video Games

As video games emerged as a mass medium of entertainment during the 1980s and 1990s, their appearance on the media landscape (especially among young people) evoked similar responses as had television three decades before. Public concern was quickly raised because some video games displayed drastically violent content. The genre of so-called "shooter" games attracted the most criticism, as they simulate violent action in a realistic fashion and afford the frequent killing of virtual human opponents. Hence, the long public debate over media violence was revitalized due to "violent video games," and today by far the largest segment of published research on video game effects addresses the influence of violent content on player aggression.

Two theoretical frameworks have dominated this research. Similar to previous efforts in the domain of television violence, Bandura's (2001; see also Chapter 7 in this volume) social cognitive theory has been employed to model possible effects of games with violent content on players' aggressive (or antisocial) cognition, affect, and behavior. The key assumptions of social cognitive theory that justify the expectation of increased player aggression as consequence of playing games with violent content are learning of (in the sense of expansion of available behavioral options) and reward from aggression. Because players perceive and enact (realistic) portrayals of violence such as shooting and killing enemy soldiers in video games, they undergo (many) experiences in which they are confronted with aggressive behavioral options and hence "learn" how and when to aggress. Moreover, because most games with violent content reward successful acts of aggression (e.g., victory experiences after killing all enemies in a game episode), a motivational effect is also assumed, as (repeated) observation (or experience) of positive consequences of a target behavior increases the probability of future execution of this behavioral option. Hence, heavy users of video games with violent content are predicted to both know more about antisocial behavior and to be more strongly motivated to execute such behavior.

The second theoretical framework that has frequently been applied to studying the effects of video games with violence content is the General Aggression Model (GAM; Bushman & Anderson, 2002). This model incorporates social cognitive theory, but adds further mechanisms and routes of aggressive behavior and its acquisition established in social psychology. Most importantly, the GAM emphasizes the role of priming and accessibility effects (see Chapter 6 in this volume), as well as of aggression-related cognitions, as a basis of situation-specific behavioral choices. According to the GAM, frequent players of video games with violent content are more likely to have developed fortified aggressive cognitive structures (e.g., a hostile expectation bias, which is the hypothesis that other people are likely to be aggressive and hence should be treated accordingly), have aggression-related behavioral options readily available (salient or "top of mind"), and are thus more likely to rely on aggressive behavioral options, particularly in situations with reduced reflection, mindfulness, and self-control (e.g., heated interpersonal conflict situations).

Media effects research knows two primary designs to test for causal influences of media on their audience: experimental studies that focus on short-term effects and their underlying (psychological) mechanisms, and longitudinal surveys that focus on real-life, long-term media effects among heavy users in particular (see Chapter 1 in this volume). Both designs have been applied in research on the effects of video games with violent content on player aggression.

Numerous experimental studies have been conducted, most of which confronted one group of participants with a violent (or “more violent”) video game and a control group with a non-violent (or “less violent”) video game and assessed some manifestation or precursor of aggression afterwards. Past research often faced the challenge of achieving internal experimental validity because the violent and non-violent games typically differed on multiple dimensions, including difficulty, competitiveness, or general entertainment value, which compromised the attribution of group differences in aggression-related outcome variables to the violent content. More sophisticated studies employed (programmed, exclusive) manipulations of violent content so that players were confronted with one “violent” or one “less violent” episode of the same game, hence ensuring greater levels of internal validity.

A broad array of aggression-related variables have been investigated in experimental studies, most of them adopted from the GAM (e.g., measures of aggressive cognition). A typical example for such work is the experiment reported by Farrar, Krcmar, and Nowak (2006). They manipulated the graphic portrayal of violent action in the combat game *Hitman*, in which players control a character who is a professional killer. Using in-game settings, the researchers systematically varied the intensity of visual displays of violence. Their post-play measure of aggressive outcomes was composed of aggressive affect, verbal aggression, and intentions for physical aggression, all obtained through self-report scales. The experiment returned no differences between players of the less-graphically violent and the more-graphically violent game version in aggressive affect or verbal aggression; however, with regard to intentions for physical aggression, a small effect ($\eta^2 = .02$) appeared. Slightly higher aggressiveness was reported by those players who had been exposed to the more violent game version. These findings converge with many other studies that also find small or no effects (Sherry, 2007).

Nevertheless, meta-analyses and review articles that summarize the many experimental studies on video games with violence content converge towards the conclusion that “there is” an average effect on aggression greater than zero (e.g., Anderson, 2004; Greitemeyer & Mügge, 2014; Sherry, 2004). Substantial debates continue, however, concerning the interpretation of effect sizes and the net effect of consuming video games with violent content (Hilgard, Engelhardt, Bartholow, & Rouder, 2017).

Complementing the experimental approach, longitudinal survey studies have been conducted to investigate whether voluntary, naturally occurring amounts of exposure to violent games is causally influential to aggression-related outcomes. These studies converge toward the conclusion that greater amounts of violent game use increase aggression-related outcomes later in time (e.g., Anderson et al., 2008; Greitemeyer & Sagioglou, 2017; Möller & Krahé, 2009).

While the cumulative evidence for the existence of an “average” effect of playing violent video games on aggression-related outcomes dominates the literature, recent advances in media effects metatheory suggest not to focus on such main effects of a medium, but to identify those audience segments who are particularly vulnerable or susceptible to a media effect (see Chapters 1 and 2 of this volume). As a notable example, the differential susceptibility to media effects model (Valkenburg & Peter, 2013) postulates that person characteristics play an important amplifying or suppressing role in the occurrence of media effects. In other words, video game violence is unlikely to affect all players in the same way or to the same extent. Rather, it is important to find out which player characteristics most likely render a *relevant* increase in aggression-related outcomes. Ten years earlier, Slater had introduced the downward spiral model of media effects that combines selection effects (e.g., more aggressive players are more likely to choose and use violent games for entertainment purposes) and genuine media effects

(e.g., game violence will foster aggression-related outcomes) (Slater, Henry, Swaim, & Anderson, 2003). What is most crucial in this stream of theorizing and longitudinal game effects research is Slater's introduction of person characteristics as a moderating condition of media (video game) violence effects. For example, young people who are suffering from peer victimization are more vulnerable to aggression-promoting effects of media, including violent games (Slater, Henry, Swaim, & Cardador, 2004).

Therefore, contemporary scientific accounts of violent video game effects can be summarized as follows: (1) Accumulated evidence suggests that playing video games with violent content bears a risk of producing higher levels of aggression-related outcomes; (2) however, across the entire player audience, average effects on aggression-related outcomes are small; (3) whereas specific person characteristics (such as peer victimization) increase the susceptibility to aggression-promoting consequences of violent games substantially.

To understand the effect of video game violence on individuals and society, it is therefore not justified to claim a universal contribution of this medium to negative social outcomes. Rather, recent theoretical and empirical advances can help to identify at-risk player types and to tailor effective countermeasures, such as game literacy training (e.g., Webb & Martin, 2012), to the susceptibility factors of these particular player types. Another important aspect that should not be neglected in the public debate over the effects of video game violence is that there is a *demand* for violent media entertainment, particularly among young men (Jansz, 2005), and this developmentally driven demand would certainly not vanish if violent games were to disappear from the market.

Finally, given the massive public controversy over video game violence that had been triggered by high-school shootings—primarily in the United States but also in Germany and other countries—it is important to note that such acts of extreme violence cannot be attributed to an aggression-promotion media effect as the main cause. Conceptual accounts of high-school shootings (e.g., Levin & Madfis, 2009) emphasize perpetrators' psychopathology and dispositional vulnerability to strain experiences from which motivations to enact mass murder arise. Using violent games may be one specific way in which perpetrators try to materialize their fantasies of violence (i.e., a selection effect), but this possibility does not imply a primary causal role of video game violence in motivating perpetrators of mass murder. Public accusations of video games as the main origin of such killings are thus not justified from a scientific point of view.

Miscellaneous Side Effects of Playing Video Games: Stereotyping, Perceptions of Social Reality, and Risk-Taking

The fact that violence is neither the only nor the dominating element of video game content has, interestingly, motivated relatively few other efforts in media effects research. This lack of research is striking because most games carry visual and narrated messages about a broad array of socially relevant topics. Today, only a few (normatively problematic) topics have made their way into public debates over video games, including stereotyped portrayals of women and of ethnic groups. Concerns have been raised that such portrayals may contribute to (young) players' distorted views on social groups or social reality.

Consequently, the most important theoretical paradigm under which research on video game effects on users' perceptions of social reality has been conducted is cultivation (see Chapters 5 and 16 in this volume). Diverse dimensions of gamers' social reality perceptions and stereotypes have been investigated as possible outcomes of video game cultivation, most importantly

probability perceptions of crime (van Mierlo & van den Bulck, 2004) and sexist attitudes against women (Fox & Potocki, 2016). Only a few studies have adopted the perspective of cumulative media effects and traced cultivation processes over weeks or longer periods. Williams (2006) observed an average increase of gamers' probability assumption about robbery incidents by 10% as a consequence of playing *World of Warcraft* for one month. In contrast, Breuer, Kowert, Festl, and Quandt (2015) did not find a cumulative long-term effect of video games on sexist attitudes (as a consequence of learning gender stereotypes from playing) over a two-year period.

Overall, the research evidence for cultivation effects of video games is inconclusive, and theoretical specifications are required to model potential differences between watching pre-produced television content on the one hand and experiencing the interactive, user-co-created content of video games on the other (van Mierlo & van den Bulck, 2004). It is highly plausible that gaming results in perceptions and learning (Poels, Ijsselstein, & de Kort, 2015), yet players may process and interpret such virtual-social experiences in a way that does not necessarily shape their real-life attitudes, for instance, towards crime or social groups.

Outside of the cultivation context, research on gaming side effects other than aggression has been conducted based, again, on priming and social learning approaches. In this primarily social-psychological domain of media effects studies, fortification of sexist stereotypes has been documented (Dill & Thill, 2007). One particularly well-defined side effect has been investigated with regard to racing video games and players' willingness to take risks in real-world driving. The degree of correspondence between the racing game experience and driving a real car is considerably greater than for most other video game genres (e.g., the social portrayal of violence in fighting games is typically not quite as "realistic"). This is a plausible explanation for the fact that research on this specific video game effect has accumulated evidence that playing racing games promotes risky and reckless driving in the real world (e.g., Fischer et al., 2009).

For all media studies on side effects of video games beyond increasing aggression, the same call for more theoretical sophistication must be articulated. Future research on game effects needs to take individual, co-created game experiences into account. If two people play the same game, their experience, even the visuals and narratives that they will encounter, may be extremely different (Klimmt, Vorderer, & Ritterfeld, 2007). In addition, individual differences and state dynamics in interpretations of and involvement with a video game should receive greater attention in theory building and empirical research in order to better understand which players are affected by which kind of game experience and exposure on which outcome dimension.

Conclusions and Outlook: Games, Gamers, and the Playful Society

Up to now, the great majority of research on the effects of video games in communication, psychology, and related fields has addressed *immediate* consequences of gameplay, both in a temporal and a conceptual sense. Why and how do games unfold their potential to entertain players? Why and how do players acquire knowledge, attitudes, and perceptions of social reality from game experiences? Which effects does the massive confrontation with virtual violence cast on combat game players? In these domains, video game research has already achieved remarkable progress:

- Video games cause powerful, sustainable, and reliable entertainment effects that operate through a diverse array of psychological-experiential mechanisms;

- Video games can trigger substantial effects on learning and relevant effects on attitudes (e.g., in social change communication or advertising);
- Video games with violent content have a small average promoting effect on player aggression (that should not be misinterpreted as a reason for a general brutalization of youth) and at-risk player subgroups can be substantially affected over time (“downward spiral,” see Slater et al., 2003);
- Portrayals of social reality in video games seem to have cultivation-like effects on gamers, but theoretical innovation and empirical consolidation is required to substantiate this conclusion.

With regard to programmatic perspectives, many facets of the rise of video games as a mass medium deserve additional scholarly attention in the future: their popularity and audience loyalty, the great (average) time investment of players, the permanent technological evolution (e.g., online gaming, better graphics, virtual reality displays, mobile and location-based gaming), the emergence of gamer lifestyles and subcultures (e.g., eSports leagues, game-based online-TV such as *Twitch*), and, most fundamentally, the growing importance of (multiplayer) gaming as a social activity (Quandt & Kröger, 2013). These developments are blurring the boundaries between video games and other digital media, namely social media, mobile media, and virtual environments (see Chapters 24–26 in this volume). They continue to expand the agenda of video game effects research, both at the level of individual processes and the level of the playful society.

First, if there are so many more episodes in people’s lives in which they generate experiences of entertainment from gaming, what are the consequences for positive media effects such as recovery and well-being (see Chapter 17 in this volume)? By the same token, what (if any) are the negative consequences of having access to entertaining (social, virtual) experiences “on demand” anytime and anywhere? Skeptics may identify permanent video gaming as the next reason for the decline of modern society, as Postman (1985) predicted. Current research on the undesirable effects of a permanently playing society has been addressing tendencies to procrastinate (Reinecke & Hofmann, 2016) and a spread of video game addiction or “internet gaming disorder” (e.g., Brand, Young, Laier, Wölfling, & Potenza, 2016). Long-term perspectives on such motivational consequences of being “always on play” (Vorderer, Hefner, Reinecke, & Klimmt, 2018) are certainly warranted.

While concern over problematic developments is always indicated, we conclude with an optimistic outlook on video games in future societies. Playing video games adds an uncounted number of positive experiences to people’s daily lives and will undoubtedly continue to do so in the future. The benefits of enjoyment, appreciation, and experiences of communion with co-players (among them peers, siblings, parents, grandparents) are making tremendous differences in individual lives, for human development, and for families and society at large (Sutton-Smith, 1997). While research on media effects has already identified important immediate effects of video games—and not all of them are socially desirable—progress in theory and empirical approaches is still required to better understand the complex interactions between gamer and game characteristics (e.g., differential susceptibilities, Valkenburg & Peter, 2013). Only those more complex accounts will be capable of determining the extent of effects on individuals and of identifying those gamers (and games) for whom (and for which) truly relevant desirable or undesirable outcomes must be expected. More elaborate models of video game effects may then also offer better connectivity of video game research to more established lines of theory and

metatheory in media effects research, which remains as an overarching programmatic mission of the field of games research.

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Psychological Effects of Interactive Media Technologies

A Human–Computer Interaction (HCI) Perspective

S. Shyam Sundar and Jeeyun Oh

As media become increasingly indistinguishable from computers and as computing technology underlies most media interfaces, several important shifts have taken place in the relationship between media and their consumers. Thanks to the interactivity of most modern media, audiences have become users, and communication receivers have become communication sources. Today's media experience is much more than receiving and consuming messages. It is also about customizing, curating, creating, and sharing new content. It is about publicly expressing approval and disapproval of content shared by others. It is about transporting us to distant lands and augmenting our experience of mediated reality. It is about interacting seamlessly with ambient media like smart speakers and being driven by recommendations made by artificial intelligent algorithms. All of these possibilities accrue from technological affordances of media interfaces that provide action possibilities for media users, so that they can go beyond simply consuming content and act on the medium as they actively construct meaning and reshape the content.

These shifts mean that traditional approaches to studying media effects by focusing on the effects of media messages on mass, mostly passive, audiences are not sufficient for capturing the complexity of the interactions and outcomes of current, computationally intensive media experiences. As a consequence, scholars have begun to focus more on the technology of the media, emphasizing the effects of affordances (or action possibilities; Gibson, 1979) independent of and in addition to the effects of message content, which is the traditional focus of this area of research (Sundar, 2009). This changed focus has altered the manner in which traditional paradigms like uses and gratifications are applied to the study of newer media, by making room for new uses and new gratifications made possible by the unique affordances of computer-driven media (Rathnayake & Winter, 2018; Sundar & Limperos, 2013).

The focus on uses and effects of technology has put the emphasis on the interface of media devices and applications, leading scholars to take the medium more seriously and examine the interaction between aspects of media interfaces and aspects of user psychology. In doing so,

they have adopted the logic, principles, and methods of human–computer interaction (HCI) to the study of human–media interaction. HCI is an interdisciplinary field that originated in software engineering, and evolved into an area that covers not only computer and information sciences but also cognitive and social-behavioral sciences (Carroll, 2003). Whereas HCI research has focused on solving various design and usability issues largely based on cognitive psychology and computer science in order to ensure a compelling user experience, its theoretical implications for media psychology have not been extensively discussed. Computer systems not only govern how we work, but also affect how we consume media content. As individuals increasingly consume news and entertainment through online systems, the functional distinction between traditional mass media and newer media platforms has blurred. For instance, social media platforms now occupy more than two-thirds of news consumption, and streaming services comprise more than 60% of TV watching among young adults in the US (Pew Research Center, 2017, 2018).

This phenomenon raises a series of important questions regarding how users perceive computer technologies that mediate mass communication, and how different systems and interfaces influence user experience, behavior, and their cognitive and emotional processing of information. Going beyond designing more efficient and useful interfaces, what does HCI research offer the field of media effects? This chapter explores the fast developing, multidisciplinary field of HCI from social-psychological and behavioral perspectives.

User Responses to Media

Communication scholars have found that users respond to computer systems as if they are social beings (Moon, 2000; Reeves & Nass, 1996; Sundar & Nass, 2000). Called “computers are social actors” (CASA), this paradigm argues that because computers are interactive, use human language to communicate, and fill roles traditionally held by humans, users tend to automatically apply rules of human–human interaction that are long established in social psychology. Superficial manipulations, such as using more assertive language (Nass, Moon, Fogg, Reeves, & Dryer, 1995) and labeling the system as specialist or generalist (Koh & Sundar, 2010), have been shown as significant predictors of user perceptions of the system as trustworthy, friendly, and competent.

Users not only project human attributes onto computer systems, but also respond to them in reciprocal ways. Individuals are more polite when evaluating a computer with which they collaborate (Nass, Moon, & Carney, 1999), and apply reciprocity norms by disclosing more to computers that self-disclose (Moon, 2000). These automatic social responses have been explained by social presence theory (Lee, Peng, Jin, & Yan, 2006) and anthropomorphism (Epley, Waytz, & Cacioppo, 2007; Lee, 2010; Sundar, 2004a). Even a simple social remark on a shopping website (e.g., “you are stylish”) (Hassanein & Head, 2007) and the mere presence of a human voice (Wang, Baker, Wagner, & Wakefield, 2007) can successfully induce more positive consumer attitudes due to enhanced social presence. In human–robot interaction (HRI), social presence explains why users display more favorable attitudes toward mismatched or complementary personalities of robots (e.g., extrovert robot for introvert users) (Lee et al., 2006), and why users perceive a robot to be more intelligent and trustworthy when it acts as a caregiver (Kim, Park, & Sundar, 2013).

In the same vein, researchers have shown that perceived anthropomorphism, the tendency to project human motivations and emotions onto nonhuman agents (Epley et al., 2007), is key to predicting positive user responses toward computer systems (Gong, 2008). For instance, Pfeifer

and Bickmore (2011) found that an anthropomorphic character was capable of sustaining user engagement with an exercise-tracking interface over time. As a user characteristic, a tendency to anthropomorphize technology is capable of predicting how loyal individuals are to specific computer terminals (Sundar, 2004a) and how much they are socially influenced by virtual agents or objects (Waytz, Cacioppo, & Epley, 2010).

In sum, the literature in HCI and communication has shown that users have a strong tendency to identify human attributes in computer systems, and respond to them socially rather than as tools. Underlying this response are perceived anthropomorphism and feelings of social presence, both of which positively contribute to user experience and attitudes.

Computers that Motivate and Persuade Users

HCI researchers have pointed out that computers can not only help users achieve their goals, but also motivate and even persuade them to change the way users think and behave. The idea of computers as persuasive technologies, called “captology” (Fogg, Cuellar, & Danielson, 2003), is borne out by research demonstrating that users perceive computers as more credible when they share the qualities of human sources that are deemed persuasive, such as in-group affiliation, similarity, and expertise cues (Moon, 1998; Sundar & Nass, 2000). With the rise of mobile devices and applications that govern our routines, this paradigm of research has become even more relevant.

Computing technologies, especially interactive technologies that are not necessarily designed solely for persuasion but nevertheless contribute to changing our attitudes and behaviors, are considered to be persuasive (Fogg et al., 2003). For instance, interactive visualizations of obesity trends in the US enhanced users’ agreement with obesity prevention policies (Oh, Lim, Copple, & Chadraba, 2018b), and an interactive Q&A tool that mimicked doctor–patient interaction was able to enhance intentions to engage in healthier behaviors (Bellur & Sundar, 2017). The persuasive impact of technologies has been demonstrated in many different areas. For instance, a meta-analysis has shown that interactive devices that monitor user behavior and provide feedback yield desirable changes in diet, physical activity, dental health, and safer sex (Matthews, Win, Oinas-Kukkonen, & Freeman, 2016).

Some theoretical models have attempted to decompose the psychological appeal of interactive and playful interfaces. The *Agency Model of Customization* (Sundar, 2008b) proposed that “self-as-source” is the most crucial psychological factor that predicts positive cognitive and behavioral outcomes of using interactive media. According to the model, contingent interaction with computer systems (e.g., tailored feedback from wearable devices), rich modalities that enable self-presentation (e.g., a 3D avatar that looks like the user), and heightened navigability of the systems (e.g., well-designed search engine) can all contribute to the perception that it is the user who controls the mediated experience. Experimental studies have demonstrated that the perceptions of self-as-source can indeed enhance persuasion. For instance, Hanus and Fox (2017) found that increasing the number of options for customizing one’s own avatar increased perceptions of control, which significantly reduced psychological reactance and enhanced product liking. Kang and Sundar (2016) also showed that customizing a web portal account enhanced user perception of self-as-source, which improved the persuasive impact of health messages presented via the portal site.

Customization is not the only way to induce desirable behavioral changes. Delving into what fundamentally motivates individuals, Sundar, Bellur, and Jia (2012) proposed the *Motivational Technology Model*, which predicts the computer systems that afford greater navigability, interactivity,

and customization can lead to greater intrinsic motivation. The model extends self-determination theory (Ryan & Deci, 2000) which first conceptualized three key factors that enhance voluntary exploration without external regulation: competence, relatedness, and autonomy. In this model, greater navigability is predicted to enhance competence while using computer systems, whereas more provision of user-to-user communication is hypothesized to boost the sense of relatedness. Features allowing users to customize the interface based on their personal tastes are said to contribute to feelings of autonomy. Researchers have found support for this model in the contexts of wearable health devices (Kim, Shin, & Yoon, 2017), online and mobile health tools (Basic, Yadamsuren, Saparova, & Ma, 2013; Bellur & DeVoss, 2018), and social media use (Jung & Sundar, 2016). Kim et al. (2017) showed that health messages on wearable devices induced more positive attitudes if users were allowed to customize the categories of their interests. Intention to use mobile health applications (Bellur & DeVoss, 2018) was also found to be predicted by perceived autonomy and social interaction with other users. Scraping data from a fitness tracking app, Molina and Sundar (2018) found that use of specific app features (e.g., uploading photos and following other users of the app) that elicit competence, relatedness, and autonomy positively predicted workout behaviors, such as the amount of tracked cardio hours and weight lifted. Jung and Sundar (2016) content-analyzed senior citizens' Facebook accounts, and showed that uploading photos, status updates and commenting, and customizing profiles were positively correlated with perceived competence, relatedness, and autonomy, respectively, with competence being a significant predictor of subjective well-being.

In sum, literature on technologies that motivate and persuade users suggests that it is the interactive nature of the medium that boosts the user perception of themselves being the source of change and action, which can lead to desirable changes in users' beliefs and behaviors in many different contexts, ranging from learning and health communication to e-commerce and social media use. Customization, social sharing, content creation, and richer modalities have been found to be effective in inducing positive changes in beliefs as well as behaviors and even subjective well-being.

How Computers Influence Cognitive Processing

Fundamental to the study of the psychological effects of media technologies is the concern over cognitive processing demands imposed on users by new features of interactivity and navigability that require them to go well beyond passive reception of content to active participation in co-construction of content. In many instances, researchers have noticed that interactive interfaces can cognitively burden users, especially if they are not particularly motivated to extensively process the content. Recent studies have found that the presence of diverse ways of accessing content (labeled as *modality interactivity*) decreased the number of message-related thoughts on an anti-smoking website among college students, most of whom were nonsmokers (Oh & Sundar, 2015). Similarly, Kang and Sundar (2016) reported a negative effect of customization on message-related thoughts.

Cognitive load theory (Oviatt, 2006) and the limited capacity model (Lang, 2000) have often been invoked to explain this negative effect of interactive systems. It appears that the finite amount of available cognitive resources prevents users from extensively processing mediated information in interactive systems while also attending to the many opportunities for interactivity afforded by them. Considering that users' attention is divided between exerting control over the interactive system and processing incoming information at the same time, those who would

need to allocate more resources to understand information can be especially negatively affected (Lee & Kim, 2016).

Perhaps the most relevant area of research regarding the negative cognitive impact of an interactive system is how smartphones influence our cognitive processing. With its great usability and constant connectivity, smartphones have significantly changed the way we receive and process media content (Sundar, Cho, & Wang, 2018). In addition to their well-known, fatal impact on distracted driving, their negative effects on attention and memory have been popular topics for media researchers. Experimental studies have found that the mere presence of one's smartphone significantly reduces available cognitive resources (Thornton, Faires, Robbins, & Rollins, 2014). In self-reported data, heavy usage of smartphones is correlated with less self-regulated learning (Lee, Chang, Lin, & Cheng, 2014), poor academic performance and memory (Mendoza, Pody, Lee, Kim, & McDonough, 2018), and poorer analytical and effortful thinking when given reasoning problems (Barr, Pennycook, Stolz, & Fugelsang, 2015).

The impact of interactive media on cognitive processing is particularly acute because of the reception context, which increasingly involves multitasking. Studies have pointed out that multitasking reduces learning and cognitive performance. For instance, second-screen viewing while watching TV news decreases news learning, regardless of thematic relevance of the second-screen content (Van Cauwenberge, Schaap, & Van Roy, 2014). Baumgartner, van der Schuur, Lemmens, and te Poel (2017) identified a causal path from multitasking to attention problems across two three-wave longitudinal studies among early adolescents between 11 and 13 years old. It appears that multitasking cannot be made more effective with practice; in fact, heavy multitaskers perform worse in task-switching, due to their relative inability to filter out irrelevant stimuli (Ophir, Nass, & Wagner, 2009). Researchers also found that multi-communicating (i.e., using smartphones during face-to-face communication) is positively associated with addictive mobile phone usage and attention deficit hyperactivity disorder (ADHD) symptoms (Seo, Kim, & David, 2015).

Although cognitive load theory and the limited capacity model suggest that interactive media can exhaust cognitive resources that otherwise could have been spent on retaining information, a closer look at the effects of interactivity on various aspects of information recall suggests another explanation. Xu and Sundar (2016) examined whether the cognitive burden from interactive features decreases cognitive processing, and found out that it was only the non-interactive part of the website that suffered from the increased cognitive load associated with interactivity. Sreejesh and Anusree (2017) also reported that interactivity in manipulating brand information enhanced brand memory, suggesting that user attention and memory are biased toward interactive regions of the interface. In other words, the sheer presence of interactivity does not necessarily deteriorate information processing; in fact, interactive tools seemed to draw users to pay closer attention to content located in their vicinity.

Cognitive overload is an unintended effect of interactive features, which are primarily designed to enhance user experience. These features can also positively affect user perception of the system and its content. In order to explain how users adopt and develop cognitive strategies to quickly evaluate media interface and content, scholars have adopted dual process theories such as the Elaboration Likelihood Model (ELM, Petty & Cacioppo, 1986) and the Heuristic-Systematic Model (HSM, Chaiken, 1987). Often, interactive interfaces provide various heuristic cues that aid quick user evaluation of media content, decreasing the amount of cognitive elaboration. For instance, compared to other search engine websites, Google's interface minimizes decorative design and promotes its automatic algorithm that retrieves objective search results.

Sundar (2008a) labeled this *machine heuristic*, a mental shortcut by which users evaluate machine-driven media content as more objective and credible than content delivered by humans. Following the prediction of ELM, the mere presence of interactive features has been shown to affect low-involvement users' attitudes, whereas high-involvement users' attitudes depended on whether they could actually use the interactive features (Liu & Shrum, 2009).

The Modality-Agency-Interactivity-Navigability (MAIN) model (Sundar, 2008a) formally specifies how the various features and action possibilities embedded in digital media interfaces lead to different heuristics, which influence user perception of content credibility. Whereas ELM and HSM attribute user involvement and processing motivation as the cause of heuristics, the MAIN model focuses on interface cues that trigger specific heuristics and conceptualizes technological affordances as governing the nature of heuristics invoked when making judgments. An affordance can cue a heuristic in two distinct ways: (1) by its sheer presence on the interface (e.g., presence of multiple menus on a website may trigger the choice heuristic, that more choice is good); and (2) by displaying metrics about prior use of the affordance (e.g., the number of visitors to the website may trigger the bandwagon heuristic, suggesting greater popularity). Newer modalities such as a 3D carousel on the website can encourage positive content perception by evoking the *novelty heuristic*, whereas agency affordances such as a human-like chatbot can induce the *social presence heuristic*. The model goes beyond influencing user perceptions of the interface and predicts that heuristics triggered by interface cues can also shape user perceptions of the quality and credibility of sources and content delivered by the interfaces. Kim and Sundar (2016) found that video modality triggered the *realism heuristic* (seeing is believing), which was associated with greater trust in video ads compared to text ads on a smartphone. Sundar and Limperos (2013) took the MAIN model a step further and claimed that the cognitive heuristics triggered by the four sets of technological affordances constitute new and distinctive gratifications (such as realism, being there, agency-enhancement, community-building, responsiveness, and play) that users have come to expect from digital media. Rathnayake and Winter (2018) applied these new gratifications to social media and validated a new set of scales for measuring user motivations for engaging with social technologies. In sum, the affordances of media interfaces carry important psychological meanings that underlie the nature and volume of user engagement with interactive media.

How Interactive Systems Enhance User Engagement

User engagement is the ultimate outcome variable in HCI research, both in industry and academia. A study of how and why users engage with different aspects of an interface in an industry setting can help assess the success of design efforts and also inform the design of new systems. Online media companies like Google and Facebook routinely use "engagement ads" and "engagement metrics" to track how users respond to various types of content posted on these platforms. In academic research, studying user engagement with media affordances can provide a window into human psychology, particularly the effects of particular features of the medium on user interactions with the interface, their engagement with media content, and consequent effects on their attitudes and behaviors.

The emerging literature on user engagement has identified a variety of system design elements that nurture greater cognitive processing. Several studies have shown that interactive systems not only trigger cognitive heuristics that affect users' evaluation of mediated content, but also promote deeper engagement with media content. User engagement has long been defined

as a positive psychological state in which user attention is completely focused on stimulus and sustained throughout the given task (O'Brien & McKay, 2018). Not only content characteristics (e.g., a compelling narrative that evokes identification) but also interface characteristics, such as system novelty, interface aesthetics, and usability, have been identified as key antecedents of greater user engagement. For instance, Sundar, Bellur, Oh, Xu, and Jia (2014) found that the interaction techniques that are more natural and intuitive for viewing content (e.g., a slider to view a historical timeline) aided user engagement with content, which positively predicted user evaluation of the website. Oh et al. (2018a) also demonstrated that user engagement is a sequential process in which the user is first attracted by a high-quality, usable interface, before going into a deeper stage of absorption with the mediated content.

Presence theory (Biocca, 1997; Lombard & Jones, 2015) and flow theory (Csikszentmihalyi, 1975) have provided useful background to explain why interactivity of the medium can lead to greater attention to the task or mediated content. Greater user control over how to browse and view online products can lead to greater telepresence (e.g., sense of actually experiencing the product), which is associated with more positive attitudes toward the shopping website and greater purchase intention (e.g., Coyle & Thorson, 2001). In the context of immersive journalism, Sundar, Kang, and Oprean (2017) showed that feelings of presence while watching 360-degree videos can also function as a heuristic cue that enhances empathy and sharing intentions. Similarly, flow, the psychological state where the user is so attentive to the experience that nothing else seems to matter (Csikszentmihalyi, 1975), is associated with prompt responses from computer systems (Novak, Hoffman, & Yung, 2000) and mediates the perceived interactivity of e-learning systems on usage intention (Rodríguez-Ardura & Meseguer-Artola, 2016).

While telepresence and flow can predict user engagement, scholars have also pointed out that a heightened level of user engagement can be achieved when the mediated content is relevant to the user's needs. System responsiveness to user needs in the form of contingency of computer systems, the degree to which the system addresses the user's cumulative input, has proven to be quite effective. Sundar, Bellur, Oh, Jia, and Kim (2016) showed that full search history on a movie search website could increase user engagement as much as a human chat agent who aided decision-making, due to the increased perception of contingency. Similarly, Bellur and Sundar (2017) also identified the mediating role of perceived contingency on users' attitudes toward an interactive Q&A health information tool that comprehensively took into account all previous conversations.

Theoretically, user engagement is associated with actions undertaken by users in an effort to take full advantage of the affordances of the medium. The aforementioned contingency in user-system interactions is made possible by interface affordances that allow for threaded exchanges between the user and the system. This kind of interactivity affordance is labeled "message interactivity" by Sundar (2007) and contrasted with "modality interactivity" (different interface actions, such as swiping, tapping, and zooming) and "source interactivity" (actions that allow users to create or gatekeep content). Whereas message interactivity engages users by providing heightened contingency, modality interactivity does so by increasing the user's "perceptual bandwidth" and source interactivity by allowing them to customize and express themselves. These three processes are modeled by the theory of interactive media effects (TIME) as belonging to the "action route," because they require user action to predict user engagement with media interface and media content (Sundar, Jia, Waddell, & Huang, 2015). This route is more effortful and involves active input by users compared to the "cue route," which is based on perceptions arising from heuristics triggered by affordances without any user action or engagement, as described earlier in the context of the MAIN model (Sundar, 2008a).

In sum, user engagement in HCI has shown strong predictive validity for various user attitudes and behaviors in health, e-commerce, journalism, and learning contexts. Computer systems can enhance user engagement by providing greater interactivity. An interactive interface can be perceived as easier, and more natural and intuitive to complete tasks, and this positive interface assessment is associated with deeper engagement with mediated content. In addition, when users are able to control the way they access information, it can create more immersive experiences such as flow or telepresence. Further, contingent responses from systems can heighten the potential of interactivity by providing more relevant communication. More generally, as proposed by the action route of TIME (Sundar et al., 2015), active use of interface features to perform communication tasks, be it simply browsing online content, actually creating it, or sharing a message, can enhance user engagement through such mediators as perceived contingency, sense of agency, and self-determination. Together, this affordance-driven engagement is expected to moderate the effects of media content on users' knowledge, attitudes, and behaviors.

Controversies and Challenges

Early HCI research adopted an object-centered approach, focusing on the interaction between entire computer systems as objects and the user. Studies based on the CASA paradigm and cap-tology revealed how computer systems can be perceived as credible as human beings, and how they motivate and change our behaviors. However, the paradigm has also left unanswered questions about which aspects of computer systems are psychologically relevant in explaining the positive or negative effects found, and how we can manipulate and design such aspects. This is analogous to a growing sophistication in message-effects research: While early media-effects research, based on agenda-setting and cultivation theories, tended to be indiscriminate about messages, the bulk of recent research has focused on specific message attributes having specific psychological effects.

Sundar (2009) articulated how this logic of message-effects research can be applied also to the study of the effects of the medium, by invoking the variable-centered approach proposed by Nass and Mason (1990). Several studies operationalizing media affordances such as modality and interactivity have successfully examined their psychological effects in a variety of domains (e.g., Hanus & Fox, 2017; Oh & Sundar, 2015; Wang & Sundar, 2018). Yet, there remains a tension in the field, as effects of a medium tend to be attributed to the device or platform as a whole rather than to its specific features or affordances. When policy-makers and parents worry about the psychological effects of over-using certain media technologies, they are concerned at the level of smartphone and Facebook use, as they do not have the vocabulary to think in terms of specific affordances of the medium. Converging evidence from several streams of research in a number of disciplines suggests that the effects of media technology are far too nuanced to be attributable to an entire device or platform. For example, some studies have shown that Facebook use is negatively associated with self-esteem whereas others show a positive association. Therefore, it is not useful to attribute media effects to an entire platform. Instead, the focus ought to be on how one uses Facebook—lurking is negatively associated, whereas posting is positively associated with self-esteem and other desirable psychological effects. Actions like lurking and posting signal distinct affordances, a study of which constitutes the current state-of-the art approach in HCI.

HCI research informs media effects scholarship by delineating how the technology of the medium, particularly the designs of systems and their interfaces as well as the interaction between the user and medium, can profoundly change the way users perceive mediated content. One of the ongoing conceptual debates in this area has been the definition and role of technological affordances. Ever since the term was coined by Gibson (1979), HCI scholars have used it to describe action possibilities suggested by the design and engineering of an object (Norman, 1988). For instance, social media sites provide high information *visibility* for users to easily locate their friends. Whereas the degree of visibility can depend on user perception, it also exists as a feature of the media technology (e.g., user profile, tagging, messaging, commenting). Recently, scholars seem to agree that affordances should include both perceived or actual action possibilities constrained by the potential of technologies as well as the user's needs (Rice et al., 2017). Whereas structural features are static once they are designed, affordances refer to the dynamic relational link among the object, users, and the outcome of action possibilities (Evans, Pearce, Vitak, & Treem, 2016).

A key affordance of modern media is *interactivity*, which has been explicated as a multi-dimensional concept that includes two-way communication between the user and system, user control, and synchronicity (e.g., Liu, 2003; Voorveld, Neijens, & Smit, 2011; Wu, 2005). In fact, scholars have debated over the relationship between actual interactivity as a structural feature and perceived interactivity that depends upon user perception and needs (Bucy, 2004; Sundar, 2004b). Whereas perceived interactivity has stronger empirical relationships with user attitudes and behaviors than does interactivity manipulated as a structural feature (Thorson & Rodgers, 2006; Yang & Shen, in press), scholars have also pointed out the tautology of such relationships by suggesting that perceived interactivity is a kind of attitude (Sundar, 2004b) and called for operationalizing interactivity as an interface feature so that we can assess the direct effect of the technology of the medium and thereby inform the design of future interactive media.

A key challenge in working with interactivity and other affordances of modern media is the considerable variability in how users engage with the medium and its contents, which can lead to methodological complications. To begin with, experimental comparisons between conditions that study the differential provision of affordances will be confounded by content differences because study participants not only engage differently with the affordances but also are exposed to different content that they help co-create. This issue can be addressed somewhat with the help of log data and tools for mining and scraping interactively generated content *post facto*. A more vexing issue however is that, within an experimental condition featuring a particular affordance, not all participants will engage the affordances in the same way, thus violating random assignment. For example, an experiment comparing the differences in experiencing a YouTube video with or without the commenting affordance cannot guarantee that every participant who is provided the affordance will in fact act on it and post a comment, thus forcing researchers to consider the data of only those who did, thereby allowing self-selection to interfere with random assignment and undermining the study's ability to show causation. One potential solution is to model the causes of self-selection (i.e., potential individual differences) as moderators, the interface feature (the commenting function in this example) as the independent variable and realization of the affordance as an intermediate outcome (mediating variable), upon which the psychological outcomes would be predicated. Studies have shown that certain individual differences related to technology use can be particularly useful in predicting realization of affordances. For example, the extent to which one is a "power user" of information technology (i.e., possessing expertise, experience, and efficacy) can determine how they act upon

interface features. Sundar and Marathe (2010) discovered that power users preferred customization (or user tailoring) over personalization (or system tailoring), whereas non-power users showed the opposite preference, thus revealing a transverse interaction effect between a technological affordance and an individual-difference variable in predicting user engagement with the affordance. Going forward, it would be important to model such individual differences as moderators in order to fully account for the effects of technological affordances on psychological outcomes of interest.

Directions for Future Research

The rapid development of new media technologies provides fertile ground for testing the generalizability of previous findings in HCI research, by examining newer interfaces and interaction techniques. They offer new ways of testing theoretical mechanisms by which computer systems motivate and persuade users. For instance, swiping on a mobile screen exerts a different psychological effect on user engagement than does tapping (Dou & Sundar, 2016), and different ranges of thumb movement for controlling mobile interfaces yields different outcomes (Shin, Choi, Kim, & Lee, 2016). Whether a haptic interface can imbue users with stronger positive emotions (Chung, Kramer, & Wong, 2018) and a greater sense of agency can offer meaningful extensions to the agency model of customization (Sundar, 2008b).

Whereas mobile media and haptic interface have been a popular setting to apply the persuasive technology paradigm (e.g., studies on how fitness trackers motivate users to maintain healthy lifestyles), not many studies have identified which aspects of the mobile systems can predict users' beliefs and behaviors. Moving beyond this object-centered approach, future studies can adopt the variable-centered approach (Sundar, 2009) and investigate the persuasive impact of different affordances. For instance, the positive effect of social sharing on exercise observed in previous research (e.g., Chen & Pu, 2014; Zhu, Dailey, Kreitzberg, & Bernhardt, 2017) can be more rigorously examined by measuring or manipulating perceived relatedness that the specific feature affords, based on the motivational technology model (Sundar et al., 2012).

The perceived humanness of computer systems has the potential to change the way users respond and think. Artificial intelligence is now embedded in many different media devices, such as Siri on iPhones, smart speakers, and robotic home appliances. How these embodied agents influence user psychology and how we can leverage their potential to further advance the field of media effects are promising lines of inquiry. Future research can be guided by the established theories and frameworks in HCI discussed in this chapter. For instance, according to the CASA paradigm, users may identify human attributes in newer digital devices even if they do not possess any human-like features. Or, as interactivity and user engagement literature suggest, heightened interactivity of smart devices may cognitively engage users, leading to greater persuasion. In support of this proposition, emergent findings suggest that vacuum cleaning robots induce unconscious empathetic brain reactions from users even without any explicit human-like features (Hoenen, Lübke, & Pause, 2016), and back-and-forth interactions with a smart speaker enhances users' memory for advertisements (Kim, Park, Park, Ju, & Ahn, 2018).

As computer systems become smarter, or as algorithms become more sophisticated, they can proactively detect our taste, preference, emotion, and lifestyles. Online recommendation systems predict the next TV show that the user would like, and social media platforms analyze users' browsing data in real time to display more relevant information. Even our casual finger strokes on mobile screens can reveal whether we are in a positive or negative mood (Shah, Teja, &

Bhattacharya, 2015). All of this information can be used to better tailor messages delivered via newer media technologies and assist us to make more data-driven decisions. Future media-effects research should analyze how personalized media content by artificial intelligence is cognitively and emotionally processed and explain its impact on our psychology and behavior. It should also address how the increasingly intelligent media pose threats to human agency and what interface solutions and affordances are necessary for providing greater user control, as we leverage their strengths to create better media and life experiences.

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24

Social Media

Jesse Fox and Bree McEwan

Although the term *social media* was not commonly adopted until the 2000s, masspersonal communication channels have existed since the advent of networked digital communication. Many outlets have emerged for people to interact online, including bulletin board systems (BBSs), newsgroups, multi-user dungeons (MUDs), social networking sites, and massively multiplayer online games.

Given the impossibility of representing the entire scope of social media research in one chapter, we focus largely on research representing notable distinctions from other computer-mediated communication (CMC) research due to affordances. *Affordances* are inherent functional attributes of an object that emerge when a user interacts with it (Gibson, 1979). Recent work has specified important social media affordances (Rice et al., 2017; Treem & Leonardi, 2013) and clarified differences in perceptions of affordances across social media and other channels (Fox & McEwan, 2017).

This review will first discuss conceptualizing social media. Next, we identify notable affordances and elaborate popular types and uses of social media. Then we review focal research areas. After identifying limitations of extant research and providing goals for scholarship, we conclude by considering the future of social media.

Conceptualizing Social Media

One of the greatest challenges in reviewing research on social media is establishing scope and boundary conditions, given a long history of loose conceptualizations. As Web 2.0 development exploded, companies and popular media were quick to label any internet-based technologies facilitating interpersonal interaction as “social media.” Although such a broad conceptualization offered limited utility to scholars, definitions emerging in the concurrent research literature were rarely any clearer (see Carr & Hayes, 2015, for a review).

One issue is that scholars have often derived conceptualizations from currently popular technologies (Carr & Hayes, 2015). Further, they may be based on dominant user practices reflecting a relatively homogeneous group of users, particularly in early phases of a technology’s diffusion and adoption. One example is the concept of social networking sites (SNSs), a subset of social media defined by Donath and boyd (2004) as “online environments in which people

create a self-descriptive profile and then make links to other people they know on the site, creating a network of personal connections” (p. 12). boyd and Ellison (2007) later rejected the term “social networking site” in favor of “social network site,” based on data indicating people’s Facebook networks reflected existing offline networks and forging new relationships was not a primary goal (Ellison, Steinfield, & Lampe, 2007). Beer (2008) cautioned against rebranding, but scholars widely adopted the modified term even though contemporaneous research found SNSs were commonly used to expand networks (e.g., Grasmuck, Martin, & Zhao, 2009).

As this example illustrates, technology researchers face an ongoing struggle: Sound scholarship demands consistent, clear, and valid conceptualizations, yet scholars examining rapidly evolving technologies must aim at blurry, constantly moving targets. Scholars are not fortune tellers, yet they must attempt to both encompass the current state of a technology and predict how it may evolve in the future. Otherwise, conceptualizations constantly shift and related theorizing is tenuous at best; irrelevance and obsolescence is a perpetual threat.

Carr and Hayes (2015) made an admirable attempt to synthesize definitions and establish parameters, defining *social media* as “internet-based, disentrained, and persistent channels of masspersonal communication facilitating perceptions of interactions among users, deriving value primarily from user-generated content” (p. 49). They further clarified that social media “allow users to opportunistically interact and selectively self-present, either in real-time or asynchronously” (p. 50). This definition presents some strengths in conceptualization, such as defining social media as *masspersonal*, meaning they have the capacity to deliver personalized messages to a broad audience (O’Sullivan & Carr, 2018). However, other elements of this definition present some unclear constraints such as how the value of user-generated content is established and whether social media require interactions between *human* users.

Given the ambiguity, we have not adopted a specific definition of the term *social media* for this review. Rather, we adopt an affordance-based approach to delineate what will be considered social media. Although Carr and Hayes (2015) critiqued affordance-based conceptualizations of social media, the definitions they provide explicitly cite affordances (synchronicity and channel persistence, related to accessibility) and imply others (disentrainment indicates conversational control, whereas selective self-presentation suggests editability). Further, a recent conceptualization of masspersonal communication is founded on affordances (O’Sullivan & Carr, 2018).

Universal Affordances of Social Media

Specific affordances are required to differentiate social media from other channels: interactivity, accessibility, visibility, and personalization. Social media provide at least two layers of *interactivity*: interacting with a responsive mediated system and interacting socially with other users (Sundar, 2007). Users must be able to manipulate a responsive interface and generate some form of socially relevant content. Further, this system must facilitate interactivity among users through some modality, such as exchanging text-based messages or images, speaking through an audio channel, or communicating via avatars. Users may also generate system cues, such as page views or aggregated “likes,” that communicate information to other users (Walther & Jang, 2012). Thus, social media often provide multiple ways of achieving social interactivity through both user-generated and system-generated content.

Another key affordance is *accessibility*, or the capability of using a channel regardless of time, place, structural limitations, or other constraints (Culnan & Markus, 1987; Fox & McEwan, 2017). Social media maintain a certain level of accessibility due to their continual availability, as sites

continue to function regardless of any individual user's participation (Carr & Hayes, 2015). It should be noted that digital divides based on factors such as age, socioeconomic status, and education still exist with regard to internet access and social media adoption (e.g., Hargittai, 2018).

Given their masspersonal nature, social media must also enable *visibility* of social interactions to a wide audience (Treem & Leonardi, 2013), which may or may not align with the imagined audience users anticipate when posting (Marwick & boyd, 2011). Many platforms offer privacy settings to allow users some control over who can see their content. Because digital content is transmitted and replicated easily, however, a message can be spread through shares, reposts, and retweets to a wide, sometimes unintended, audience with little effort. Because of this *scalability*, messages can become viral, meaning they are widely dispersed by users across vast audiences, sometimes reaching millions of users almost instantly (Marwick & Lewis, 2017).

Despite the potentially broad audience, another requisite affordance of social media as a masspersonal channel is that users can *personalize* messages (O'Sullivan & Carr, 2018). Users can tailor their message or direct it to a smaller segment of the audience.

Aside from these universal affordances, other affordances vary considerably across social media and are used to distinguish different types or explain discrepancies in uses or effects. Articulating these affordances allows scholars to perform a nuanced evaluation of social media, distinguish them from other communication channels, and inform theorizing.

Other Social Media Affordances

Perhaps the most commonly examined affordance is *anonymity* or *identifiability*, the degree to which users' real names or true identities can be concealed in a channel (Lea & Spears, 1991). Anonymity has been central to theorizing on online disinhibition, in which people engage in less socially normative behavior online (e.g., the social identity model of deindividuation effects, Lea & Spears, 1991). Even if users try to maintain anonymity, they often leak cues to their identity through profile information, network members, geolocated content, or "likes" (see Shu, Wang, Tang, Zafarani, & Liu, 2017, for a review).

Some affordances shape how interactions transpire via social media. Sites vary in *synchronicity*, or the timing of message exchange (Culnan & Markus, 1987). *Conversational control* involves managing the mechanics of an interaction, such as regulating turn-taking or ending a dialogue (Fox & McEwan, 2017). For example, a system may limit how many times a user can respond to a post, or users may be able to "mute" or "block" others' comments.

Other affordances determine the nature of messages and content. *Bandwidth* is the scope of verbal and nonverbal cues that can be conveyed through various modalities, such as text, graphics, audio, or video (Walther & Parks, 2002). Limited bandwidth and asynchronicity facilitate *editability*, or the capacity to revise messages (Walther, 1996). The digital materiality of social media messages affords easy modification. This materiality also makes messages easily replicated and transmitted, facilitating the *persistence* of messages (Treem & Leonardi, 2013). Although users may be able to delete messages, these can also be shared, downloaded, or stored, and so may remain long after the original transmission.

Finally, *network association* enables users to visibly link to other users, creating a traceable network of connections. Through common nodes or "friends," users can identify other network members and often access their content (boyd & Ellison, 2007; Treem & Leonardi, 2013), creating networks of strong, weak, and latent ties (Haythornthwaite, 2005). Network association

facilitates context collapse, which is experienced when social circles normally maintained separately (such as a person's co-workers, their former classmates, and their extended family) are blended in a shared environment (Marwick & boyd, 2011).

Types and Uses of Social Media

Several types of social media have emerged, although individual platforms or groups may fall into multiple categories. The primary functions of social media are interacting with others and sharing information; other uses and gratifications vary across sites (McEwan, 2015). Some of the earliest social media research focused on bulletin board systems, online forums, and online communities (e.g., Jones, 1995; Rheingold, 1993; Wellman & Hampton, 1999). Discussion forums may be organized around topics (e.g., Reddit, 4chan) or specific content (e.g., comment sections on news articles). Some forums may be considered online communities, which are characterized by aggregates of individuals who share a common feature or interest (McEwan, 2015). Online community members engage in social goals such as forming relationships, building a collective culture, and creating, negotiating, and sharing group norms (Baym, 2010).

Among the most common social media are SNSs such as Facebook, Twitter, Instagram, and LinkedIn, preceded by sites such as Friendster, MySpace, Hyves, and Orkut. SNSs are characterized by the abilities to create a profile, link to other users, and observe how other users are connected within the broader network via the affordance of network association (boyd & Ellison, 2007). Thus, establishing social connections, maintaining relationships, and building networks are common uses of SNSs.

Some social media are characterized by richer environments and tasks beyond socializing and exchanging information. Social virtual worlds (e.g., Second Life, VRChat), open sandbox platforms (e.g., Roblox), and massively multiplayer online games (e.g., *Fortnite*) typically enable richer forms of self-representation such as customizable avatars (Yee, 2014) and near synchronous communication via text chat, voice chat, or avatar interactions. Given their diversity of tasks, other common uses for these sites include collaboration, competition, achievement, discovery, role-playing, and escapism (Yee, 2014).

Content-based social media sites often constitute *participatory cultures*, as these sites are designed primarily to share, consume, and interact with material created or curated by the user (e.g., Pinterest, Tumblr, YouTube, Twitch, blogging communities, wikis; Jenkins, 2006). Other types of social media are distinguished by affordances, such as locative social media designed to track and report users' movements to other users (e.g., FourSquare, Dodgeball; Humphreys, 2007) and anonymous sites designed to elicit disinhibited disclosures (e.g., Whisper, Yik Yak, Formspring). Other types of social media are likely to emerge with future technologies.

Areas of Social Media Research and Theorizing

Social media can influence human communication processes in three ways. First, social media may simply *accommodate* the manifestation of communication phenomena without changing the communication process. Existing theories do not require additional clarification because the channel does not have a notable impact. For example, Carpenter and Spottswood (2013) observed that self-expansion effects previously studied in offline interactions between romantic partners can also occur via Facebook. Second, social media may *amplify* observed communication processes by expediting, expanding, or enhancing phenomena compared to other channels.

For example, social media allow activists to organize collective action more efficiently than other channels (Tufecki, 2017). Regarding amplification, existing theories may increase their explanatory power by assessing relevant social media affordances, but they do not require major revisions. Finally, social media may *alter* communication processes in fundamentally different ways. For example, according to social penetration theory, if two strangers meet face-to-face, they would have to engage in ongoing self-disclosure to get to know each other. On an SNS like Facebook, however, they may have access to considerable information about each other in terms of breadth (tastes, friends, opinions) and possibly depth, perhaps without ever interacting. When social media alter processes, theories must be revised or new theories must be developed. In this review, we will largely focus on research examining amplification and alteration via social media.

Self-Presentation, Impression Management, and Identity Performance

Social media have altered how identities are performed online, but sites are not equivalent in their effects on identity performance. Affordances like asynchronicity and editability enable users to engage in selective self-presentation and more diligent impression management (Walther, 1996). Anonymous spaces can grant more flexibility in the identities people can present (McEwan, 2015; Turkle, 1984). These affordances are valuable for people who experience marginalization offline (McKenna & Bargh, 1998). Yet, network association can complicate identity performance; due to context collapse, members of one social audience segment may see identity performances meant for another audience (Marwick & boyd, 2011).

McEwan (2015) proposed considering social media spaces along a fixed–flexible continuum contingent on the access of particular types of network members. Fixedness or flexibility is based on varying degrees of corporality, anonymity, and persistence. *Flexible* spaces are divorced from stable connections between network members, including a separation from one’s online communication and a corporeal self (i.e., unanchored relationships). Within these spaces participants can engage in identity experimentation (e.g., Livingstone, 2008; Valkenberg, Schouten, & Peter, 2005) or even present as multiple identities (Turtle, 1984). Within *fixed* network spaces, users’ performed identities must be coherent and consistent for at least one potential social audience and often for multiple audience contexts (e.g., Stutzman, Gross, & Acquisti, 2013). People may manage fixidity by maintaining different profiles with different audiences. Alternatively, they may attempt to present an identity appropriate for multiple audience segments (Hogan, 2010).

Fixidity is also influenced by visible feedback offered by other users. According to warranting theory, because online self-presentation can be more easily manipulated by the source, users seek out and evaluate cues to assess the veracity of this self-presentation (Walther & Parks, 2002). The less a cue can be manipulated by the source, the more value and weight it has to the user (DeAndrea, 2014). On social media, people trust friends’ comments about a person more than the person’s self-presentation (Walther, Van Der Heide, Hamel, & Shulman, 2009). In this way, identity performance is constrained by affordances and audience members.

Disclosure and Privacy

Self-disclosure and privacy have been a popular focus for social media research (Stoycheff, Liu, Wibowo, & Nanni, 2017). Several concepts have been clarified through research focused on

social media, such as context collapse, the imagined audience, and the privacy paradox, which describes the inconsistency between users' privacy concerns and their behaviors (Barnes, 2006; Marwick & boyd, 2011). The masspersonal nature of social media further complicates privacy management and what is perceived as acceptable self-disclosure.

To examine this, Bazarova (2012) adopted a disclosure personalism framework to examine perceptions of intimate and nonintimate messages shared on Facebook. Comparing masspersonal, public Facebook posts, and private interpersonal Facebook messaging, Bazarova found people judged senders and their intimate disclosures more negatively in masspersonal contexts. Examining senders, Bazarova and Choi (2014) extended existing theorizing to a functional model of SNS disclosure, which argues senders' impression management concerns are amplified by SNS affordances such as visibility and personalization.

Relationship Development and Maintenance

Within existing relationships, a social media site may become an additional channel through which to communicate, contributing to *media multiplexity* (Haythornthwaite, 2005). Social media may also facilitate new relationships (Parks & Floyd, 1996; Utz, 2000). Some sites enable people to connect over shared interests or content, which can minimize factors that may have prevented a relationship from developing otherwise, such as geographical distance or demographic dissimilarities (Baym, 2010; McKenna & Bargh, 1998; Parks & Floyd, 1996). In addition to social interaction, users may engage in shared tasks (e.g., game activities, content moderation) to maintain relationships (Baym, 2010; Ledbetter & Kuznekoff, 2012; Yee, 2014).

SNSs have been a major focus for relational maintenance research. SNSs greatly increase the number of weak ties maintained by users (Donath & boyd, 2004) and can help solidify emerging relationships (Ellison et al., 2007). The SNS affordance of network association may also help people maintain not just direct connections, but also connections between those whom we see connected to our connections (Ellison, Vitak, Gray, & Lampe, 2014).

People can use SNSs to enact traditional maintenance strategies (Bryant & Marmo, 2009), as well as site-specific strategies (e.g., McEwan, Fletcher, Eden, & Sumner, 2014). For example, messages directed to specific others indicating social contact and relational assurances are correlated with satisfaction, liking, and commitment in friendships. Yet, messages seeking comfort from a general audience are negatively related to these outcomes (McEwan, 2013).

Social Capital, Social Resources, and Social Support

Social capital refers to the value imbued within an individual due to their representation of other, potentially powerful, network connections (Bourdieu, 1986). *Bonding social capital* is associated with close network relationships, and *bridging social capital* is produced through the accumulation of weaker ties. Maintained social capital can sometimes be converted into resources. Through building capital-rich networks, social media users may later be able to request instrumental and social resources from their network connections. Research has shown SNSs like Facebook can help users develop bridging social capital and attain resources (e.g., Ellison et al., 2007, 2014).

One such resource is social support, which is commonly obtained through SNSs and online support groups (e.g., Wright, 2000). Informational and emotional support are easily conveyed online, although tangible support can be more difficult (Mikal, Rice, Abeyta, & DeVilbiss,

2013). Affordances affect support seeking and provision. Accessibility is key, as users can obtain support any time; further, they may be able to identify support providers they do not have access to offline, such as other people with a similar condition (Rains, 2018). Anonymity may facilitate more disclosure and help-seeking, particularly for those with stigmatized conditions (Mikal et al., 2013). The visibility of others' supportive messages on social media leads users to create higher quality support messages (Li & Feng, 2015).

Seeking support and resources through social media may not always be effective. Some research has indicated people must be actively engaged with network members to have resource requests fulfilled (Ellison et al., 2014). In some cases, masspersonal support requests may be judged negatively by weak tie connections (High, Oeldorf-Hirsch, & Bellur, 2014).

Psychological Well-Being and Health Communication

An evergreen topic for researchers has been the effects of social media use on well-being, which have been associated with individual traits, consumed content, and the nature of use. Evidence has been found to support both the social compensation hypothesis ("poor-get-richer," in which those lacking offline have needs met online) and social enhancement hypothesis ("rich-get-richer," in which those who already have support or resources offline also benefit online; Seabrook, Kern, & Rickard, 2016). Evidence suggests it is the nature of the communication that matters. Similar to other channels, positive and supportive interactions are associated with positive well-being, whereas negative interactions and social comparisons are associated with depression, loneliness, and anxiety (Seabrook et al., 2016). Excessive use (i.e., "addiction") has been associated with negative well-being, although more nuanced findings suggest these are likely co-occurring outcomes attributable to individual differences (Seabrook et al., 2016), and problematic or maladaptive use (e.g., surveillance of one's ex-partner or disruptive multitasking) should be examined more specifically (see Caplan, 2018).

Extremely negative interactions, such as cyberbullying and online harassment (e.g., trolling) have shown consistent associations with negative outcomes and may be amplified by online affordances (Fox & Tang, 2017; Tokunaga, 2010). For example, doxing and revenge porn involve disclosing a target's private information without their consent (Marwick & Lewis, 2017). Although these breaches would also be violating offline, the visibility, scalability, persistence, and searchability of this information online may make these experiences especially pernicious.

Unfortunately, few studies have compared channels or assessed affordances to determine whether social media are augmenting effects on mental health. Establishing causality can also be difficult. One notable experiment manipulated interactivity on Facebook, finding passive browsing, compared to actively communicating with others, caused a drop in affective well-being over time. A follow-up field study using experience sampling further clarified passive browsing was associated with greater feelings of envy, possibly due to social comparison with one's ties (Verduyn et al., 2015). A controversial experiment conducted by Facebook tested network effects by manipulating the visibility of positive or negative emotional posts in users' newsfeeds and analyzing their subsequent posts. Seeing more positive posts increased users' positive posts and reduced negative posts, whereas seeing more negative posts had the opposite result, indicating an emotional contagion effect (Kramer, Guillory, & Hancock, 2014).

Other health-related research has investigated information seeking, support seeking, and patient-provider communication through social media (see Rains, 2018, for a review). Despite

the apparent advantages of SNSs for health interventions, randomized controlled trials have yielded minimal effects, similar to other media (Yang, 2017). One novel use of social media in the health context has been the tracking of outbreaks (e.g., flu, food poisoning) through SNS posts and networks (see Charles-Smith et al., 2015, for a review).

Information Diffusion and Evaluation

The convergence of established mass media, online news, and interpersonal sources within and across social media create information flows that can be difficult for the average user to evaluate. The source of the message can become ambiguous (Flanagin, 2017). Methods of curation and censorship by sites (e.g., algorithms, filters, content moderators) and users can further cloud the veracity and comprehensiveness of presented information (Flanagin, 2017). Regardless of accuracy, the scalability of social media messages enables murky sources or misinformation to circulate far and wide (Marwick & Lewis, 2017).

For these reasons, the credibility of information shared via social media is often questioned. Only 3% of U.S. Americans claim to have a lot of trust in information they find via social media (Smith & Anderson, 2018). Research indicates, however, users are more likely to trust digital misinformation shared by friends (Garrett, 2011), and friends' endorsements on social media affect news selection (Messing & Westwood, 2014). In this way, social media may have distinct effects compared to misinformation from other online sources, as users may be more likely to believe and propagate "fake news" when it is shared by a friend.

The differing affordances of social media sites may influence information diffusion. Online communities may facilitate homogeneous spaces where users can share like views that become reinforced over time (Wojcieszak, 2010), whereas SNSs often facilitate large weak tie networks which expose users to greater information diversity (Bakshy, Messing, & Adamic, 2015). Although nonanonymous SNSs like Facebook certainly are not free of incivility, political discussions on SNSs may feature more politeness than anonymous spaces like a YouTube comments section (Halpern & Gibbs, 2013).

Political Communication and Collective Action

Social media research has indicated amplifying effects on political expression and collective action, particularly given the linkages and rapid diffusion of information among ties on social networking sites (e.g., Freelon, McIlwain, & Clark, 2016; Kreiss, 2016). The accessibility of social media may promote greater political engagement (Papacharissi, 2002). SNS users may feel more comfortable expressing themselves online and may reach more politically diverse audiences than they would offline due to network association and scalability (Freelon et al., 2016), which may also facilitate collective action more efficiently and on a greater scale than traditional channels (Tufekci, 2017). These same affordances, however, may drive a spiral of silence for marginalized users (Fox & Warber, 2015).

Another concern is that social media provide unprecedented tactics and power to political operatives and corporations (Vaidhyanathan, 2018). Facebook demonstrated it could influence voting behavior by manipulating the visibility of voting messages in users' feeds (Bond et al., 2012). Sock puppet accounts and bots can be used to disseminate misinformation, astroturf (i.e., disguise operatives' efforts as grassroots movements), or instigate discord or further

polarization (Marwick & Lewis, 2017). A final concern is that the visibility and aggregation of social media users' activities generate considerable data that have been used by political parties, corporations, and bad actors to identify, target, and silence dissidents; perpetuate misinformation and propaganda; and influence political outcomes (Pearce & Kendzior, 2012; Vaidhyanathan, 2018).

Future Directions for Social Media Research

In the relatively short history of social media research, a few consistent issues have emerged. Here, we address some observed limitations in existing research, provide some goals for researchers, and consider emerging social media platforms and their affordances.

Improving Social Media Research

Do Your Homework

First, social media scholars need to begin their investigations by digging much deeper than recent social media research on their topic within their field. Lacking a historical grounding, too often social media researchers commit a false novelty error, in which they assume a phenomenon is unprecedented and attributable to social media. Often these phenomena are not novel; rather, they illustrate amplifying effects of social media on existing processes. If researchers do not conduct historical research across different disciplines, they may assume, for instance, trolling (social aggression and harassment), ghosting (relationship dissolution), and fake news (rumors, gossip, and deceptive journalism) are new occurrences or unique to social media. Recognizing how phenomena manifest outside of social media contexts is not just sound empirical practice, it also challenges one-sided narratives in which social media are uniformly heralded as saving humanity or blamed for destroying it.

Be Patient

Social media researchers should not be baited by apparent novelty, media frenzies, or technophilia; proceed diplomatically and assess similarities to and differences from existing channels. Historical research may reveal patterns in how related technologies have been perceived, used, adopted, or abandoned, which may give insight on the durability of an emerging technology (Rogers, 1962). Another reason patience is advised is that technology users and practices evolve over time. Initial users are likely to differ from other users in significant ways (Humphreys, 2007; Rogers, 1962), limiting conclusions or theorizing based on early findings.

Diversify

A third goal is to expand the populations, topics, and sites researchers study. Due to growing internet access, social media audiences are diversifying globally. Various cultural norms, governmental regulation or monitoring, and literacies influence social media use (e.g., Pearce & Kendzior, 2012). Additionally, studies are often conducted with a single site (often Facebook) and findings are erroneously generalized to all social media (Stoycheff et al., 2017). Sites vary in the nature of their users and audiences, the features they offer, and their affordances (e.g., Fox & McEwan, 2017). Finally, researchers should also seek out nonusers, examining digital divides,

group differences, and selective avoidance (e.g., Hargittai, 2018). Of particular concern is that individuals, particularly those from marginalized groups, may avoid or quit using technologies due to negative social experiences (e.g., Fox & Tang, 2017).

Adopt an Affordance-Based Approach

Researchers should account for structural and perceived affordances when studying social media as they are important determinants of site selection, use, communicative behaviors, and other effects. Clarifying the role of affordances will help scholars better predict what findings generalize across sites or across channels more generally, enabling more flexible and durable theorizing (Fox & McEwan, 2017).

Improve Measurement

A fifth goal is to better operationalize social media behavior, which may include updating one's profile, creating or sharing content, viewing or interacting with others' content, or messaging another user in a private channel. Unfortunately, researchers typically only assess time spent on sites. Many studies' hypotheses, however, concern the type of content participants are encountering and how much they are attending to, processing, and interacting with such content. For example, a study examining the impact of cross-cutting political discussions on Twitter needs to assess how much users notice, read, and engage with such discussions, not how much time they spend watching cute chinchilla videos. Given the considerable limitations to common techniques (e.g., self-report, automated tracking, experience sampling, data scrapes; see de Vreese & Neijens, 2016), triangulation of methods is advised.

Researchers should also consider how social media fit within media repertoires as well as within other social experiences (Stoycheff et al., 2017). Processes may be working in conjunction, perhaps indicating additive effects. For example, women may receive consonant messages reinforcing the importance of their physical appearance across traditional media, social media content, and social interactions. In other cases, notable contradictions may emerge. For example, individuals who cannot discuss their sexual orientation among known ties may express themselves freely on unanchored social media (e.g., McKenna & Bargh, 1998).

Conduct Ethical Research

A final advisement is social media researchers must give ongoing consideration to a number of ethical issues in our ever-evolving domain. The thirst for easily accessible data—and perhaps envy of corporations' stockpiles—does not obviate scholars' ethical obligations to protect participants and maintain public trust in scientific research. Current research practices beget two ethical questions: Should researchers use participants' data without explicit consent? Should they scrape and aggregate this data and share it freely on the internet?

Researchers must concede users' outrage about Facebook's many missteps (see Vaidhyathan, 2018) indicates many users are not happy about their data being used without their awareness or approval. Specific to scientific study, Fiesler and Proferes (2018) surveyed a sample of Twitter users and found over 60% were not aware researchers could use their tweets. Nearly half indicated they would feel uncomfortable if their Twitter history was used for research, and 65% said researchers should not be allowed to use tweets without asking permission from the

user. These findings indicate many users object to researchers taking their data without informing them or obtaining consent.

Researchers must also acknowledge that accumulating and aggregating social media data inherently increases privacy risks to users. The process generates copies, links data in ways that may be otherwise not easily discernible, and establishes persistence the user has no control over. Even if a user deletes their account and all their posts, the researcher is now a curator taking away the user's "right to be forgotten" (Rosen, 2012). Aggregate datasets posted online are more identifiable and create greater risk for participants than scholars may realize, given many forms of social media data are searchable (e.g., the content of a tweet) and thus potentially identifiable without names attached—not to mention algorithms already exist that are capable of linking data across anonymous and nonanonymous sites and identifying users (Shu et al., 2017). Moreover, scholars cannot anticipate how corporations, insurance companies, employers, law enforcement, governments, or criminals may use this conveniently compiled data or link it to other records.

Perhaps the underlying issue here is the objectification of social media users: they—we—are now seen as data points, not people. But what we do on social media sites is more than just data or information or content. What we create and share through social media are our personal histories, artistic expressions, memories, feelings, conversations, and secrets. Collectively, these artifacts constitute a digital self that people want to share with others socially, but they may object to having been placed under a microscope. Social media scholars should consider these ethical issues carefully in the design, conduct, and reporting of their studies and associated data.

Emerging and Evolving Social Media Platforms

Although it is difficult to determine how emerging forms of social media will manifest and whether they will endure, some recent social media have provided distinct features or combinations of affordances. In recent years, for example, Twitch has become an immensely successful global platform by merging video livestreaming and text-based chat. Streamers can create profiles and broadcast live video to an interactive audience. Although research is emerging on Twitch (e.g., Taylor, 2018), theorizing has yet to tackle the confluence of one-to-many mass communication (the streamer broadcasting), many-to-many computer-mediated group communication (text-based chat among audience members), and one-to-one or many-to-one computer-mediated interpersonal communication (audience members addressing the streamer).

Social virtual environments such as massively multiplayer online video games (MMOs), 3D virtual worlds, and collaborative virtual reality have grown in popularity. They are often overlooked within the scope of social media, but by many definitions, these environments qualify and provide distinct affordances. For example, embodiment is often afforded through the use of a responsive avatar controlled by keypresses or body movements. In fully immersive virtual environments, users can move their bodies in natural ways and their avatar responds accordingly. This mapping may have distinct effects for mediated social interaction compared to communicating through less natural methods, such as keypresses.

Another crucial consideration for social media researchers will be to account for the growing influence of computer-generated content, algorithms, and agents (i.e., computer controlled entities, such as bots and nonplayable characters) in social media spheres. Already, users may find themselves engaging in Turing tests to determine whether they are interacting with

a human or a computer. As agents become more sophisticated, however, it may be more difficult to identify when they are masquerading as human users. When senders and receivers are no longer human or predominantly human-controlled, the applicability of existing communication theories will have to be reconsidered.

In conclusion, social media have become an integral communication channel for many people, providing a conduit for interaction, but also amplifying and altering communication processes. As social media and their users continue to evolve, researchers face an ongoing challenge of keeping pace with changing practices and a changing society.

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25

Effects of Mobile Communication

Revolutions in an Evolving Field

Scott W. Campbell and Rich Ling

The previous edition of this volume pushed the media effects tradition into new territory by adding a chapter on “Effects of Mobile Communication” (Campbell & Ling, 2009). At the time, mobile texting and calling were enfolded into the social structure, and having access to the technology was becoming a basic expectation, like telling time (Ling, 2012). Accordingly, our previous chapter emphasized the effects of mobile communication on mundane aspects of everyday life, particularly changes in how people engage with others and places of social activity. This chapter expands on that by addressing two major developments that have occurred since.

First, we address the smartphone revolution. Technically, the transition from *basic* to *feature* to *smart* phones was actually part of an evolution toward enhanced data services (Frith, 2015; Goggin, 2011). However, in terms of shifts in scholarship on media effects, it has been nothing short of revolutionary. The shift toward third-generation (3G) mobile networks and devices is well-recognized in the field as “the smartphone era,” “the age of smartphones,” “the smartphone turn,” and so on (e.g., Hjorth, Burgess, & Richardson, 2012, p. 1; Kobayashi, Boase, Suzuki, & Suzuki, 2015, p. 330; Ling & Lai, 2016, p. 834). There have been many advancements since, with subsequent generations rolling out in various parts of the world. However, for purposes of assembling the literature, we utilize the more basic approach of examining effects before and after the uptake of smartphones.

The second major expansion of this chapter pushes the conversation beyond the realm of mundane interactions to account for the effects of mobile communication in acute situations. Although the vast majority of calls, texts, and messages take place in the context of everyday life, the technology has always been a tool for safety during times of crisis and disaster. However, the literature is just now becoming sufficiently ripe to offer a synthesis of different areas, such as natural disasters and terrorist attacks. The material in this section opens up new avenues for media effects scholarship by shedding light on the ways that mobile communication has come to play a key role not only in everyday life moments and movements but also in how people deal with crisis.

Before getting started, a few words about our treatment of “media effects” are in order. Traditionally, the media effects paradigm has served as a framework for understanding how mass

media content influences the attitudes and behavior of audience members. Our concern is not so much about the content, but the system through which it is exchanged. Further, the analysis of the mobile phone shows that its effects are perhaps most obvious in social behavior. This is not to suggest a dearth of cognitive effects. As we discuss toward the end of the chapter, cognitive effects of mobile media comprise an important and budding branch in the field. However, the meat of our analysis largely deals with manifestly social uses and consequences of mobile media and communication, which have gained sufficient foothold in the research to synthesize before and after the uptake of smartphones.

Also for clarification, “mobile communication” refers to access to other people, information, and media content while the user is free to move about. Mobile media (e.g., via the smartphone) are similar to portable media (e.g., laptop computer) in that both are wireless and can be carried from place to place. However, during moments of use, portable media tether individuals to places with needed infrastructure, such as a surface. Mobile media characteristically support the possibility of connecting while users are physically in transition. As we turn to in the next section, this ubiquitous and direct access has meaningful implications for mundane social and spatial experiences. Thereafter, we will address some of the ramifications for not-so-mundane experiences as well.

Mobile Communication in Everyday Life: The Mundane

An exhaustive list of mobile communication’s effects warrants its own volume. Instead, this section highlights how it can restructure select aspects of social life, including how people coordinate social activities, maintain personal relationships, and experience public places. We have selected these topics because (a) they were addressed in our previous chapter on texting and calling (Campbell & Ling, 2009), and (b) these areas of scholarship have remained active and thus illuminate how the transition toward smartphones and applications has altered the narrative about mobile technology’s effects on social life.

Effects on Social Coordination

Among the initial findings in mobile communication research is that it alters, if not diminishes, the roles of time and space in social coordination (Ling, 1997; Ling & Yttri, 2002). Prior to mobile messaging and calling, in-person gatherings were coordinated through agreed-upon times and places. Mobile communication restructures social coordination by allowing for individual addressability, or direct access to others in real time and while moving about (Ling, 2017). In contrast to fixed and portable media, mobile media allow people to connect between and beyond places of destination, not just in them. The possibility of connecting in transition means that users can flexibly refine their plans or simply make them up as they go along, a practice known in the literature as “microcoordination” (Ling, 2004; Ling & Yttri, 2002).

The concept of microcoordination was advanced well before the uptake of smartphones; so, its original scope was bounded by dyadic contexts of interaction. Messaging applications have since paved the way for “microcoordination 2.0,” or group-level coordination (Ling & Lai, 2016). Whereas traditional texting via SMS makes individuals always available on a dyadic basis, the use of messaging apps offers an ambient sense of what the group is up to, which Hampton (2016) characterized as persistent and pervasive awareness. This shift has introduced new dynamics for social coordination, both for better and for worse.

On the one hand, group messaging can be more efficient than individual texting when making arrangements. Whereas texting calls for a series of non-overlapping exchanges among individuals, group messaging allows for decentralized and direct access among all members, speeding up the communication process while making it more transparent. As Ling and Lai (2016) explained:

The point-to-point nature of SMS and voice calls means that group coordination has to be carried out in a series of individual and isolated calls/texts. In a hub-and-spoke type of communication, one person (the hub) can send the same text to several others (the spokes). However, the recipients cannot see the responses of the other recipients or even know who the other recipients are ... This leads to cumbersome planning.

(p. 837)

As a result, microcoordinating in groups can entail a great deal of communication.

With the coming of smartphones and the development of messaging apps (e.g., WhatsApp, WeChat, Facebook Messenger, Line, Telegram) there was a breakdown of the hub-and-spoke alignment described above. With these apps, all the interlocutors can see everyone's messages. This transition can facilitate the coordination process because there is not a single hub through which all the messages must flow. Even the sheer volume of messages can be a useful way for individuals to stay on top of a group's activity, especially when the content is simplified down to a shared meme, such as "Tonight, 7pm" (Ling & Lai, 2016, p. 846). On the other hand, group messaging offers a distinctive set of challenges that can hinder social coordination as much as support it. Most notably, when the volume gets too high, people can become overwhelmed and lose their ability to manage the flows. A group chat can have several hundred messages a day, making the noise-to-message ratio quite high. On a related note, group messaging is not always useful when consensus is desired (Ling, 2017). Deliberation and alternate suggestions are theoretically desirable, but in a decentralized group messaging context, different voices moving in different directions can derail the task at hand, especially when consensus is the goal (Ling & Lai, 2016).

From a media effects perspective, this discussion highlights how the use of mobile technology has distinctive consequences for how people coordinate social activities (Thulin, 2017). Mobile communication restructures coordination such that it is rooted in anytime-anywhere access to others, as opposed to the traditional anchors of space and time (Ling & Campbell, 2009). Messaging apps represent a major advancement, but they also complicate the picture, providing opportunities for media effects scholars to explain the conditions under which they support or suppress efficient coordination in addition to other effects such as power relations and small group dynamics. Although these apps are relatively new, previous research on small-group communication, as well as computer-mediated communication, point to some promising directions for future study. For example, the size of a group can complicate turn-taking (Herring, 1999), leading to thematic decay (Ling & Lai, 2016). Leadership (or the lack thereof) is also an important factor in keeping group-level communication on point, especially in mediated environments (Kiesler, Siegel, & McGuire, 1984). Also, characteristics of the group can affect coordination. A clear goal and strong sense of cohesion (e.g., insert your favorite sports team here) offers advantages for group-level coordination (Starbird & Palen, 2013). As this line of research develops, scholars should identify how these and other contextual factors support and suppress multi-sided coordination through mobile media.

Effects on Personal Relationships

Just as the possibility of connecting in transition paves the way for new forms of coordination, so too does it have distinctive ramifications for personal relationships. In fact, a great deal of the early mobile communication scholarship highlights how use of the technology strengthens bonds among core network ties. Indeed, this is still an active area of research. As with coordination, we can attribute this to the way mobile communication restructures social interaction by uniquely allowing for, if not encouraging, anytime-anywhere availability to others (Ling, 2017; Schrock, 2015; Vorderer, Krömer, & Schneider, 2016). Mobile calling played an important role in this shift by allowing people to talk with distant others regardless of time and place. As with the landline, long conversations on the mobile phone helped sustain social cohesion among distant others; however, this is not what made mobile communication unique. Mobile communication uniquely affected personal relationships when it was taken up as a means of staying in touch with others throughout daily life. Rather than long conversations, a new type of “connected presence” (Licoppe, 2004) was established through short and frequent mobile exchanges, which could be weaved into the flows of everyday activities.

SMS (texting) and MMS (photos) emerged as especially useful channels for establishing and maintaining connected presence. Despite the flexibility in where and when people connect, voice calling is greedy in that it consumes sustained attention to the conversation at hand. Messaging text or images can take place in real time; however, it is less greedy in that it can be synchronous, asynchronous, or *nearly* synchronous (Rettie, 2009). Thus, it can be worked into everyday life moments and movements, allowing close ties to maintain a sense of continual accessibility. Oftentimes the symbolic meanings of these connections carry more weight than the content, and over time they can develop into ritualistic “chains” of interaction that take on their own significance, while bringing close personal ties even closer together (Ling, 2008).

At the same time, the overt bonding capacity of mobile communication started to raise concerns that one’s social scope might become narrowed with limited exposure to weak, new, and diverse ties. For example, Ling (2008) argued the cohesive effects of mobile communication are bounded to close ties and can come at the expense of engaging with new and different people. As he put it,

We see that there is a tightening in the individual’s social network that augurs against those who are marginally known to us and in favor of those who are familiar. That is, we are perhaps seeing the development of bounded solidarity ... the potential for the clique to be so focused on its own interactions that the so-called weak-link connections are neglected.

(p. 176)

Others expressed similar concerns about “telecooing” (Habuchi, 2005; Kobayashi & Boase, 2014) and receding from civic life in favor of the affirming voices encountered through ubiquitous access to like-minded core ties (Gergen, 2008). Collectively, these propositions represent one of the early theoretical perspectives in mobile communication studies. From this perspective, mobile communication presents a zero-sum game, where time and attention to core ties take away from engaging with lesser known and diverse others (Campbell, 2015, 2019).

Shortly after this perspective gained traction, the field shifted attention toward uses and effects of 3G data services providing mobile-mediated access to social network sites, group messaging, location-based services, Bluetooth, and other aspects of the emergent app ecology. With

expanded channels came an expanded range of content and opportunities to engage beyond the realm of close personal ties. Perspectives of disconnection have not disappeared in the smartphone era (e.g., Turkle, 2011, 2015); however, they have become overshadowed by counter-arguments and evidence that treat mobile communication as a means of expanding, instead of narrowing, one's range of social experience. Rather than reaching in to core ties at the expense of reaching out beyond them, the effects of smartphone use can be characterized as reaching in *and* reaching out, with the technology serving as an added layer of social connectivity.

Wilken (2011) helped pave the way for this perspective by suggesting that the bridging capacity of mobile communication was overlooked in the previous era and needed to be revisited with the smartphone turn. He reminded that “bonding and bridging are not ‘either-or’ categories into which social networks can be neatly divided, but ‘more or less’ dimensions along which we can compare different forms of social capital” (p. 23). Wilken pointed to several cases where social networks have expanded through mobile messaging and information exchange (e.g., Boase & Kobayashi, 2008; Horst & Miller, 2006). Turning to smartphones, he pointed to the capacity for bridging through Bluetooth applications that alert strangers with shared interests when they come into proximity of one another. In contrast to the narratives of insularity above, Wilken (2011) argued that “mobile phones work to strengthen existing social ties (so-called strong links) *and* facilitate broader contacts outside a user's immediate social sphere (so-called weak links)” (p. 127).

Rainie and Wellman (2012) made a similar case. Comparing smartphones to a Swiss army knife, they highlighted how the multi-functionality of apps broadens the user's social connection. They recognized that mobile communication has traditionally reinforced existing relationships and that it still does but no longer at the expense of forming ad hoc communities that traverse diversified networks. With access to social media, mobile games, locational navigation, and an expanding range of other services, smartphones and applications provide a more diversified social experience. Rather than being socially cocooned, users are “connecting to the broader fabric of society” (Rainie & Wellman, 2012, p. 13).

These propositions are supported by empirical studies that also run counter to zero-sum perspectives on the social effects of mobile communication. For example, Kobayashi et al. (2015) reported on an experiment demonstrating how mobile applications can effectively prompt users to reconnect with dormant weak ties. They concluded, “With the recent spread of smartphones there is an increasing need to rethink the tele-cocooning hypothesis, because the customizability of smartphones allows them to facilitate increased interaction with weak tie relationships” (para. 64). In another example, Schrock (2016) challenged Ling's (2008) concept of bounded solidarity by demonstrating the bridging effects of mobile social network site use. His survey of parents with young children linked mobile use of photos and video on Facebook to bonding *and* bridging forms of social capital. As Schrock argued, because texting and calling come with expectations to be immediately accessible, they tend to be more narrowly used. The asynchronous nature of posting to mobile social network sites structures opportunities for connecting with new and different others. Rather than bounded solidarity (Ling, 2008), Schrock argued that contemporary mobile media support a more open type of *porous solidarity*.

These studies and others (e.g., Campbell & Kwak, 2011, 2012; Cui, 2016; Lee & Katz, 2015) mark a dramatic shift in the effects of mobile communication on personal connections. In contrast with earlier propositions, they portray an image of contemporary mobile communication as an added layer of connectivity rather than a zero-sum game. This perspective still recognizes how mobile communication strengthens bonds among core ties. However, with smartphones it

does not come at the expense of connecting with lesser known others in community and society. Instead, diversified mobile media usage translates into diversified social connections.

Effects on Public Settings

Like the previous sections, this section identifies a pivot in the social consequences of mobile communication coinciding with the smartphone turn. In this case, we are interested in the shifting effects on how people experience public settings. Originally, this area of research pursued explanations for the problem of disturbing voice conversations around unoffending bystanders. Smartphones may be replacing the early handsets, but they have not displaced the original problem of annoying phone calls in public. Nonetheless, their use does present a dramatically different set of effects for how people experience shared space, not to mention a more positive take on mobile communication's capacity to support connection with, as opposed to disconnection from, public settings. Like the others so far, this section presents a tale of two stories. The first grapples with the problems of annoying calls in public; the second recognizes opportunities of smartphones as locative media (Frith, 2015).

Some of the early scholarship in this area attempted to explain attitudes about mobile phone use in public with individual characteristics, such as personality traits (Love & Kewley, 2005; Turner, Love, & Howell, 2008), socio-demographics (Turner et al., 2008), and ownership history (Palen, Salzman, & Youngs, 2000, 2001; Wei & Leung, 1999). Characteristics of the setting were also examined, such as how open vs. confined a place is and whether the normative expectations are heavy vs. light (e.g., Humphreys, 2005; Ling, 2004; Murtagh, 2002; Okabe & Ito, 2005; Wei & Leung, 1999). Studies also tried to explain perceptions and uses of mobile phones in public through cross-cultural lenses, revealing notable consistency in attitudes and behaviors across societies, as well as some nuances (e.g., Campbell, 2007a, 2007b; Caporael & Xie, 2003; Hoflich, 2006).

Others in this area have examined strategies for managing the disturbance, noting how some mobile phone users mitigate the intrusion by finding their own space, closing off their posture, keeping calls short, diverting their eyes, and other tactics (e.g., Hoflich, 2006; Humphreys, 2005; Ling, 2004; Murtagh, 2002; Okabe & Ito, 2005; Paragas, 2005; Plant, 2001). Bystanders commonly resort to what Goffman (1963) called civil inattention, or maintaining awareness without direct engagement, although this can be difficult when they are forced into eavesdropping (e.g., Ling, 2004; Perrson, 2001; Srivastava, 2005). Those types of passive strategies tend to be favored over direct sanctioning of mobile phone (ab)users. When direct intervention occurs, glancing prevails as an effective yet subtle way of expressing discomfort (e.g., Ling, 2004; Okabe & Ito, 2005; Paragas, 2005).

Collectively, the various strands of research reflect the shared perspective that mobile phone use in public, particularly voice calling, presents a social problem in need of explanation. The methods may be diverse, involving surveys, experiments, interviews, and observations. However, the body of work coheres into an overarching theoretical direction: that voice calls put the user in the difficult position of juggling separate and competing social stages. On that note, Goffman's (1959) dramaturgical metaphor for the presentation self through front and back-stage performances commonly appears as framing in this research (e.g., Fortunati, 2005; Ling & Yttri, 2002; Puro, 2002; Woolgar, 2005).

With the adoption of smartphones, particularly their locative features, the narrative about mobile media's effects on public settings began to pivot. Momentum rapidly tipped toward

the way apps with location awareness help connect people to places of social activity. For example, mobile locative games encourage geographical exploration through paths that lead to real and virtual objects (Farman, 2012; Gordon & de Souza e Silva, 2011; Licoppe, 2017; Richardson & Wilken, 2009). Others encourage mobility by using location awareness to support tracking, evasion, tagging, and virtual combat with others (Hjorth, 2011). In contrast to traditional computer games, where individuals are physically isolated behind screens, mobile games bring people out into urban environments as public places become part of the game board (de Souza e Silva, 2006).

The scholarship on mobile social networks (MSNs), such as Dodgeball, Foursquare, and Socialight, offers another window into the shift in how people relate to public places through mobile media. Studies involving a variety of MSNs show how the layering of digital information through check-ins, virtual sticky notes, and photos support exploration of new places through propagation coordination of meet-ups (Humphreys, 2012; Humphreys & Liao, 2011). Rather than separate and competing social stages, contemporary scholarship on mobile media and spatiality represents an alternative perspective. In this case, locative mobile media are theorized as instrumental to the construction of *hybrid* places, where physical and digital are mutually constitutive, not separate and not competing (de Souza e Silva, 2006). From this direction in theory, places are socially produced, and locative mobile media help integrate digital content onto and into physical settings.

Mobile Communication in Not-So-Everyday Life: Acute Situations

In addition to the mundane effects of mobile communication, effects are evident in the context of acute situations. Since we receive information about various types of emergencies through our phones, they become the touchpoint through which people experience and manage crisis. As we discuss in this section, research on the uses and consequences of mobile media during emergencies provides new insight into emotional as well as behavioral reactions during these situations.

Looking at the emotional side of the equation, there are emergent circumstances mediated through the mobile phone that bring our broader situation into sharp focus. This can be seen, for example, in the mistaken missile warning message to the people of Hawaii on January 13, 2018. That morning, a message was sent to their smartphones announcing, “BALLISTIC MISSILE THREAT INBOUND TO HAWAII. SEEK IMMEDIATE SHELTER. THIS IS NOT A DRILL.” Even though the warning later proved to be false, quite naturally many people took it as legitimate. Data gathered from residents in the immediate wake of the event (Oppegaard, Huang, & Ling, forthcoming) showed the mobile-based missile alert generated a good deal of fear (e.g., “I was really scared and ran for cover. And shocked, fearful, angry at Trump and Kim Jong-un. I first kept re-reading ‘this is not a drill’”). It also unleashed a desire to be in contact with loved ones (e.g., “We were very scared panicking. We called family to say good-bye”). In this case, it is not difficult to draw the connection between a message received via the mobile phone and the visceral reactions described above.

As one would expect, these deeply felt emotions also play out in behaviors. In the case of the Hawaii missile incident, the message resulted in people seeking out verification and, as noted, reaching out to loved ones. Unlike the media effects that arise from the more passive consumption of, for example, watching a television program, the content mediated through mobile phones is oftentimes directed toward specific individuals, giving it added salience with which to

engender a behavioral response. At the most everyday level, this type of mediated information may simply be a message as to where we are to meet friends for a beer. The coordination mechanism, in this case, is clear. We may have some pre-existing agreement with our friends, and the information mediated through the device affects whether we go to one or the other location. During times of crisis, the mobile phone takes on various roles (Coyle, 2005). In cases where disasters are slow in building (e.g., hurricanes, floods, brush fires) the mobile phone can be used as an early warning device that alerts people to evacuate the area. In the immediate aftermath of a disaster the device can be used to help coordinate recovery and allow for victims to contact one another and to check on the wellbeing of close family and friends. Finally, in the recovery phase of a disaster, the mobile phone can be used to distribute information and to aid in attempts for restoration of normal life.

Of course, disasters range in duration, size, degree of personal impact, and so on (Berren, Beigel, & Ghertner, 1980). At a local level, it may be a domestic emergency, ranging from rather simple issues (e.g., our partner has run out of gas and we need to go pick them up; our child has forgotten her gym shoes) (Haddon, 2000) to more acute situations (e.g., a child breaks a leg and the various family members need to be mobilized to attend to the situation) (Rainie & Wellman, 2012). At a broader social level, disasters can include major natural events, terrorist attacks, and ongoing conflicts. In each case, our ability to be individually available to one another means that, at a moment's notice, we may have to react to an emerging situation.

From the individual to the collective level, mobile phones have also become a go-to resource when entire communities are in crisis, such as with terrorist attacks (Cohen & Lemish, 2005). Studies of call data records show that when confronted with such desperate situations, people are likely to reach out to their very closest social ties (Ling et al., 2018). This was evident through the use of mobile communication during the immediate aftermath of the July 22, 2011 terrorist bombing in Oslo, Norway. An examination of network traffic data including several million records show that Norwegians generally made calls to their strongest two to three personal ties in the immediate wake of the bombing. Further, the sequencing of the calls followed decreasing link strength. That is, people first dialed the individual with whom they had called most often in the months previous to the bombing, then they dialed the second strongest tie, and so on.

The ability to connect directly and immediately with others during times of crisis not only reflects who is in one's intimate social sphere, but also strengthens the relationships within it. As Collins (2004) wrote,

Not just any conflict results in high levels of group solidarity. The key to such a pattern is the dramatic incident, the attention-focusing event: a sudden attack and response to the attack ... *Solidarity is produced by social interaction within the group, not by the conflict itself as an external event.* What creates the solidarity is the sharp rise in ritual intensity of social interaction, as very large numbers of persons focus their attention on the same event, are reminded constantly that other people are focusing their attention by the symbolic signals they give out, and hence are swept up into a collective mood.

(p. 55, emphasis added)

Following Collins, the collective emergency produces the context in which social solidarity is forged. Putting this in the framework of media effects, having a mobile phone and also knowing

that our closest personal ties are similarly available has changed how people respond emotionally and behaviorally during times of crises.

From Social Behavior to Social Psychology: Problems with Smartphone Addiction

The material above traces some of the major developments in mobile communication research to reveal shifting effects alongside changes in the socio-technological landscape. As noted earlier, much of that work deals with effects of mobile communication on social behavior, where changes so far have been most obvious. We end this chapter by moving over to the psychological side of mobile communication's effects. Again, an exhaustive review of the literature is beyond the scope here. Instead, we weigh in on one of the most visceral debates about the psychological effects of mobile communication: smartphone addiction.

Narratives of smartphone addiction have gained a foothold in the popular press, as well as academia. Scholars have advanced new criteria for smartphone addiction (e.g., Kwon et al., 2013; Lin et al., 2016), and research on its antecedents and outcomes has gained recent momentum (e.g., Aljomaa, Mohammad, Albusan, Bakhiet, & Abduljabbar, 2016; Darcin et al., 2016; Fu Yuan, Chiu, & Huang, 2012; Haug et al., 2015; Hawi & Samaha, 2016; Körmendi, Brutóczy, Végh, & Székely, 2016; Roberts, Pullig, & Manolis, 2015; Salehan & Negahban, 2013). While this literature represents a much-needed emphasis on the psychological aspects of mobile media and communication, so too does it create a space for criticism.

Despite the recent fervor to measure and study smartphone addiction, questions linger about whether it even exists. First, smartphone addiction is not recognized by the *Diagnostic and Statistical Manual for Mental Health Disorders* nor the psychological community (APA, 2013). In fact, neither is internet addiction, which is noteworthy considering the oft-used Smartphone Addiction Scale is validated using a measure of internet addiction (Kwon et al., 2013). On the surface, addiction seems like an intuitive way of explaining problematic mobile phone use, such as texting while driving. However, it runs into complications when confronted with its scientific criteria, which include tolerance, withdrawal, relapse, and others (Billieux, Maurage, Lopez-Fernandez, Kuss, & Griffiths, 2015; Griffiths, 1995, 2005; Panova & Carbonell, 2018). Without doubt, smartphones are used compulsively, which can lead to problems. However, this does not necessarily add up to an addiction. After reviewing scholarship in this area, Panova and Carbonell (2018) conclude,

Although the majority of the research in the field declares that smartphones are addictive or takes the existence of smartphone addiction as granted, we did not find sufficient support from the addiction perspective to confirm the existence of smartphone addiction at this time. The behavior in the research could be better labeled as problematic or maladaptive.

(para. 1)

This is not to suggest we stop trying to explain problematic mobile phone use through a psychological lens, only that we may be better off with a different set of goggles. Other than addiction, habit is an emerging explanation for problematic mobile phone use. As opposed to the long and contentious list of criteria for addiction, habit offers a much simpler formula. To have a habit, one must do something frequently and without a great deal of cognitive effort (LaRose, 2010). In other words, habits are routine behaviors that we fall into without really thinking. Empirically, a handful of studies have linked mobile phone behaviors, such as texting

while driving and checking one's smartphone while walking around, to a habitual orientation to the technology (Bayer & Campbell, 2012; Panek, Bayer, Dal Cin, & Campbell, 2015). Theoretically, this should not be surprising if we subscribe to LaRose's (2010) argument that half of all media usage is habitual in nature.

Shifting from theory to practice, habit may also be a more promising alternative than addiction for getting people to change their behavior. To our knowledge, there are no positive addictions, and confronting one can come with heavy baggage, such as spiritual rebirth and life-changing rehabilitation. Habits, on the other hand, can be good or bad. Just as some text and drive without thinking, so too do people fasten their seatbelts with little thought—because it has become habit. Considering uphill battles with diagnosing and confronting addiction, media psychologists with an interest in explaining and addressing problematic smartphone use might find habit to be more useful, in both theoretical and applied contexts (Bayer & LaRose, 2018).

Concluding Thoughts

As research in the field expands, a next step is to synthesize the effects of mobile communication across the collective and psychological levels for theoretical coherence. Some of the effects are macro, some are micro, and the others can be found at various places in between. Currently, we have sufficient evidence to propose embedding of mobile communication at the societal level and at the individual levels. From a sociological perspective, Ling (2012) traces mobile communication's path from the new thing to nothing new; like telling time, it has become a taken-for-granted expectation and an integral part of social structure. His account of mobile communication's journey into the collective conscious is complemented by research on how the technology has become embedded at the cognitive level, evidenced through unconscious use (Bayer, Campbell, & Ling, 2016; Bayer, Dal Cin, Campbell, & Panek, 2016; Panek et al., 2015). In other words, mobile communication has become deeply embedded in society, as well as the self. Considering this, a fruitful direction for mobile scholarship is to bridge the theoretical fault lines separating the social and the psychological ramifications of its use. Moving forward, we may need to consider more interdisciplinary frameworks that traverse sociology and psychology. For example, Bourdieu (1977) proposes the concept of habitus, where members of a social collective develop shared cognitive orientations that, over time, can take on a life of their own and become part of the structure of society. Other promising avenues for a more unified theory of mobile communication's collective and psychological effects include cognitive sociology and social cognition, which explicitly aim to bridge theoretical gaps separating sociology and psychology (di Maggio, 1997). As the field continues to grow, scholars should strive for more nuance within existing traditions as well as opportunities like these to bring them into conversation with one another.

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Virtual Reality in Media Effects

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In the complex and constantly evolving world of modern media, immersive media technologies have assumed a prominent voice. These technologies, whose most popular manifestation is virtual reality (VR), attempt to craft mediated experiences that epitomize the verisimilitude of real life. Such “reality” enhancers are not new—the advent of a new medium or technology has often been accompanied by excitement regarding its ability to engross a user—but the key difference is the increasing diminishment of the line between what constitutes “real” and what constitutes “mediated.” In addition, although the blurring between “virtual” and “reality” can be attributed to a range of factors (chiefly, sophistication in hardware and software), the disruptive potential of the technology and its scalability has heralded its growing prominence in research. This technological progress has permeated the scholarship on social and psychological consequences of communication technologies. In this chapter, we offer a commentary on why immersive technologies are particularly ripe for continued exploration in media effects, and some directions that would be fruitful for research pursuit. We first outline a brief history of VR and summarize the current media zeitgeist in terms of its immersiveness.

Mixed Reality Continuum: From the Physical to the Virtual World

In many ways, Ivan Sutherland’s (1965) iconic “The Ultimate Display” laid the foundation for immersive technologies more than half a century ago. Sutherland’s prescience can be gauged by his vision of a space where a technology could direct the varied quotidian experiences that one might encounter or undergo. Other visionaries followed in Sutherland’s wake with Jaron Lanier coining the term “virtual reality” in the 1970s (see Lanier, 2017, for a detailed history of the term) to describe a mediated world that would or could resemble the physical (real) world. Thus, although the notion of “virtual reality” has been in vogue for more than four decades now, the progress has been relatively slow for much of the time that the internet and the web revolutionized modern digital technologies. Reasons for the slow adoption have largely been due to the bulkiness and high cost of the equipment, the prohibitive amount of time and money it takes to create compelling VR experiences, and the scarcity of locations to actually experience VR simulations. However, the last five years have seen tremendous strides made in

the VR universe with its gradual establishment as a lodestar in the immersive technology landscape. Indeed, this pace has been exponential, with more advancement in VR technology in the last few years than in the prior two decades combined (see Bailenson, 2018). In general, the growing prominence of VR also reflects the vibrancy of the range of current immersive technologies.

This push toward merging real-world and virtual experiences reflects a “mixed reality” continuum, portraying a spectrum that traverses the physical world toward mediated experiences that delineate the real world. On one end of the continuum is our physical reality: the terrestrial world that allows for sensorial experiences without machine enhancement. Technological advances have allowed us to increase the ways in which we engage this reality. For example, in its most elemental form, our physical reality can be visually represented via cartography (or maps), allowing us to discern aspects that are otherwise inaccessible to the human eye. Urban planners use maps to depict infrastructure changes of other objects in the environment (e.g., buildings). However, maps may be difficult to comprehend, especially in scenarios where they convey more than just geographic information. In such cases, they may be “augmented” with computer-generated information, using tangible user interfaces (TUIs) (Ishii & Ullmer, 1997), allowing the user to stipulate what information is shown (visually) on the map. Using a TUI-based map of renewable energy sources in the Netherlands, city officials could select various locations on the map and interact with the visual information (e.g., green spaces, distance to schools) that was presented in real time (see Maquil, Leopold, De Sousa, Schwartz, & Tobias, 2018).

Whereas TUIs rely on interaction with real-world objects, augmented reality (AR) allows users to add or project digital information directly onto their physical surroundings. AR can be experienced either as spatial AR—where digital information can be superimposed into a user’s physical space (Azuma et al., 2001) or as see-through AR—where a head-mounted display (HMD) can enable users to experience the physical world juxtaposed with the digital world. So, in AR, the goal is to have the user be primarily “present” in the real world. Popular applications of AR include the facial filters provided to users in the messaging app SnapChat, and the mass adoption of Pokémon Go, which enabled users to see the game’s creature inhabit their real-world environment (Rauschnabel, Rossmann, & tom Dieck, 2017). Returning to the example of the urban planners, users would be able to stand in the physical location they identified on a map and, through the lens of their smartphone screen or an HMD, see the physical objects themselves overlaid with information. Indeed, the ability to see the virtual embedded onto the physical has driven the adoption of AR in various domains, with the recent \$480 million contract that Microsoft signed with the U.S. Army to provide the military with HoloLens AR headsets for combat and training being a spectacular example (Brustein, 2018).

Although AR allows users to experience their physical world in a novel, interactive manner, the world itself remains static, and the user exists in a sort of limbo—with one foot in the virtual, and one foot in the physical. Augmented virtuality (AV) allows the user to append “real” information to a digital rendition (Regenbrecht et al., 2004). For example, artists who sketch things they see in immersive VR often allow themselves a small window of real-time video to see a sketch pad in their hands as they draw the digital content.

Anchoring the other end of the spectrum of immersive experiences is VR, where the user’s senses are completely enveloped in a computer-generated world. Thus, in contrast to AR, the objective is for the user to be present fundamentally in the virtual world. Although both AR and VR may rely on HMDs, VR’s headsets eliminate any visual and audio input from the physical world, replacing it with synthetic stimuli (e.g., 3D visuals), creating an experience known as

immersion (Bowman & McMahan, 2007). Immersion—which can be either semi-immersive or completely immersive depending on whether the user’s field-of-view is partial or complete—is an objective state based on the level of sensory fidelity provided by the VR system, contributing to a sense of presence, or the subjective psychological sense of “being there” in the virtual world (Slater & Steed, 2000; Steuer, 1992). Should the urban planners mentioned in the previous examples swap their TUIs and AR equipment for a VR headset, they would experience the city in a completely different fashion. For one, VR would allow them to see the city’s buildings from the ground as life-sized 3D models. As users move their heads to examine the 3D world, the VR set-up would also track their head movement, conveying the illusion that they are indeed inhabiting this new virtual city. Using additional equipment, such as hand controllers, the user would also be able to walk into a specific building, and even interact with the objects in that building as they would in the real world, such as opening and closing doors. Indeed, this very application of VR is becoming increasingly popular for its ability to bring the user into “inaccessible realities” (Portman, Natapov, & Fisher-Gewirtzman, 2015).

Whereas this brief discussion of the mixed reality landscape allows us to place the range of available immersive technologies on a continuum and their research applications, we focus primarily on VR.

Conceptual Premises of Virtual Reality

Among the many explications of virtual reality (see Biocca & Levy, 1995, for early accounts), Blascovich et al. (2002, p. 105) conceptualize immersive virtual environments as “synthetic sensory information that leads to perceptions of environments and their contents as if they were not synthetic.” Another popular definition considers VR to be “a collection of technologies that allow people to interact efficiently with 3D computerized databases in real time using their natural senses and skills” (McCloy & Stone, 2001, p. 913). Although recent scholarship has explored the varied facets of VR (see Blascovich & Bailenson, 2011), there is general agreement that several sensory components such as auditory, visual, haptic, olfactory, gustatory, or a combination of these can be programmed as part of a natural, real-time experience.

VR can thus be considered an amalgamation of various technological capabilities such as the HMD, hand controllers, headphones, and various tracking sensors. These devices combine to immerse the user’s senses in a computer-generated virtual environment (VE). Within this VE, a user’s body is graphically represented by a virtual avatar, or a visual manifestation of the user in the virtual world, with their physical movements synchronously tracked and mirrored by the avatar (Bailenson, 2018).

VR hardware can envelop the user’s audiovisual senses in the VE with a high degree of fidelity. This element of fidelity reflects the level of immersion, based on the input provided to the user’s senses. The degree of immersion, or immersiveness, is closely tied to psychological presence, which, in many ways, is the fulcrum upon which (the effectiveness of) VR pivots (Slater, 2002). The essence of presence is the notion of “being there” and is typically regarded as “a psychological state in which virtual (para-authentic or artificial) objects are experienced as actual objects in either sensory or non-sensory ways” (Lee, 2004, p. 37). Presence thus alludes to how real a VR experience is and is assumed to reflect the degree of vividness of the immersive technology.

In order for the sense of presence to be realized, three technical components, namely tracking, rendering, and display, are critical (Bailenson, 2018). Simply put, tracking is the act of measuring

body movements and is considered to be the most important determinant of presence (see Cummings & Bailenson, 2016). Once a movement is tracked it needs to be rendered accurately. Rendering, then, refers to accurate audio, visual, and tactile representations of a three-dimensional model containing mathematical information. Once rendering is accomplished for each tracked location, it needs to be presented to the user. Display refers to the replacement of the physical senses with digital data and is presented using headsets, microphones, or tactile devices. The precision with which these three technical elements are incorporated has direct bearing on the user's perception of the simulation, with imperfection leading to simulator sickness.

A high degree of immersion leads one to “slip into the shoes” of another person. A user is then able to take the perspective of the other and not merely to imagine the other's point of view but rather to experience it. A profusion of psychological research has shown that perspective-taking can nurture empathy (see Davis, Conklin, Smith, & Luc, 1996); not surprisingly, the ability of VR to stimulate perspective-taking has led to its being touted by filmmakers as the “ultimate empathy machine” (Milk, 2015).

In addition to immersion, the I's of “imagination” and “impossibility” are closely intertwined. The imagination criterion gives full rein to creativity and allows a user to experience those events or scenarios that would not otherwise be possible. In a related vein, the impossibility criterion acknowledges the constraints that would be present in the physical world and showcases how what might be impossible is made possible in VR. For instance, research has consistently shown that spending time in nature is salubrious for mental and physical health. Diverse manifestations of nature-rich environments juxtaposed together (say, a lush mountain with abundant greenery alongside a beach with pristine waters) may be geographically limited in the real world, but they can be easily realized in VR.

Finally, the I of “interactivity” is especially crucial in VR. The construct of interactivity has been explicated ad nauseam, though it is consistently viewed as a process-oriented variable defined by the degree of adaptive engagement afforded by a medium (Sundar, Kalyanaraman, & Brown, 2003). Interactivity in VR manifests itself as the ability of the user to exert influence over virtual objects (see Kalyanaraman & Wojdyski, 2015), thereby affording the user control over outcomes. Interactivity may be enabled by the ability of a VR set-up to translate real-world user inputs (e.g., pressed buttons) into virtual actions with causal influence. For example, VR headsets like the Oculus Go provide the user with one controller that limits the user to interacting with the VE via a laser-pointer. Conversely, headsets like the Oculus Rift furnish the user with two hand controllers and spatial tracking, which allows the user to place their virtual hands into virtual objects, pick them up, and throw them, much like in the physical world.

Effects of the Self

Although the utility of VR in inducing presence and empathy is well-established, what specific responses would a person experiencing VR exhibit? A fruitful way to answer this lies in our consideration of the self. Although the literature on the self is extensive and exhaustive, some perspectives are especially salient to researchers interested in pursuing a scholarly agenda on the psychological effects of VR (see Kalyanaraman, Penn, Ivory, & Judge, 2010). Baumeister's (1998) treatise on the self serves as a linchpin for extracting the most relevant aspects of the self in the VR context. First, the notion of reflexive consciousness presumes a propensity to be cognizant of experiences that are part of our environment and then to have the capability to make sense of those experiences to construct a nuanced understanding of oneself (Baumeister,

1998). Although reflexive consciousness is composed of both “self” and “other” awareness, for clarity of purpose in media effects, the VR environment may represent the “other.” Hence, an awareness of one’s virtual self or avatar would also likely be accompanied by an awareness of the external environment. In addition to self-awareness, self-knowledge suggests that humans construct a “self-digest” (Higgins, 1996) based on an assimilation of knowledge about their selves, which is then used to inform their relationship with the larger VR landscape encompassing them. The ways in which such relationships are created depend on the types of motives that people strive to espouse (Baumeister, 1998). Based on our fundamental understanding of reflexive consciousness, self-awareness, and self-knowledge, users exposed to a VR simulation would exhibit cognitive and affective responses. Furthermore, these psychological manifestations would not just be restricted to the VR environment but would also include the evaluation of those factors that inform the composition of the individual as well as the role of the individual in that VR environment. Several studies have shown profound psychological effects when users interact with their virtual selves. For example, users whose selves were morphed with a political candidate exhibited a clear preference for the (morphed) representation, with such preference happening at an unconscious level (Bailenson, Iyengar, Yee, & Collins, 2008). In another study, users’ perception of their virtual (healthier) selves led to clear behavioral effects, as measured by their visit to a gym subsequently (Fox & Bailenson, 2009).

A second consideration of the relationship between individuals and VR environments is provided by the framework of the extended self. According to the extended-self paradigm, humans regard their possessions as parts of themselves, or as an extension of their own selves (Belk, 1988). Belk relied on William James’s (1890) conception of the self: “A man’s Self is the sum total of ALL that he can call his” (pp. 291–292). Belk explicated the extended self to include categories such as body parts, ideas, and experiences. In VR simulations, the ability to sensorially experience a “real” simulation (see Blascovich & Bailenson, 2011) should lead to the entire process being perceived as part of one’s extended self. Belk also posited ways in which possessions can be incorporated into the extended self by “appropriating or controlling an object for personal use; by creating an object; or by knowing an object” (pp. 150–151). The extended-self paradigm is apt when considering how VR allows for embodiment and tracking of body movements. For example, one experiment showed that tracking body movements while being embodied in a Black avatar decreased bias among White participants (Peck, Steinfeld, Aglioti, & Slater, 2013). In another study, scientists examined one’s ability to control novel bodies and how participants adapted to these novel bodies (Won, Bailenson, & Lanier, 2015).

Psychological Effects of VR

Since Blascovich et al. (2002) proposed the viability of VR as a tool to conduct psychological research, scholarship in this domain has been steady and sustained (see Fox, Arena, & Bailenson, 2009 for a chronological analysis of VR research). VR research has not only relied on established concepts and theories such as presence, perspective-taking, empathy, and the self, but has also progressed based on the uniqueness of the technology that lends itself to conceptual and methodological discoveries. In large measure, this theoretical advancement has occurred as a result of careful and creative experimentation with scholars measuring a range of psychological outcomes.

As mentioned earlier, one of the prime reasons for the buzz surrounding VR is its ability to induce empathy. Empathy has long been seen as having both an affective (the extent of feeling) and a cognitive (the extent of thinking) component. However, both these viewpoints discount

a prosocial component that is (or should be) typically a hallmark of empathy. In VR research, it is more fruitful to adopt the notion of “full-fledged empathy” because it includes a distinct motivational aspect and can help answer the more important question (beyond mere elicitation of empathy) of whether a user is inspired to help others (Zaki, 2014). Theoretically too, the motivational model of empathy is distinct from other postulations because it proposes that empathic experience is volitional and not automatic.

To reiterate an earlier point, allowing a user to experience a scenario from another person’s perspective is particularly compelling in inducing empathy. Although traditional empathy-inducing manipulations in media effects typically have relied on written or audio-visual instructions, these suffer from formidable constraints. For one, asking a user to imagine herself as the other requires the user to formulate a mental representation from scratch. Clearly, the effectiveness of such a manipulation strategy is both dependent on the user’s stock of cognitive resources as well as the extent to which they are motivated to form that representation. Second, it is difficult—if not impossible—to ensure that the mental representation is formed as intended. For example, asking a person to imagine themselves as someone who suffers from schizophrenia may lead to an unintended consequence if the person has a negative stereotype of schizophrenia patients as dangerous and unstable. VR is particularly effective in overcoming both these challenges. By allowing a user to experience exactly what the other’s perspective is, it may preclude the need for mental representation. Second, the perspective-taking scenario can be created with absolute precision as intended, without having to worry about repercussions arising from negative stereotypes (see Bailenson, 2018).

In research that has explicitly examined the role of VR in inducing empathy and subsequent outcomes, the findings have generally shown that VR-induced perspective-taking manipulations can be effective. In one study, experimental participants who assumed the perspective of an older avatar generated significantly more positive words to describe elderly people, relative to those who adopted the perspective of a younger avatar (Yee & Bailenson, 2006). In another study, White participants who were embodied in a Black avatar’s perspective scored lower on implicit-bias measures (Peck et al., 2013). Ahn, Le, and Bailenson (2013) discovered that, across three experiments, participants who assumed the perspective of a colorblind individual in VR not only reported greater empathy, but this also translated into more time spent volunteering to build colorblind-accessible websites. In the mental health domain, Kalyanaraman et al. (2010) showed that a VR-induced perspective-taking manipulation of schizophrenia, combined with a traditional measure of perspective taking, helped generate greater empathy and more tolerant dispositions toward people suffering from mental health issues. This result is promising because it suggests ways to add VR simulations into curricula—VR doesn’t need to replace existing techniques to teach diversity and inclusion, but it can augment them. Although these findings undoubtedly are promising, caveats need to be considered, especially when deploying VR simulations to study disabled and vulnerable populations (as we shall discuss later in this chapter).

Besides empathic consequences, the range of outcomes that can be—and have been—measured are diverse. These include cognitive, affective, and behavioral effects. For example, embodying Einstein in VR led to improved performance on subsequent cognitive tasks, with the most improved scores for those participants with low self-esteem (Banakou, Kishore, & Slater, 2018). In another study in which participants embodied the body of a child in VR, participants overestimated virtual objects in the environment (Banakou, Groten, & Slater, 2013). In an experiment in which children experienced a VR simulation of swimming with whales, several

participants exhibited “false memories” and reported that they had physically visited SeaWorld to see a whale, relative to those who just watched the simulation (Segovia & Bailenson, 2009).

Several studies have also shown how experiencing VR simulations can result in attitude change and formation. When users embodied a virtual lawyer (avatar) who was Black, participants exhibited less racial biases and delivered more conservative evaluations of an ambiguous legal case (Salmanowitz, 2018). Friedman et al. (2014) found that when participants were given the opportunity to undergo time travel in VR and change historic events, it affected their perceptions of morality and guilt. In the consumer behavior arena, shopping in VR (compared to a non-immersive environment) led to more favorable attitudes of the store, as well as higher purchase intentions (Suh & Chang, 2006).

VR is particularly effective in gauging behaviors. Decades of research have shown that people respond to immersive simulations in a manner that is similar to real experiences (see Bailenson, 2018, Chapter 2, for a review). Immersive VR experiences can encourage both how we treat the environment and how we view ourselves in relation to nature. In one study, participants who cut down a virtual tree in VR even used less paper on an unrelated task compared to those participants who watched a video or read a description of the task (Ahn, Bailenson, & Park, 2014). Participants who saw and interacted with their older, future selves changed their savings behavior by agreeing to put more money in a savings account, compared to control conditions such as interacting with their current self (Hershfield et al., 2011). In environmental communication, a recent study found that interactions with at-risk wildlife in VR (specifically larger-sized animals) influenced whether the user would re-enter VR to assist the virtual animal by cleaning it from the effects of oil spills (Pimentel, Kalyanaraman, & Halan, 2018).

Although these examples reflect just a small sample of the diverse domains and disciplines in VR research, we believe that the technology offers some unique opportunities to shed light on some particularly vexing issues that have challenged scholars and practitioners. We address this in the next section.

VR and Accelerated Futures

A commonly held belief in psychology is that we expend considerable energy and thought in crafting various events and scenarios about the future (Lieberman & Trope, 2007). We perceive an object to be psychologically remote from us to the extent that it is faraway both temporally and spatially and one whose occurrence is doubtful. Construal level theory (CLT) links psychological distance from objects to the mental representations or construal of those objects (Trope & Liberman, 2003). Fundamentally, lower-level construals are concrete and well-organized, whereas higher-level construals are reckoned to be abstract and less structured, with the latter representative of greater psychological distance (Lieberman & Trope, 2007). Although it is beyond the purview of this chapter to dwell at length on CLT and psychological distance, we invoke these precepts for two reasons: first, to forward the idea that even psychologically distant events or objects are transformed from abstract and abstruse mental representations to more tangible and vivid ones in VR; and second, to showcase the effectiveness of VR as a solution for issues that are contingent on psychological distance.

Virtual experiences provide scholars with two unique affordances that are integral to advancing the study of human behavior: *interactivity* and *impossibility*. Once immersed in a computer-generated replication of their reality, VR simulations allow user actions to produce consequences, facilitating life-like interactions that allow actions like the tossing of a ball or the swinging of

a sword. However, unlike the physical world, where human navigation is limited by space and time, virtual consequences transcend these boundaries.

Barring a breakthrough of quantum teleportation, human actions, and by extension the consequences of those actions, are bound to the here-and-now. Consider the planting of a tree or the smoking of a cigarette. The initial actions may provide an immediate gratification to the individual in the moment, though the consequences of both of these actions often remain dormant for many years until one can truly grasp the totality of the initial decision. These two actions in VR are bound by no such limitations. Whether seed or smoke, VR allows the user to experience the long-term consequences of their actions immediately after they are initiated. Such situations represent a unique addition to the immersive persuasion toolbox as VR can be an efficient and effective technology to address those issues that are psychologically remote. By accelerating the future, distal and faraway events can be made proximal and immediate using VR. So, what could be decades in the real world would undergo cosmic legerdemain using VR and lead to a compelling, immersive experience spanning no more than a few minutes with appropriate chronological representation. Accelerating futures in VR can be applied to a diverse array of contexts, as we highlight in considering its potential for implementation in health, social, and environmental situations.

Accelerating Health Consequences

The fundamental notion of an accelerated future is driven by the ability to (a) collect user input (e.g., behavior), (b) analyze that input and predict future circumstances, and (c) depict the future circumstance(s) in the moment. Given these requirements, the notion of experiencing an accelerated future clearly is not limited to VR. Indeed, scholars have examined how mediated experiences can facilitate feedback loops that are impossible in the physical world. For example, Ahn et al. (2015) leveraged the concept of accelerated futures for their virtual pet application in which users' physical activity contributed to the accelerated weight loss of their virtual pet. In the real world, such weight loss would be impossible, although the virtual nature of the pet allows the user to obtain the gratification of seeing their virtual behavior immediately rewarded. Although Ahn et al.'s (2015) work was not adapted to immersive VR, it can be argued that the impact of this accelerated future would be amplified by the affordances of VR, such as presence. Kuo, Lee, and Chiou (2016) also found that embodying a virtual avatar that visually represented their weight-reduced self led to healthier dietary decisions in a subsequent task. Although the study did not elicit a weight change in the user's avatar as a result of their action, leveraging this accelerated future framework is a logical progression. Fox and Bailenson (2009) demonstrated a similar effect in that seeing one's virtual self lose weight as a function of exercise caused more physical exercise compared to control conditions.

As another example, consider the effects of overconsumption of sugar. The issue of sugar presents a peculiar and singular challenge. For one, the human body needs sugar to survive. Then, sugar is closely associated with sociocultural mores (e.g., birthdays and other celebratory occasions invariably are accompanied by the presence of copious quantities of "sweets"). Sugar even permeates the language of love ("honey," "sweetheart"), further adding to the difficulties of persuading consumers about the perils of overconsumption. With diabetes fast approaching epidemic proportions, the healthcare systems of the globe are under severe pressure as they struggle to combat the menace. Exacerbating the issue is the fact that, for most

people, the real extent of the damage will not be felt for many years into the future. That is, most people cannot easily “see” what the damage from excess consumption of sugar could be. Based on the notion of accelerated futures, a “sugar body” in VR could portray the short-term (one month, six months, one year) and long-term (five years, ten years) effects of excess sugar consumption.

Accelerating Social Consequences

In tandem with the temporal dimension, the technology’s control over the spatial dimension provides unique affordances that also contribute to the impact of accelerated futures on persuasion. Because VR controls the user’s audiovisual input (what they see and hear, and thereby experience), these inputs can be leveraged to simulate the lived experiences of others. This embodiment has been increasingly examined among communication and psychology scholars. Most notably, Yee’s (2014) work documents a series of studies examining the Proteus effect, which is the prediction that the appearance of one’s avatar influences the user’s behavior across different contexts.

These perspective-taking experiences in VR can have enduring effects. For example, Herrera, Bailenson, Weisz, Ogle, and Zaki (2018) compared VR perspective taking to traditional role playing by allowing the user to imagine or experience homelessness in an accelerated fashion, namely a descent from home ownership to eviction in a quick progression. Both immediately after treatment, as well as two months later, there were differences in attitudes and behaviors with stronger prosocial responses from the VR group.

Accelerating Environmental Consequences

Just as VR can accelerate the effects of a decision on one’s virtual body or that of one’s pet, it can also transform one’s environment (Markowitz, Laha, Perone, Pea, & Bailenson, 2018). Consider the issue of climate change. Despite an overwhelming body of scientific evidence that clearly has shown how human actions have ravaged (and continue to destroy) the environment, the steps that we have taken as a society to combat this devastation is depressingly inadequate. Troublingly, many policy-makers remain unconvinced by the consensus of scientific opinion. Second, the majority of the lay public appears to be dismissive of the scope of the problem, let alone the remedial measures that have to be taken to ameliorate the damage. A large part of the problem resides in the fact that climate science is a hard-to-comprehend topic with numerous nuances. Also, the true damage from climate change likely will not be felt for several more years. Under the circumstances, it is more comforting to pretend that the problem is not as apocalyptic as some scientists proclaim or merely to ignore it altogether. Allied with the fact that most people cannot perceive the extent of future damage, the majority of people also cannot “see” or experience the deleterious effects firsthand. In contrast, a VR user could start an experience in the current time and then chronologically see how this world undergoes a metamorphosis as a result of human apathy (such as excess carbon dioxide leading to ocean acidification, how global warming affects various elements of the earth’s ecosystem, and so on).

In a related vein, urban planners have used VR to simulate a building’s ability to withstand certain environmental threats. This ability increasingly will be applied to environmental advocacy, in which large-scale but slow-moving threats like climate change come to the forefront of the

public conscience. Because such threats are abstract, scholars are increasingly relying on new media technologies to allow audiences to visualize and make sense of such phenomena. For example, consider the projected rise in sea level (which could be several inches in many parts of Florida) over the next several years. It is difficult for audiences to imagine how such an increase will look or impact their daily life. VR would allow individuals to stand on their city's busiest intersection and see the water level rise around their virtual ankles. Traditionally, such simulations were relegated to traditional data visualization techniques (e.g., maps, diagrams). Interactive versions on the web, however, lend credence to the power of accelerating the future as it relates to environmental threats.

Challenges and Opportunities

Given the vastness of the VR universe, we conclude by outlining some pertinent challenges and concomitant opportunities in media effects. As the technology continues to evolve and becomes even more scalable and disruptive, it will continue to present distinctive scholarly possibilities. We discuss some of these in the following paragraphs.

One of the challenges of creating an immersive experience is the degree of care that needs to go into creating a truly meaningful simulation. Although the caliber of VR simulations has undergone an exponential increase, scientists would do well to note several caveats, especially in experiments that rely on high quality perspective-taking scenarios to generate empathy. For example, contrary to expectations, Groom, Bailenson, and Nass (2009) found that when White participants embodied a Black avatar, the embodiment appeared to reinforce their racial stereotypes rather than generate empathy. The authors speculated that their manipulation may not have been powerful enough in cultivating perspective-taking and that it simply could have primed their existing negative stereotypes. Indeed, later scholars have acknowledged this possibility and taken great care to ensure more robust operationalizations of embodiment. Encouragingly, Peck et al. (2013) reversed the effect observed in the Groom et al. (2009) study and stated that embodiment has the potential to alter negative interpersonal attitudes. Thus, an obvious cautionary note is the need to ensure that embodiment manipulations serve their intended purpose and do not unintentionally drive other processes or mechanisms because of specious operationalizations.

We also sound another note of warning in studies that have relied on perspective-taking manipulations to generate empathy toward vulnerable populations. For instance, Silverman (2015) found that participants with normal eyesight were discomfited when made blind as part of the experimental manipulation and that this actually made them discriminate towards blind people rather than empathize toward them. It appears that these participants did not get to reflect on long-term blindness and perceive blind people as able and independent. Findings such as these clearly point to challenges of operationalizing the study design, including the duration of stimulus exposure.

In addition to the strength of embodiment and proper implementation strategies, we also issue a call to judiciously consider the various types of outcome measures and how they may be impacted by a VR experience. Consider for example the finding in Kalyanaraman et al. (2010) that compared a written empathy set condition with a control condition, a VR-only condition, and a combination of the written empathy set condition with the VR condition on perceptions of schizophrenia. Although most of the findings were as hypothesized, with the VR conditions eliciting the greatest empathy and most positive attitudes toward people suffering from schizophrenia, the VR-only condition elicited the highest (most negative) scores on a measure of

social distance compared to the other conditions. Similar to Groom et al. (2009), perhaps mere exposure to the simulation of schizophrenia (in the VR-only condition) may have activated automatic (or less conscious) processing. Participants in this condition probably perceived the simulation as a novel experience and the very act of being able to “experience” what a schizophrenia patient goes through may have induced generally positive responses on measures of empathy and attitudes. However, it bears noting that measures of empathy and attitudes are more likely to evoke socially desirable responses (see McLeod, Deane, & Hogbin, 2002). The social distance measure, on the other hand, is a much more personal construct as it ascertains the degree of participants’ likelihood to embrace someone suffering from schizophrenia into their “inner” social circle. Under such circumstances, it appears that the very act of going through a simulation experience in isolation may activate participants’ “true” selves and suppress the propensity to respond in socially desirable ways. Indeed, as Kunda (1990, p. 483) elegantly stated, “People will come to believe what they want to believe only to the extent that reason permits.” From this, we infer that mere exposure to a virtual simulation, or at least in certain types of simulations, can preserve an “illusion of objectivity” (Pyszczynski & Greenberg, 1987) only to a certain threshold. Clearly, one potential solution to this problem may be to simply provide users with adequate information about the scenario and what the (accompanying) VR experience might offer. Such strategies may be effective beyond the laboratory and showcase how VR can be effective in educational settings.

Methodologically, the perspectival fidelity of VR brings into question the magnitude of the effects associated with VR interventions across a multitude of studies. In fact, across disciplines, scholars have voiced the need for longitudinal investigations in order to establish more definitive conclusions as to how VR truly impacts key psychological and behavioral outcomes well after the intervention is over (e.g., Hupont, Gracia, Sanagustin, & Gracia, 2015).

Another important factor moving forward is testing VR interventions on vulnerable populations, namely children. Several studies have tested VR interventions on school-aged children (Didehbandi, Allen, Kandalaf, Krawczyk, & Chapman, 2016). This may become problematic considering that brain development is both high and susceptible to environmental factors during this period (Lenroot & Giedd, 2006) and the role of VR as an environmental wildcard is relatively unknown. Put simply,

the structure of the brain at any time is a product of interactions between genetic, epigenetic, and environmental factors ... and demands placed by the environment will result in compensatory physiological responses and behaviors that in time may affect brain structures.

(p. 726)

A recent report by Common Sense Media outlines the possible negative consequences to children from VR use and suggests guidelines in terms of amount of time, type of content, and other recommendations for research and for VR media consumption involving children (Aubrey, Robb, Bailey, & Bailenson, 2018).

Recent work has attempted to address this gap in the literature. In their long-term evaluation of the effects of perspective-taking in VR on empathy, Herrera et al. (2018) found that although there were no differences between VR and traditional forms of perspective taking on self-reported measures of empathy, immersive perspective taking did contribute to higher levels of empathic behaviors, namely signing a petition to benefit the homeless. Similarly, a study examining the effects of VR on pro-environmental behaviors found that a week after cutting down a virtual tree, participants

engaged in less paper consumption (Ahn et al., 2014). Although both studies examined effects within a week's time, future work should explore longer periods of time given the experiential nature of immersive experiences and the "impossibility" factor they inherently bring to the user.

Finally, there needs to be a host of research about the technology itself, similar to the decades of research on television, video games, and other media. Concepts such as overuse, addiction, distraction, behavioral modeling, and physical effects such as simulator sickness and eyestrain remain largely unstudied. We just experienced a transition in which this technology went from a few thousand systems in existence (pre-2013) to about 10 million systems in the hands of consumers (2019). The next decade will likely feature some form of VR in living rooms across the world, and the time for media effects researchers to study this technology is now.

Authors' Note

The authors would like to thank Daniel Pimentel for his invaluable research assistance.

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Cross-Cultural Media Effects Research

Jinhee Kim and Kimin Eom

Despite the substantial development of media effects research, one critical dimension, cultures, has not been actively examined. Most of the theoretical accounts have been derived from Western thought systems, and relevant empirical studies have been conducted mostly in the U.S. or Western Europe. Except for the areas of advertising and health campaigning, very little media effects research has used a cross-cultural framework. In this chapter, we review scholarly work that compares and contrasts portrayals of media messages and their uses/effects/processes of one culture with those from a different culture. Cultures are often equated with national groups, but concepts of cultures are diverse, and ambiguities are inevitable. With these caveats in mind, we first introduce three central theoretical frameworks that have guided cross-cultural research, then overview the pertinent prior research on media effects. Subsequently, we point out key challenges to be addressed and suggest new directions. We hope this chapter provides general guidelines that will facilitate cultural inquiry in media effects research.

Theoretical Frameworks of Cross-Cultural Research

Individualism vs. Collectivism

Individualism vs. collectivism is one of the most widely studied dimensions to explain cultural variation (Hofstede, 1980; Hofstede, Hofstede, & Minkov, 2010). Individualistic cultures place greater value on personal rather than group goals. Therefore, individuals are encouraged to express their feelings, thoughts, and needs to strive for success and well-being of themselves. Strong individualistic cultures are usually observed in developed Western countries such as the U.S., Canada, Australia, and the UK. In contrast, collectivistic cultures place more emphasis on achieving in-group rather than personal goals. Prosperity and well-being of in-groups are prioritized, so people are expected to adjust personal needs to achieve the collective goals. Around the world, collectivistic cultures are found more frequently than individualistic cultures. Much research has focused on East Asian cultures, such as China, Japan, and Korea, as collectivistic societies to emphasize the contrast between individualistic vs. collectivistic culture (Heine, 2016; Triandis, Bontempo, Villareal, Asai, & Lucca, 1988).

Individualism and collectivism are reflected across a variety of elements that compose a society, and they generate distinct patterns of ideas, situations, practices, institutions, and products. Individuals constantly engage in cultural systems, so their psychological tendencies are also culturally shaped. Evidence has documented a wide range of differences in psychological tendencies between individuals in individualistic vs. collectivistic cultural contexts (see Heine, 2016; Markus & Kitayama, 1991, 2010 for reviews). Broadly speaking, this body of research that compares individualistic cultures with collectivistic cultures has been conducted with two main frameworks: how the two cultural systems shape distinct ways of viewing (a) the self and (b) objects and events in the world.

Independent vs. Interdependent Self-Views

Research suggests that people in individualistic vs. collectivistic cultural contexts develop different ways of seeing themselves. In individualistic cultures, the self is considered as an entity separate, distinct, or independent from others. In this view, internal attributes such as one's own thoughts, attitudes, and emotions form a core that defines the self. This model of the self that is grounded in personal self is referred to as the *independent view of self*. In contrast, in collectivistic cultures, the self is considered as an entity connected to, related to, or interdependent with in-group members. Thus, social roles and relationships with others are key defining aspects of self-identity. This model of the self that is grounded in social relationships is referred to as the *interdependent view of self* (Markus & Kitayama, 1991, 2010 for reviews on the distinct views of self).

Importantly, the independent vs. interdependent models of self lead to divergent *models of agency* (i.e., implicit guidelines for how to act) that underlie significant cultural differences in psychological and behavioral tendencies (Markus & Kitayama, 2003). In independent models of self, internal attributes are viewed as primary determinants of action and behavior (Kashima, Siegal, Tanaka, & Kashima, 1992). Thus, personal attitudes are strongly predictive of decision-making and behavior (Eom, Kim, Sherman, & Ishii, 2016; Savani, Markus, & Conner, 2008), and people feel uncomfortable when their behavior does not match their attitudes (Heine & Lehman, 1997). People with independent self-views experience negative health and well-being outcomes when they are not able to express their emotions freely (Soto, Perez, Kim, Lee, & Minnick, 2011). For these people, choice is a means to express their own internal attributes, so having personal choice is an essential factor to fulfill intrinsic motivations (Iyengar & Lepper, 1999).

In contrast, in interdependent models of the self, behaviors that correspond to social roles and norms are strongly emphasized, and social norms are often predictive of decision-making and behavior more strongly than personal attitudes (Eom et al., 2016; Savani, Morris, & Naidu, 2012). People with interdependent self-views are not necessarily uncomfortable with the inconsistency between attitudes and behavior. Instead, they feel uncomfortable when their decisions for others do not reflect the others' attitudes and preferences (Hoshino-Browne et al., 2005). Suppressing emotions is not negatively associated with health and well-being among interdependent individuals (Soto et al., 2011), and a lack of personal choice is not necessarily demotivating or depressing (Iyengar & Lepper, 1999).

Analytic vs. Holistic Thinking

People in different cultures also develop divergent ways they see objects and events. In individualistic cultures, people tend to view the world as if it is composed of independent objects, whereas in collectivistic cultures, people hold a holistic view that all elements in the world are

interconnected. Such cultural differences in a basic worldview are manifested in distinct cognitive styles in domains such as attention, memory, attribution, and categorization. These culturally varied cognitive styles are referred to as *analytic vs. holistic thinking* (see Nisbett, Peng, Choi, & Norenzayan, 2001 for a review).

In individualistic cultures, analytic thinking is prevalent. People tend to focus on objects and perceive them as existing independently of their contexts. Descriptions of a scene or event tend to be centered on focal objects rather than on backgrounds, and people's performance in recognition tasks is not critically affected by changes in backgrounds (Masuda & Nisbett, 2001). People in individualistic cultures see themselves as independent agents who act based on internal attributes, so they apply the same view to understanding other actors. Thus, analytic thinkers tend to explain actors' behaviors in terms of their dispositional characteristics rather than in situations that may lead actors to behave in particular ways (Morris & Peng, 1994). Because analytic thinkers use abstract rules and logical reasoning to understand events in the world, they view change as occurring in linear and irreversible ways (Ji, Nisbett, & Su, 2001), and try to resolve contradictions by determining the truth (Peng & Nisbett, 1999; Spencer-Rodgers, Williams, & Peng, 2010).

In contrast, holistic thinking is prevalent in collectivistic cultures. People in these cultures tend to perceive objects as existing in interrelation with their contexts. Thus, holistic thinkers are more likely to describe a scene or event in terms of how focal objects relate to their background, and changes in backgrounds significantly reduce accuracy in recognition tasks by people in collectivistic cultures (Masuda & Nisbett, 2001). People in collectivistic cultures see themselves as interdependent agents whose action occurs on the basis of particular contexts, so holistic thinkers tend to refer others' behaviors to the surrounding situations rather than to dispositional characteristics (Morris & Peng, 1994). Because holistic thinkers believe that the world is continually in flux and interconnected in complex ways, they view change as occurring constantly, reversely, and unpredictably (Ji et al., 2001), and tend to embrace contradiction (termed *naïve dialecticism*) (Peng & Nisbett, 1999; Spencer-Rodgers et al., 2010).

Prior Cross-Cultural Research in Media Effects: An Overview

This section overviews research that has explored distinct cultural portrayals in mediated messages and cultural members' responses to these messages. Whereas numerous previous studies have examined the portrayals primarily in advertisements, recent studies have expanded their scope to news stories, Facebook, and blogs. Relevant studies have also explored how members of different cultures respond to these messages in the domains of persuasion, goal-oriented media-message consumption, and message processing.

Cultural Portrayals in Media Messages

Various mediated messages are cultural artifacts (Morling & Lamoreaux, 2008). Scholars believe that these messages provide a natural context to examine various cultural practices, ideas, or beliefs that may represent cultural members' tastes. Accordingly, numerous cross-cultural quantitative content analyses have been conducted on the basis of the three theoretical frameworks that were just explained.

Using the dimension of individualism vs. collectivism, Han and Shavitt (1994) found that Korean advertisements depicted collectivistic values (e.g., harmonious relationship, in-group goals),

whereas U.S. advertisements portrayed individualistic values (e.g., freedom, independence). Relatedly, Kim and Markus (1999, Study 4) also reported that values of conformity (e.g., “Seven out of ten people are using this product”) were prevalent in Korean advertisements, whereas values of deviance (e.g., “The internet is not for everybody. But then again, you are not everybody”) were prevalent in U.S. advertisements.

Scholars have also explored how independent vs. interdependent self-views are depicted in mediated messages. For example, an analysis of Olympic news stories featuring medalists revealed that U.S. stories focused on athletes’ personal strength, personal style, or their competitors, whereas Japanese stories emphasized athletes’ background, previous success and failure, or close supporters (Markus, Uchida, Omeregic, Townsend, & Kitayama, 2006). Likewise, an analysis of facial expressions captured on public figures’ official posed photos showed that U.S. leaders expressed more smiles and, particularly, *excited* smiles than Chinese leaders, suggesting that expressing culturally valued emotions (i.e., arousing positive affect) may allow independent cultural members to fulfill their interpersonal goal of influencing (vs. adjusting to) others and asserting their needs using some form of action (Tsai et al., 2016).

Using the dimension of analytic vs. holistic thinking styles, Huang and Park (2013) showed that regardless of users’ city locations, the profile pictures of Taiwan Facebook users depicted more background and less face area, whereas U.S. American Facebook users presented more face and less background. The distinct thinking styles are also reflected in news stories. Morris and Peng (1994) showed that *The New York Times* news articles attributed the cause of a Chinese mass murderer targeting U.S. Americans to the murderer’s dispositions (e.g., psychological problems), whereas the *World Journal* (Chinese-language) news articles attributed the same cause to situations (e.g., pressures in Chinese society). This finding was also replicated when the two newspapers reported a U.S. American murderer targeting U.S. Americans.

Because cultures can be continuously changing, a longitudinal framework can be used. For example, Twenge and her colleagues (2010, 2013) showed increasing individualized trends in the U.S. by examining new-born babies’ unique (vs. common) names from 1880 to 2007 and prevalent use of *I, my, me, myself* (vs. *we, our, ours, ourselves*) in books published from 1960 to 2008. Additionally, given the unprecedented growth of online messages (e.g., blogs) that also reflect various cultural practices and values, future research may also consider analyzing the messages by using computer-based techniques, such as using searchers of collocates to quantify mixed emotions (e.g., Grossmann, Huynh, & Ellsworth, 2016, Study 1).

Effects, Uses, and Processes of Media Messages in a Cross-Cultural Context

Effective Persuasion Outcomes

The most productive area of research into cross-cultural media effects examines persuasion involving advertisements and health campaigns. One of the central arguments and findings from this line of research is that if cultural portrayals of persuasive messages match receivers’ cultural orientations, the persuasion effects tend to be amplified. For example, U.S. Americans reported favorable attitudes toward news websites that included each individual’s unique news interest, whereas Chinese people reported favorable attitudes toward news websites that reminded the participants of their group membership (Li & Kalyanaraman, 2013). Similarly, persuasive messages that feature health physicians who emphasize patients’ overall vitality vs. a relaxed lifestyle were preferred by patients who value excited vs. calm affect respectively by

heightening perceived trustworthiness (Sims, Tsai, Koopmann-Holm, Thomas, & Goldstein, 2014). Arousing rather than non-arousing positive affect tends to be valued in the U.S. rather than in East Asia (Tsai, Knutson, & Fung, 2006).

The importance of designing culture-specific health campaign messages to reduce reactance has been also reported. For example, safe-sex messages that pose a direct threat to the independent self (e.g., “*I felt ashamed and sad*” by failing to use condoms) rather than the interdependent self (e.g., “*My partner felt ashamed and sad*” by failing to use condoms) induced unfavorable attitudinal outcomes for European Americans, whereas the responses to the two types of messages did not differ for Asian Americans (Ko & Kim, 2010, p. 63). The finding suggests that European Americans may have applied defensive processing when they encounter self-threat messages. Indeed, when European Americans had a chance to restore their positive self-views by receiving a bogus positive feedback in other domains of health, the reactance disappeared.

Media Message Selection and Gratification

Media scholars have examined goal-oriented message consumption based on theories of uses and gratifications (Rubin, 2009) and of mood management (Zillmann, 2000; see also Chapter 10 in this volume). This body of work has focused on message consumption as a means of fulfilling viewers’ *personal* goals that may include seeking pleasure, meaningfulness, information utility, and personal control, or seeking to validate one’s own personality, among many others (Bryant & Vorderer, 2006). Cultural variables, however, have been neglected in this research domain. Accordingly, *cultural* goals (e.g., maintaining relationship harmony in collectivistic cultures, increasing one’s personal control over a task in individualistic cultures) that may be triggered by prominent cultural ideas have not been identified clearly.

Examination of prior research that explored personal goals suggests that the results may be qualified by cultural variables. For example, need for affect as a personality trait was identified to predict meta-levels of enjoyment and appreciation regarding serious dramas that induce mixed-affect (Bartsch, Appel, & Storch, 2010); however, cultural variables, such as interdependent self-views, may further increase the gratifications. Similarly, pleasure-seeking was identified as a central state goal in selecting messages when viewers experience negative affective states due to failure (Zillmann, 2000). However, pleasure-seeking is seen as unhealthy and undesirable in Asian cultures (Schimmack, Oishi, & Diener, 2002; Spencer-Rodgers et al., 2010). Likewise, regaining a sense of control (e.g., rationalization rather than self-blame) was identified as a central goal in deriving enjoyment from TV messages when viewers experience regret due to cheating on a partner (Nabi, Finnerty, Domschke, & Hull, 2006). However, perceived control is often discretionary, and perceived relationship harmony with close in-group members is a central cultural goal in Asian cultures (Kitayama, Karasawa, Curhan, Ryff, & Markus, 2010). Consequently, future research would benefit from considering cultural concepts to expand prior theoretical frameworks of uses and gratifications and mood management.

Media Message Processing

The three theoretical frameworks explained have also been applied to understanding individuals’ ways of processing various mediated messages. Notably, the processing of advertising messages has been explored using the framework of holistic vs. analytic thinking styles. For example, after seeing print advertisements, Chinese were less likely than U.S. Americans to recall and

generate thoughts regarding focal products; however, members of the two cultures did not differ in their thoughts about the context of the advertisements (e.g., an office setting) (Feng & Frith, 2014). Similarly, responses to negative information regarding brand publicity (e.g., a serious malfunction) were also affected by the thinking styles (Monga & John, 2008). Specifically, holistic thinkers considered *both* external contexts and internal objects, and therefore were less likely than analytic thinkers to change their pre-existing beliefs about a brand in response to negative publicity.

Self-serving bias that results from self-enhancement tendencies is prominent, particularly in Western cultures (Heine, Lehman, Markus, & Kitayama, 1999), so scholars have also wondered whether *third-person effects* are moderated by cultures (Cho & Han, 2004; Hong, 2015; Lee & Tamborini, 2005). The third-person effect is a tendency for individuals to perceive stronger media-message influence on others than on the self, particularly for harmful and undesirable messages (Perloff, 1999). Research on cross-cultural third-person effects conducted in South Korea and the U.S. reported that the magnitude of the effects tended to be weakened among Koreans (Cho & Han, 2004) and by collectivism measured at individual levels (Lee & Tamborini, 2005). Moreover, the *first-person effects* from perceiving desirable messages was stronger among U.S. Americans than among Koreans (Cho & Han, 2004). The moderating effect of cultures appeared to occur because, for East Asians, self-enhancement is not a salient motivation, and social distance between the self and others tends to be small. Future research may measure these relevant variables and test their potential mediation effects.

Challenges and Future Directions

This section addresses several challenges in cross-cultural research, which include conceptual ambiguity of cultures, difficulty in establishing causality, response biases, and non-invariant measures. However, recent developments also show potentials to overcome these challenges. Accordingly, we also suggest several future directions that may encourage scholars to pursue this line of research and to expand the scope of prior media-effects theories. Finally, we discuss implications of emerging media technologies for cross-cultural media-effects research.

Operationalizing Culture

Culture is a broad system in which meanings, practices, and mental processes and responses are loosely organized and often causally connected (D'Andrade, 2001; Kitayama, 2002). Given its inherent complexity, operationalizing culture is a challenging task, so cross-cultural research inevitably relies on the use of proxies for culture. The most common way of operationalizing culture is to use *groups of people* who belong to certain shared contexts by which they are more likely to be exposed to similar cultural ideas, values, and practices. Various social categories have been used to operationalize culture, such as nationality (e.g., American vs. Japanese; Heine et al., 1999), social class (e.g., working vs. middle class; Stephens, Markus, & Townsend, 2007), religious affiliation (e.g., Protestants vs. Jews; Cohen & Rozin, 2001), and region within a nation (e.g., U.S. southerners vs. northerners; Cohen, Nisbett, Bowdle, & Schwarz, 1996).

The biggest challenge in operationalizing culture as a particular group of people is that individuals within a group can differ significantly. One approach that may minimize this challenge is to measure cultural values and traits directly at the individual and psychological level by using attitudinal self-report surveys (e.g., Singelis, 1994). However, such attitudinal responses

may not adequately capture a broad system such as culture. Some critics contend that culture is not just in the head but exists as particular patterns of reality and social contexts beyond internalized attitudes at the individual level (D'Andrade, 2001; Kitayama, 2002).

Although fruitful, these operationalizations of culture as a social category or as individual values or traits complicate the task of establishing causality of cultural influence. One way to address this problem is so-called *cultural priming* (Hong, Morris, Chiu, & Benet-Martinez, 2000; Oyserman & Lee, 2008). This approach views culture as mental representations that can be situationally activated. By experimentally evoking cultural schemas in an individual's mind, the cultural priming methods allow investigation of the causal influence of culture (i.e., cultural representations) on relevant outcomes. One widely used method is to expose participants to certain cultural icons (e.g., national flags, famous people, landmarks) to activate the corresponding cultural representations (e.g., Hong et al., 2000). The pronoun-circling task is another frequently used method. In this task, participants are instructed to search and circle the first-person singular (e.g., I, me, or mine) or plural pronouns (e.g., we, us, or ours) in given stories to activate individualistic or collectivistic orientations, respectively (Gardner, Gabriel, & Lee, 1999).

One important complication regarding the measurement of culture is that it is a dynamic and changing system (Kashima, 2014). Ecological changes in population density, resource availability, or climate can induce significant cultural change and variation (see Varnum & Grossmann, 2017, for a review). For example, individualistic practices and values have increased over the past decades in many societies around the world, partly as a consequence of increasing socioeconomic development (Santos, Varnum, & Grossmann, 2017). Moreover, recent rapid globalization and active intercultural exchange are driving many societies and individuals to become multicultural (Morris, Chiu, & Liu, 2015). How to take the dynamic nature of culture into account will be a critical task in operationalizing culture and examining cultural influence.

Identifying Mediators and Moderators Involving Cultural Differences

Mediators

Cross-cultural scholars often collect data from more than two national groups and explore the differences (e.g., average scores) between the groups. In this context, mediators must be identified and measured, otherwise observed differences in responses may be misattributed to cultural influence, whereas they are actually a result of unconsidered factors (i.e., “cultural attribution fallacy,” Matsumoto & Yoo, 2006, p. 235). Accordingly, cross-cultural studies that use the framework of group comparison often measure possible underlying mediators to explain the observed cultural group differences.

Several mediators have been identified, and among them, Hofstede's individualism vs. collectivism dimension measured at the individual level has been used widely. For example, Koreans reported more support for the censorship of harmful messages—a behavioral component of the third-person effects—than U.S. Americans did, and this cultural difference was mediated by collectivism (e.g., emphasis on in-group members' well-being) (Hong, 2015). Similarly, Korean viewers showed a greater preference for contradictory entertainment messages that induce laughing and crying than U.S. viewers did, and this difference was mediated by naïve dialecticism from holistic thinking style (Kim, Seo, Yu, & Neuendorf, 2014). Furthermore, European Americans had a greater preference for maximized pleasure and minimized pain than Chinese Americans did, and this difference was mediated by the degree of valuing independence (vs. interdependence)

(Sims et al., 2015). However, these mediators are often measured at individual levels and thus tend to reflect cultural members' *internalized* values or beliefs, which are also akin to the operationalization of cultures explained.

In particular, when cultural values are measured as guiding principles at individual levels, results have often been the opposite of the expected cultural differences. For example, U.S. Americans rather than Chinese may endorse higher values on humility, whereas Chinese rather than U.S. Americans may endorse higher values on personal choice (Peng, Nisbett, & Wong, 1997). The authors claimed that cultural members may often endorse values based on social comparison processes (e.g., valuing "respect for the elderly" compared to acquaintances) and values that are deprived in a given culture. This insight suggests that perceived consensus in a given culture may explain cultural influence better than internalized personal views do (Chiu, Gelfand, Yamagishi, Shteynberg, & Wan, 2010). Indeed, cultural differences in compliance behaviors were mediated more by the extent to which cultural members believe that collectivistic behaviors (e.g., consulting one's family before making an important decision) are prevalent in their own culture than by personal values endorsing collective behaviors (Zou et al., 2009). Future research would benefit from exploring perceived consensual (vs. personal) values as possible explanatory mechanisms.

Moderators

Factors that moderate cultural influence on relevant outcomes should be identified because cultural differences are not necessarily uniform. Under certain circumstances, cultural differences are obtained in accordance with specified knowledge structures, but under other circumstances these differences can disappear or even reverse (Choi, Choi, & Norenzayan, 2004). Several studies have attempted to identify factors that moderate cultural influence. For instance, collectivistic appeals featured on advertisements increased purchase intention more for Koreans than for U.S. Americans, particularly when advertisements featured shared products (e.g., furniture); however, this cultural difference disappeared when advertisements featured non-shared products (e.g., toothbrushes) (Han & Shavitt, 1994). Similarly, Koreans were more likely than U.S. Americans to prefer contradictory entertainment messages that induced both laughing and crying, but this difference was larger for positively valenced messages (e.g., comedy) than for negatively valenced ones (e.g., sad films) (Kim et al., 2014).

Expected cultural differences can even be reversed. For example, U.S. Americans vs. Chinese formed favorable attitudes toward beer advertisements that feature other-focused ("*Relaxing near the fire with best friends*") vs. ego-focused ("*Celebrating life's accomplishments*") appeals (Aaker & Williams, 1998, p. 245). Regarding these opposite results of the hypothesized cultural difference, the authors claimed that other-focused vs. ego-focused appeals may have been perceived as novel in the U.S. vs. China. Accordingly, each cultural member may have had great motivation to further elaborate on these messages, and as a result, may have tended to generate favorable thoughts. Findings that either limit or are opposite to the expected cultural differences may inform us that a dynamic approach to culture is necessary. Consequently, researchers should consider the range of applicable domains or situations that can trigger cultural knowledge strongly (Chiu & Hong, 2006).

Methodological Challenges

Cross-cultural research involves numerous methodological challenges (Matsumoto & van de Vijver, 2011). This section focuses on response bias and measurement non-equivalence.

Response Biases

Systematic differences in responses to measurement items can distort the true responses. Three response biases are commonly reported (Grossmann & Na, 2014): *moderacy* (participants' tendency to provide middle points particularly in Asian cultures, such as rating "4" on a seven-point scale), *extremity* (participants' tendency to provide extreme end-points particularly in Western cultures, such as rating "1" or "7" on a seven-point scale), and *acquiescence* (Asian participants' tendency to agree with all measurement items due to their prevalent holistic thinking style).

Cross-cultural scholars have employed multiple ways of standardizing participants' raw scores to minimize these biases (e.g., adjusting an item score by using an individual's mean and standard deviation of the given scale; reviewed in Fischer, 2004); however, this standardization may not fully remove these biases. For example, Tsai et al. (2006) reported no substantial differences between raw and standardized scores when comparing responses of Hong Kong Chinese to those of European Americans. Furthermore, many scholars who use standardizations do not theoretically discuss *why* the obtained differences between cultural groups measure bias rather than meaningful differences (Fischer, 2004). Indeed, these biases may represent a substantial cultural influence (Matsumoto & Yoo, 2006).

To minimize these biases (if any), researchers may explore the relationships between variables by treating cultures as a moderator, rather than by considering the average-score differences between cultural groups (Bond & van de Vijver, 2011; Grossmann & Na, 2014). Self-report measures alone may be susceptible to response biases, so researchers must acknowledge and address the potential effects of such biases. Future cross-cultural research may also benefit from including open-ended responses, participant observations, or archival data when they are accessible.

Measurement Equivalence

Cross-cultural research should be also able to establish the equivalence of most aspects of research, including sampling, conceptual meanings, and empirical methods. Researchers often use back-translations (Brislin, 1970) to ensure conceptual equivalence of translated questionnaire items and original ones; however, these procedures alone do not fully ensure the comparability of measurements.

Three psychometric steps that are hierarchically nested (i.e., configural, metric, and scalar invariance) have been suggested to ascertain measurement equivalence (Kühne, 2013). Odağ, Hofer, Schneider, and Knop (2016) showed these three steps regarding hedonic and eudaimonic motivations underlying entertainment consumption in samples of respondents from Turkey and Germany. First, the pattern of factor structures should be similar across cultures. For example, six indicators of the factor of hedonic motivation and six indicators of the factor of eudaimonic motivation should be loaded in a way that is intended and similar in the two cultures. This structural similarity can be estimated by conducting a multi-group confirmatory factor analysis that considers the cultural group's baseline model. Configural invariance is achieved when the results reveal acceptable fit statistics.

Second, loading coefficients of indicators that belong to a given factor should be similar across cultures. This metric invariance can be estimated by constraining the loadings to be equal across cultural groups, and by using a chi-square test to compare the constraint model to the baseline model. Metric invariance is achieved when the chi-square test is non-significant, although Cheung and Rensvold (2002) have different views. Some scholars (e.g., Byrne,

Shavelson, & Muthén, 1989) further argue that achieving *full* metric invariance is very challenging, and thus if at least two loading coefficients onto one factor are invariant across cultures, partial metric invariance is achieved.

Third, intercept values of indicators of a given factor should be also similar across cultural groups (i.e., scalar invariance). For example, if both Koreans and U.S. Americans are truly satisfied with themselves, they should provide the similar rating for the item, “*On the whole, I am satisfied with myself.*” However, because of self-criticism (vs. self-enhancement) and moderation tendency, Koreans may provide low ratings even if they are truly satisfied with themselves. Cross-cultural researchers often report that scalar invariance tends not to be achieved, and researchers seem to agree that scalar invariance is *not* necessary to achieve measurement invariance (Boer, Hanke, & He, 2018).

Although these measurement-invariance procedures have been recommended in cross-cultural research, few studies have used them (Boer et al., 2018). Similarly, media-effects scholars have just started assessing measurement invariance in cross-cultural research (e.g., Odağ et al., 2016). Boer et al. (2018) suggested that even if researchers cannot achieve measurement invariance, they can still obtain insight into the pertinent topic, and this insight may generate future scrutiny.

Implications for Emerging Media Technologies

The rapid growth of emerging media technologies presents great potential to connect individuals from various cultural backgrounds. However, cultural differences observed in prior studies have also been found in technology products, services, and practices. This observation suggests that existing cultural differences are maintained and perhaps even amplified. For example, one study that explored social network characteristics of Facebook users in 49 nations revealed that individualism scores at national level were positively associated with users’ ego-centric characteristic (Na, Kosinski, & Stillwell, 2015). Specifically, in individualistic cultures, the self was located in the center of the social network, and other members around the self were able to be connected to one another only through the self. Furthermore, Koreans were less likely than U.S. Americans to present themselves positively on Facebook (Lee-Won, Shim, Joo, & Park, 2014) because Koreans readily accept negative aspects of the self (Heine et al., 1999). A social networking service platform itself can dictate global users’ behavior based on its cultural origin (Qiu, Lin, & Leung, 2013). Specifically, Chinese users residing in Singapore tended to engage in benevolent in-group sharing when they used Renren (the “Facebook of China”), whereas the same users tended to engage in positive self-presentation when they used Facebook.

Although this line of studies is valuable in expanding applicable domains of cultural differences, media effects research should assess whether emerging media environments challenge or complement established cultural differences. For this purpose, we suggest three directions for future research.

First, given the great emphasis on enhanced social connections with emerging technologies in the human–computer interaction literature, cross-cultural frameworks focusing on interdependence may be utilized in non-cross-cultural technology environments. For example, U.S. game players with interdependent self-views tended to form heightened para-social interaction with their virtual avatar on the Wii game screen by developing a sense of self-presence (i.e., equating the players’ avatar with the actual-self) (Jin & Park, 2009). Because interdependence that focuses on “we” can be also primed temporally, a study of serious games that require cooperation or role playing that involves other players may implement priming procedures to examine whether they produce effective outcomes, such as increasing the healthy diet or pro-social behavior of the gamers.

Second, despite easy access to a large volume of transnational entertainment messages as a result of internet streaming services (e.g., Netflix), little research has been conducted regarding global audiences after the seminal work on *Dallas* (Liebes & Katz, 1993). Fans of global hit films (e.g., *Harry Potter*) or localized entertainment (e.g., Korean/Japanese TV dramas or films) across nations can be located, and researchers may explore how various cultural backgrounds of these viewers may affect interactions with fictional characters (e.g., para-social interaction) and evaluations of transnational entertainment (e.g., enjoyment and appreciation). For example, viewers from Mexico (collectivistic culture) assessed Harry Potter's social attributes (e.g., selfless, helpful) more strongly than did viewers from Germany (individualistic culture), though the same difference was also found in ego-attributes (e.g., decisive, self-confident) (Schmid & Klimmt, 2011). Future research would benefit from exploring the global audience's selection, interpretation, and evaluations of transnational media messages and cultural differences and similarities in these processes.

Third, traditional research on media effects has focused predominantly on message or argument characteristics, but emerging technology research concerns non-contents or peripheral aspects of the target messages (e.g., interactivity) that may increase users' involvement and perceived control (e.g., Sundar, Jia, Waddell, & Huang, 2015). We suggest that this line of research can be expanded by using cross-cultural frameworks. Specifically, as a result of their holistic thinking style, East Asians may be more likely than Westerners to be influenced readily by peripheral attributes of central messages that can be regarded as equally important in the whole context. One investigation showed that East Asians were more likely than Canadians to rapidly locate the target pictorial images within a long mock webpage, suggesting that East Asians may be skillful in handling context-rich information (Wang, Masuda, Ito, & Rashid, 2012, Study 3). Consequently, prior research on formal features of emerging technologies can be tested in a cross-cultural context to examine whether existing findings obtained from Western cultures can be different in Eastern cultures.

Concluding Remarks

This chapter has introduced central theoretical frameworks of cross-cultural research and an overview of pertinent research into media effects. Notably, areas of advertisements and health campaigns have actively examined cultural differences, perhaps because the messages must reach a wide range of global audiences to be maximally effective. Media messages reflect culturally dominant ideas, values, and practices, and East Asians and European Americans select, interpret, and evaluate these media messages through their chronically or temporarily activated cultural lenses. We hope that this chapter encourages media-effects researchers to conduct cross-cultural research in various domains that go beyond persuasion, in other collectivistic societies than Korea, Japan, or China, and in new cultural dimensions (e.g., tightness-looseness, Gelfand et al., 2011). We also believe that emerging media technologies that allow cultural mixes and exchanges may provide cross-cultural researchers with an exciting opportunity to expand and complement existing media-effects theoretical accounts.

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Index

Locators in **bold** refer to tables.

- accelerated futures, virtual reality 410–413
- accessibility 83–84; attitude 85–87; chronic 83, 84–89, 249; cognitive 248–249; construct 84–85; cultivation theory 74; framing theory 54–55; future of research 94–95; norm 87–88; political priming 92; social media 374–375, 379; stereotypes 93, 248–249
- acquisition, activation, application model (3AM) 227–228
- active-elaborative users 10
- active self 180
- actual self 180
- ad watches 43–44
- addiction: mobile communication 397–398; pornography 237; social media 382
- adolescents: cultivation theory 76; educational media 293, 300; health 312; identity 185; selective exposure 150; sexuality and media depictions 229, 230, 231–232, 233, 234, 236; social cognitive theory 106, 108; social media 232; violence and aggression 218, 219
- advertising: African Americans 245; to children 277–278, 297–298; effects and effectiveness 275–276, 285–286; future research 282–285; health 309; psychological/individual effects 278–281; resistance and advertising avoidance 281–282; social effects 276–278
- affect, eudaimonic entertainment 261–263
- affective disposition theory (ADT) 329–331
- affiliation goals 156
- affordances: social media 373, 374–376, 379, 380, 382; virtual reality 410–411
- African Americans: priming theory 93; stereotypes 93, 244–246, 248–249
- age: developmental theories 296–298; entertainment selection 329; virtual reality in reducing stereotypes 409; *see also* adolescents; children's media
- agency, self-views 420
- agenda setting: accessibility 85; citations of term 18, **20**, 21; framing theory 54–55; news 37; political priming 92; social media 42–43
- aggression: desensitization theory 214–215; differential susceptibility 217–219; effect sizes 218, 219–221; and emotions 169–170; enjoyment and reception 331–332; excitation transfer theory 216; historical context 211–213; priming theory 90–91, 215; research conclusions 221–222; research context 211; sexual 229, 234, 236; social cognitive theory 104–105, 213–214; video games 216–217, 347–349; *see also* General Aggression Model
- AIDA model 278–281, 284
- algorithms, advertising 282–283
- alteration, social media 376–381
- always-on environment 12, 268, 351
- American Academy of Pediatrics (AAP) 290, 292
- amplification, social media 376–381
- analogies, framing theory 57
- analytic thinking, cultural context 420–421, 422
- Anderson, C. A. 216–217
- anonymity, social media 375
- anthropomorphism 358–359
- applicability effects, framing theory 58–59
- appreciation 259–260; *see also* enjoyment
- Aristotle 115–118
- arousal: emotions 166–167; General Aggression Model 90–91; violence and aggression 214–215, 216
- artificial intelligence 366, 383–384
- Asian Americans: priming theory 93; stereotypes 93, 247, 249
- attention: advertising 275; and self 180–181; social cognitive theory 102
- attitude: advertising effects 279–280; framing theory 59–60; narrative effects 133–136; operationalizing culture 424–425; selective exposure 156; and self 185–186;

- sexuality and media depictions 235–237; theoretical foundations 115–118; virtual reality in reducing stereotypes 410
- attitude accessibility 85–87
- attitude congruency bias 122
- attribution theory 52
- audience research 6
- audience selectivity: global appeal 429; issue publics 151–152; news effects 38; *see also* identification
- augmented reality (AR) 405–406
- augmented virtuality (AV) 405
- availability heuristic: accessibility 84–85; cultivation theory 74; political priming 92
- avatars: customization 359, 376; priming theory 94; Proteus effect 30, 94; social cognitive theory 108–109; virtual reality 383, 406, 412; virtual reality use in reducing stereotypes 408, 409–410, 413
- awe 262–263
- babies, educational media for 290–291, 292
- balance theory 10
- Bandura, Albert 22, 100, 108, 213
- bandwidth, social media 375
- behaviorism: historical context 100, 196–197; in journals 21
- behaviors: attitude accessibility 85–86; cultivation theory 76–77; health 310–311, 314–316; intended effects 106–107; narrative effects 133–136; priming theory 88–89; selective exposure 154–155; and self 185–186; sexuality and media depictions 229–231, 233–237; social cognitive theory 101–109; use of mobiles 390, 395–396, 397–398; video games 350; violence and aggression 213–214; virtual reality 410
- beliefs 133–136; *see also* attitude; behaviors
- Bennett, W. L. 39, 56
- Berelson, B. 147
- Berkowitz, L. 90
- big data: advertising 282–283; right to be forgotten 383
- Bilandzic, H. 131–132, 133
- blood oxygen level dependent (BOLD) effect 204–205
- Bobo doll studies 213
- body image: exposure 172; sexuality and media depictions 229; social comparison theory 183; social media 108
- books for children 295
- brain studies *see* neuroscience
- Brehm, J. W. 122–123
- Brock, T. C. 136
- Bryant, J. 18, 19, 22, 27, 151
- Bushman, B. J. 216–217
- Busselle, R. 131–132, 133
- cable television: media choice 146–148; multiplication of channels 39
- capacity model 298
- Center for a Commercial Free Childhood (CCFC) 290–291
- ceteris paribus* 55
- channels: multiplication of 39–40, 147–148; narrative effects 134–135; *see also* media choice
- characters: anthropomorphism 358–359; narrative effects 131, 134, 136, 138; persuasion 119; reception and enjoyment 329–330, 333; self 183–185; sexuality and media depictions 231–232; social cognitive theory 105, 108–110
- children's media: advertising 277–278, 297–298; co-viewing with parents 294–295, 301; fright reactions 165; intended effects 106–107; prosocial behaviors 266; screen time 290–291, 299–300; suspense 332–333; violence and aggression 212, 213–214, 218, 221; virtual reality 414; *see also* educational media for children
- China, cultural context 422, 423–424, 426
- chronic accessibility 83, 84–89, 249
- Chung, C. J. 18, 19
- civil inattention 394
- climate change, accelerated futures 412–413
- co-viewing, parents-children 294–295, 301
- cognitive accessibility 248–249
- cognitive dissonance theory 152
- cognitive functional model (CFM) 169
- cognitive load theory 360–361
- cognitive overload 361
- cognitive processing: advertising 278, 279; eudaimonic entertainment 263–265; interactive media technologies 360–362; media effects theories 21–22, 27, 29; *see also* social cognitive theory
- cognitive theory perspective 9
- cognitive turn: development of social cognitive theory 100–101; emotions 171; in journals 21; psychology 6–7, 197
- collective action, social media 380–381
- collectivistic cultures 419–420, 421–422, 425–426, 429
- commercialization, media content 278
- communication: framing theory 55–60; historical context 2–6; mass communication 4–6, 16, 17–18; models of 2–3; social media 376–377
- communication disciplines 1
- communication technologies: health 317–318; journals 22; priming theory 94; user-generated content 139
- Computer-Mediated-Communication (CMC) studies 23–25
- computers are social actors (CASA) 358, 366
- conative effects 278, 280–281
- conditionality paradigm 26–27
- confirmation bias 122, 152, 156, 157
- connectedness 187, 262, 265–266; *see also* social context
- consonance, news effects 38
- construal level theory (CLT) 410
- construct accessibility 84–85
- construction process, cultivation theory 74
- consumers: advertising 276–277; responses to new forms of advertising 283–285
- contingency in user-system interactions 363
- contraception use: cross-cultural media effects research 423; media depictions 233–234; social cognitive theory 105, 107
- conversational control, social media 375
- corporate actors, framing theory 56
- counter-cultivation 77
- crisis scenarios, use of mobiles 395–397

- cross-cultural media effects 419; research challenges and futures 424–429; research overview 421–424; theoretical foundations 419–421
- cultivation analysis 69
- cultivation differential 71
- cultivation theory 69–71; accessibility 84; challenges to research 76–77; citations of term 18, 20, 21, 22; conditionality paradigm 26; criticism and critique 71–73; emotions 171; genre 74–75; inside the black box 73–74; realism 75–76; sociological approach 71; stereotypes 249; video games 349–350
- cultural context: advertising effects 285; cross-cultural media effects research 419–429; framing theory 53, 57; moderators of eudaimonic media experiences 267; portrayals in messages 421–422; *see also* social norms
- cultural priming 425
- curriculum-based content 292–293
- customization: advertising 282–283; future research 365–366; interactive media technologies 359–360, 365–367
- cyberbullying 379
- data *see* big data privacy
- decisional balance 118
- defensive reactions 122–124
- deliberative behaviors, priming theory 88–89
- demography, cultivation theory 70
- descriptive norms 87–88
- desensitization 166–167, 214–215
- determined, passive users 10
- developmental theories 296–298
- Dewey, J. 2
- differential susceptibility to media effects model (DSMM) 10–11, 150, 217–218
- diffusion of innovations, citations of term 20, 21
- dimensional views of emotion 163–164
- direct effects, persuasion 121
- disabilities: in learning 301; virtual reality in reducing stereotypes 409, 413–414
- disaster scenarios, use of mobiles 395–397
- disclosure *see* self-disclosure
- disconfirmation bias 122
- discrete views of emotion 163–164
- display, virtual reality 406–407
- dispositional factors, media choice 148
- Drinkmann, A. 9–11
- drive theory: emotions 168; persuasion 116–117
- driving behaviors, video games 350
- dual coding theory 120
- dynamic-transactional approach (DTA) 149–150
- e-books for children 295
- ecological momentary assessment (EMA) 299–300
- Edelman, M. J. 56
- education-entertainment *see* entertainment-education
- educational media for children 290–291, 301–302; future research 299–301; interactivity 295–296; learning from 291–295; theoretical foundations 296–299
- effect sizes: news 37; persuasion 121; violence and aggression 218, 219–221
- elaboration 264
- elaboration-likelihood model (ELM) 10–11; citations of term 20; conditionality paradigm 26–27; interactive media technologies 361–362; narrative effects 131; persuasion 116
- electroencephalogram (EEG) 203–204
- Electronic Activated Recorder (EAR) 300
- elevation 262
- Eliot, T. S. 2
- embodiment: media psychophysiology 198, 206; virtual reality 408, 409–410, 413–414
- emergency scenarios, use of mobiles 395–397
- emotional broadcaster theory (EBT) 170
- emotional contagion 335
- emotional processing 23, 27, 28, 29
- emotional regulation 263–264
- emotions 163, 172–173; in advertising 280; character involvement 330–331; definition 163–164; eudaimonic entertainment 258–268; health 312, 315; limitations and future directions 170–172; as the mechanism of effect 167–170; media choice 164; mobile use in acute situations 395–396; as outcome of media exposure 165–167; persuasion 116–117; reception and enjoyment 335; virtual reality 408–410
- emotions-as-frames model (EFM) 169
- empathy: characters 330–331; eudaimonic entertainment 261–262; interactivity 363; persuasion 116–117; virtual reality 408–410, 413, 414–415
- emphasis framing 63–64
- engagement: eudaimonic entertainment 264, 266; flow 133, 363; interactive media technologies 362–364; narrative 131–132, 133, 334; political 266; reception and enjoyment 329–335
- English language 12
- enjoyment: as concept 324–325; and emotions 165–166; entertainment theory 329–335; hedonic motivations 258, 259–260, 263, 264, 427; media effects theories 23; reasons for watching eudaimonic entertainment 258–260; video games 343–346
- entertainment: as concept 324–325; motives for selection 325–329; reasons for watching 258–260; reception and enjoyment 329–335; research challenges and opportunities 335; video games as 343–346; *see also* eudaimonia
- entertainment-education: health 309, 312–313; social cognitive theory 107; video games 346–347
- entertainment overcoming resistance model (EORM) 313
- entertainment theory 329–335
- environmental awareness, use of virtual reality 412–413, 414–415
- epistemologies 9–10
- equivalence framing 63–64
- ethics: fear appeal 315; social media research 382–383; *see also* moral judgment
- ethos (persuasion) 117

- eudaimonia 258; components of eudaimonic media experiences 261–264; cultural context 427; future research 268–269; moderators of eudaimonic media experiences 267–268; motivations and appreciation 258–260; outcomes of eudaimonic media experiences 264–266; predictors of eudaimonic media experiences 260–261
- eudaimonic narratives 188–189
- evergreen theories 21, 28
- excitation transfer theory 166, 167, 216, 332–333
- exemplification theory 120, 311
- expectancy-value based protection motivation theory (PMT) 168
- experience-taking 136
- exposure: aggression 169–170; cultivation theory 74–75; and emotions 165–167, 172; framing theory 60; and identity 182; screen time for children 290–291, 299–300; sexuality and media depictions 231–232, 236–237; social cognitive theory 108; *see also* selective exposure
- extended elaboration likelihood model (extended ELM) 131, 312–313
- extended parallel process model (EPPM): fear appeal research 168; health 311, 312; persuasion 116–117
- extended self paradigm 408
- Facebook: cultivation theory 77; emotions 173; and identity 181, 182–183; privacy 378; social cognitive theory 108; social networking 374; spiral of silence theory 42; use of data 382; voting behavior 380–381
- facial EMG 200, 202
- fact-checking 44
- fake news 43
- favoritism 249
- Fazio, R. H. 91, 94
- fear appeal 168–169, 280, 315
- fear responses 168, 298–299
- Festinger, L. 152
- filter bubble 76
- fitness trackers 318, 360
- fixed spaces, social media 377
- flexible spaces, social media 377
- flow: interactive media technologies 363; narrative effects 133
- formats: multiplication of channels 39–40, 147–148; narrative effects 134–135; *see also* media choice
- foundational human needs 325–326
- frame analysis 52
- frame building 56–57
- frame distribution 62
- frame selection 63
- frame setting 58–60
- frames of reference 52
- framing theory 51; accessibility 85; citations of term **20**; communication studies 55–60; explanatory models 53–55; future of 60–64; narrative effects 135; news effects 39; theoretical foundations 51–52
- Frankenfood metaphor 57
- fright reactions 165
- functional magnetic resonance imaging (fMRI) 203, 204–205
- Gamson, W. A. 53
- Gaudet, H. 147
- gender: entertainment selection 328; masculinity 93; moderators of eudaimonic media experiences 267; mood adjustment approach 153–154; priming theory 93; sexuality and media depictions 229–230, 232, 234, 235; social cognitive theory 106; stereotypes 93, 244; video game stereotypes 349–350
- General Aggression Model (GAM) 216–217; and emotions 169–170; priming theory 90–91; selectivity paradigm 25; video games 347, 348
- genre: cultivation theory 74–75; enjoyment and reception 331–333; perceived realism 76
- Gerbner, G. 38, 69–72, 75–77
- global audiences 429
- global positioning system (GPS) 282
- goal attainment, and self 180–181
- goal impediment theory 281–282
- Goffman, E. 52, 394
- granular forms, persuasion 119
- gratifications *see* uses and gratifications
- Green, M. C. 136
- Groeben, N. 9–11
- group messaging, use of mobiles 391
- group solidarity, emergency scenarios 396–397
- harassment, social media 379
- hashtags 62
- Hawaii missile incident 395–396
- Hawkins, R. P. 73–74
- head-mounted display (HMD) 405
- health 308–309, 318; advertising 277; future research 316–317; interaction with wearable tech 360; newer communication technologies 317–318; research limitations and controversies 313–316; social cognitive theory 105–106, 107–108; social media 379–380; theoretical foundations 310–313; types of health media and their effects 309–310; virtual reality 411–412
- health belief model (HBM) 310
- heart rate 200–201
- hedonic motivations 258, 259–260, 263, 264, 427; *see also* eudaimonia
- Heidegger, M. 2
- Heider, F. 52
- heuristic processing: cultivation theory 74; stereotypes 248
- heuristic-systematic model (HSM): interactive media technologies 361–362; persuasion 116
- Hierarchy of Advertising Effects 278–281, 284
- Hirsch, P. 72
- historical context: behaviorism 100, 196–197; communication studies 2–6; media effects research 7–11, 16; social cognitive theory 100–101; social media effects 381; violence and aggression 211–212

- holistic thinking, cultural context 420–421, 422
 hope 262
 Hovland, C. 4
 Hughes, M. 71–72
 human-computer interaction (HCI) 358–367; *see also* interactivity
 human nervous system 199–205
 humanities, communication studies 5–6
 humor, political entertainment 44–45
 hypodermic theory 7
- ideal self 180
 identifiability, social media 375
 identification: narrative effects 131, 134, 136, 138;
 persuasion 119; reception and enjoyment 329–330, 333;
 self 183–185; sexuality and media depictions 231–232;
 social cognitive theory 105, 108–110
 identity 179; demands and constraints 186–187;
 eudaimonic narratives 188–189; mediated relationships
 181–186; and self 179–181; social identity theory
 249–250; social media 377; stereotypes 250;
 temporarily expanded boundaries 186–188
 imagery: narrative effects 130–131; persuasion 120
 imitation: and identity 182; violence and aggression
 212–214
 immersive narrative experiences 132–133, 135; *see also*
 narrative effects
 immersive virtual environment technologies (IVET)
 108–109, 406, 407; *see also* virtual reality
 impression management 377
 independent self-views 420, 422
 Indexing Hypothesis 56
 indirect effects, persuasion 121
 individual effects: advertising 278–281; differences in
 motives and selection 328–329
 individual identity 186–187; *see also* identity
 individualistic cultures 419–420, 421–422, 425–426,
 428, 429
 infants, educational media for 290–291, 292
 information diffusion, social media 380
 information effects, framing theory 53, 61–62
 information processing 10–11, 197
 information recall 361
 information sufficiency principle 116
 informational utility (IU) 152–153
 ingroups 249
 injunctive norms 87–88
 Innis, H. 5
 Instagram 108
 institutional process analysis 69
 integrated behavioral model (IM) 310–311
 intended effects: advertising 278; social cognitive theory
 106–108; video games 343–347
 interactivity 357–358; advertising 282; computers that
 motivate and persuade 359–360; educational
 media for children 295–296; enhancing user
 engagement 362–364; future research 366–367;
 health media 318; human-computer interaction
 (HCI) 358–367; impact on cognitive processing
 360–362; mass self-communication 29–30;
 media psychophysiology 206; narrative effects
 139–140; parasocial relationships 186; research
 controversies and challenges 364–366; social media
 374–375; technological affordances 365–366; user
 responses 358–359; video games 342, 344, 350; virtual
 reality 407
 interdependent self-views 420, 422, 423, 428
 interdisciplinary research: health 314; human-media
 interaction 358
 interests, selective exposure 151–152
 Internet *see* online media
 interpersonal communication research 38–39
 involvement, eudaimonic entertainment 264, 266; *see also*
 engagement
 Iran-Contra media coverage 91
 issue publics, selective exposure 151–152
 Iyengar, Y. 39
- James, William 179
 Japan, cultural context 422
 Jensen, K. B. 6
 journalism 38; historical context 4–5; *see also* news
 journals, use of media effects theories 17–24, 27–28
 judgmental approach 10
- Kafka, F. 2
 Kahneman, D. 74
 kairos 117–118
 Kamhawi, R. 18, **19**
Karate Kid study 215
 Katz, E. 3–4, 120
 Kinder, D. R. 91
 knowledge gap theory 18, **20**
 knowledge, news effects 37
 Korea, cultural context 421–422, 424, 425
 Krosnick, J. A. 91
- Lang, A. 6–7
 language, online media 12
 Lasswell, H. 4
 Latino stereotypes 246–247
 Lazarsfeld, P. F. 3–4, 24, 120, 147
 learning disabilities 301
 learning process: cultivation theory 74; four human
 capacities 101–102; video games 346–347; *see also*
 educational media for children; social cognitive
 theory
 learning theory perspective 9
 learning transfer 296
 level of effects 59–60
 Levinas, E. 2–3
 Lewin, K. 4
 Lewis, E. St. Elmo 278
 limited capacity model **20**, 360–361
 limited capacity model of motivated mediated message
 processing (LC4MP) 167–168
 linear theory, citations of term 18, 21
 locative media 394–395

- logos 115–116
- long-term effects: advertising 385; cognitive processing 361; cultural context 422; desensitization theory 214; sexuality and media depictions 229, 230; sexually explicit media 233, 234, 235, 236; social cognitive theory 110; violent video games 348; virtual reality 414
- machine heuristic 362
- machine learning 283
- mainstreaming, cultivation theory 71
- mapping, virtual reality 405
- masculinity 93; *see also* gender
- mass communication: historical context 4–6; prominent theories 17–18; as term 16
- mass self-communication 29–30
- massively multiplayer online video games (MMOs) 326, 334–335, 344, 383
- masspersonal communication channels 373, 374
- material self 179
- materialistic consumer culture 276–278
- materiality, social media 375
- McLuhan, M. 5, 21
- meaningful media experiences: and emotions 166; eudaimonic entertainment 260–261, 263–264; narrative effects 138
- measurement science 198–199
- media choice 146; emotions 164; motives for selection 325–329; reasons for watching 258–260; technologies 146–147; terminology 147–148; *see also* selective exposure
- media content, commercialization of 278
- media effects: definition 16–17; online and connected world 11–12
- media effects models 17; *see also* media effects theories
- media effects theories 1; communication studies 2–6; core features 24–27; definition 17; future of 28–30; historical context 7–11, 16; prominent theories 17–24; psychological turn 6–7; use in journals 27–28; what is a media effects theory 16–17
- media multiplexity 378
- media priming *see* priming theory
- media psychophysiology: desensitization theory 214–215; future research 205–206; human nervous system 199–205; measurement science 198–199; and neuroscience 195–198; as term 198
- media system dependency theory **20**
- Media Use 2.0 28–29
- mediated relationships 181–186
- Mediated Wisdom of Experience perspective (MWOE) 188–189
- medium dependency 18
- medium theory 21
- memory: accessibility 83–86; nostalgia in advertising 280
- mental effort 294
- mental health: emotions 172–173; smartphone addiction 397–398; social media 379–380
- mental simulation, narrative effects 131
- message design: health 312, 315–316; persuasion 118–120
- message-effects research 364
- message processing: cross-cultural media effects research 423–424; elaboration-likelihood model 116, 131; emotions 167–168, 201; persuasion 54, 122, 123, 124
- message sharing 170
- message system analysis 69
- metaphors: framing theory 57; persuasion 119–120
- microcoordination 390–391
- microlevel media-effects theories 9
- Miron, D. 18, **19**, 22, 27
- misinformation: health 317–318; news media 43–44
- mixed reality continuum 404–406
- mobile communication 389–390, 398; in acute situations 395–397; addiction 397–398; definition 390; in everyday life 390–395; impact on cognitive processing 361
- mobile social networks (MSNs) 395
- Modality-Agency-Interactivity-Navigability (MAIN) model 362
- modality, citations of 21
- modality interactivity 360
- model minority stereotypes 93, 247, 249
- model of intuitive morality and exemplars (MIME) 137
- modeling, and identity 182
- moderate media effects 7–8
- Modigliani, A. 53
- mood adjustment approach 153–154
- mood management theory (MMT) 151, 153–154, 164
- moral judgment: affective disposition theory 331; narrative effects 136–137
- motivated reasoning 122
- motivation: emotions 164, 167–168; entertainment selection 325–329; eudaimonic entertainment 258–260; interactive media technologies 359–360; selective exposure 148; social cognitive theory 102–103; video games 344–345
- Motivation and Opportunities as DEterminants (MODE) model 88–89, 91
- motor reproduction, social cognitive theory 102
- multiplication of channels: news media 39–40; selective exposure 147–148; *see also* media choice
- multitasking: impact on cognitive processing 361; Media Use 2.0 28–29
- music, African Americans 245–246, 250
- Muslim terrorist stereotype 249
- narrative aesthetic absorption 132
- narrative effects 130; attitudes and behaviors 133–136; imagining and understanding the human mind 136; immersive narrative experiences 132–133; meaningful media experiences 138; models of 130–132; social and moral judgment 136–137; transcending one's horizons 137–138
- narrative engagement 131–132, 133, 334
- narrative understanding 131–132
- narratives: citations of theory 18; cultivation theory 75–76, 77; definition 130; educational media for children 294, 298–299; eudaimonic 188–189; identity 185; reception and enjoyment 329–331, 334; social cognitive theory

- 110; temporarily expanded boundaries 186–188; video games 344
- National Television Violence Study (NTVS) 212–213
- Native Americans, stereotypes 247–248
- navigability 359, 360, 362
- negotiated media effects 8
- neo-associationistic model 90
- nervous system 199–205
- network association, social media 375–376
- Neuman, W. R. 26
- neuroscience: future research 205–206; human nervous system 199–205; measurement science 198–199; and media psychophysiology 195–198
- new media *see* communication technologies social media virtual reality
- news 36–39; African American representations 246; frame building 56; framing theory 53–64; health topics 309, 310; Latinos representations 247; misinformation 43–44; multiplication of channels 39–40; partisan media 39–41, 43–44; polarization of the political environment 40–41; political entertainment 44–45; political priming 91; social media 41–43
- newspaper science 4
- norm accessibility 87–88
- norms *see* behaviors social norms
- nostalgia in advertising 280
- observational learning 9
- Ogden, C. K. 2
- on-demand television 76–77
- online harassment 379
- online media: always-on environment 12, 268; cultivation theory 74; health information 317–318; media choice 146–147; media effects 11–12
- operationalizing culture 424–425
- ought self 180
- parallel processing model (PPM) 168
- parasocial interactions (PSI) 333–334
- parasocial relationships (PSR) 186, 333–334
- parental media intervention: advising about media use 300–301; co-viewing 294–295, 301; sexuality and media depictions 231
- Park, D. W. 3, 4
- participatory cultures, social media 376
- partisan media 39–41, 43–44
- passive media, for children 295–296
- pathos 116–117
- Payne Fund Studies 211–212
- people of color: African American stereotypes 93, 244–246, 248–249; attitude accessibility 86; Latino stereotypes 246–247; model minority stereotypes 93, 247, 249; priming theory 93; social cognitive theory 106; virtual reality in reducing stereotypes 408, 410, 413
- perceived majority opinion 42
- perceived realism 75–76
- perceptual bandwidth 363
- personal identity 186–187, 189; *see also* identity
- personal relationships: mobile communication 392–394; social media 378
- personality traits: and emotions 165–166; entertainment selection 329; moderators of eudaimonic media experiences 267–268
- personalization: advertising 282–283; future research 366–367; interactive media technologies 359–360, 365–367
- perspective-taking, virtual reality 409, 413, 414–415
- persuasion 115, 124–125; advertising 276, 281; campaign processes 120–121; cross-cultural media effects research 422–423; emotions 168–169; fear appeal 168–169, 280, 315; framing theory 54; interactive media technologies 359–360, 366; message design 118–120; resistance 122–124; theoretical foundations 115–118; video games 346–347
- persuasion knowledge model (PKM) 281
- Peter, J.: conditionality paradigm 26–27; differential susceptibility to media effects model 10–11; microlevel media-effects theories 9; selective exposure 150; violence and aggression 218–219
- Peters, J. D. 2–3, 9
- physiological responses 198; *see also* media psychophysiology
- Pingree, S. 73–74
- play 325–326
- pleasure in consuming entertainment *see* enjoyment hedonic motivations
- polarization of the political environment 40–41
- political context: cultivation theory 71; frame building 56; moderators of eudaimonic media experiences 267; social media 380–381
- political engagement 266
- political entertainment 44–45
- political framing 85
- political news *see* news
- political priming 91–92
- pornography 232–237
- portable media 390; *see also* mobile communication
- possible selves 180
- Potter, W. J. 18, 19, 22, 72–73
- power users 365–366
- pregnancy 231
- preschool programs 292–293
- presence theory 363
- Price, V. 92
- prime strength 89–90
- priming theory 9, 83, 89; avatars 94; characteristics of priming effects 89–90; citations of term 18, 20; future of 94–95; political 91–92; stereotypes 92–93, 248–249; violence and aggression 90–91, 215
- privacy: cultivation theory 77; social media 377–378, 382–383
- prosocial gbehaviors 266, 428
- prospect theory 314
- protection motivation theory (PMT) 168
- Proteus effect: accelerated futures 412; avatars 30, 94; priming theory 94
- psychological effects, advertising 278–281

- psychological self 179–180
 psychological sweating 201–202
 psychological turn 6–7
 psychology, history of 6–7, 196–197; *see also* neuroscience
 psychophysiology *see* media psychophysiology
 public service announcements (PSAs) 87–88
 public settings, effect of mobiles 394–395
 pull model of advertising 283–284
 push model of advertising 283–284
- race-based representations 93, 243–250
 racism: African American stereotypes 93, 244–246, 248–249; attitude accessibility 86; Latino stereotypes 246–247; model minority stereotypes 93, 247, 249; priming theory 93; social cognitive theory 106; virtual reality in reducing stereotypes 408, 410, 413
 rap music 245–246, 250
 rape 229, 231
 Rapoport, Anatol 69
 rational appeals, advertising 280
 reactance: advertising 281; health 313; persuasion 122–123
 real self 180
 realism: children's media 297; cultivation theory 75–76; video games 349–350; virtual reality 404
 realism heuristic 362
 reasoned action perspective 310; *see also* theory of reasoned action (TRA)
 recency, priming theory 89
 reception processes, entertainment 329–335
 reciprocity 358
 recommender systems: advertising 283; future research 366–367
 reductive-modifying users 10
 reference dependency 52
 reinforcement: selective exposure 150; social cognitive theory 103, 108, 110
 reinforcing spirals model (RSM) 25, 149–150
 relationship development, social media 378
 relationship maintenance, social media 378
 rendering, virtual reality 406–407
 resonance, cultivation theory 71
 response biases 427
 retention, social cognitive theory 102
 retrospective imaginative involvement (RII) 186
 rhetoric 4, 115–118
 Richards, I. A. 2
 right to be forgotten 383
 risk: health 314–315; sexuality and media depictions 230, 233–234; social cognitive theory 105–106; video games 349–350
 risk ratios 71
 Rogers, E. M. 88, 107
 Rosengren, K. E. 6, 69
 Roskos-Ewoldsen, D. R. 86–87
- same-sex relationships, media depictions 234
 satire 45
 scare tactics *see* fear appeal
 schema theory 9, 293–294, 298–299
- schizophrenia, use of virtual reality 409, 413–414
 school-age educational programs 293
 screen time 290–291, 299–300
 selective exposure: attitude accessibility 86; citations of 24; conditionality paradigm 26–27; cultivation theory 76–77; emotions 164; entertainment 325; future research 157; polarization of the political environment 40–41; research traditions 148–151; social cognitive theory 105; technologies 146–147; terminology 147–148; theoretical accounts 151–157; transactionality paradigm 25; *see also* media choice
 selective exposure of self- and affect-management (SESAM) model 154–155, 164
 selective-reactive users 10
 selectivity paradigm 24–25
 self: eudaimonic narratives 188–189; and identity 179–181; mediated relationships 181–186; selective exposure 155, 164; temporarily expanded boundaries 186–188; virtual reality 407–408
 self-as-source 359
 self-awareness 180–181, 408
 self-determination theory (SDT) 187, 360
 self-disclosure: cultivation theory 77; social media 377–378
 self-efficacy: health 310–311; social cognitive theory 102–103, 107
 self-esteem 181, 183, 264, 332
 self-knowledge 408
 self-perception: cultural context 420, 422, 423, 428; identity 180, 185
 self-presentation, social media 377
 self-reflection capability 101–102
 self-regulation capability: narrative effects 138; selective exposure 155; social cognitive theory 101–102
 self-serving bias 424
 self-transcendent emotions 166
 sense-extension *see* medium theory
 sex appeal, in advertising 280
 sexuality and media depictions 227, 237–238; health 312; mainstream media 228–232; sexually explicit media 232–237; social cognitive theory 105, 106, 107; social media 232; stereotypes 244, 246; theoretical foundations 227–228
 sexually explicit media 232–237
 short-term effects, social cognitive theory 110
 Shrum, L. J. 74
 side effects, video games 349–350; *see also* unintended effects
 Signorielli, N. 76
 similarity, sexuality and media depictions 231–232
 similes, framing theory 57
 Simonson, P. 3, 4
 situational factors, media choice 148, 326–328
 skin conductance 200, 201–202, 214–215
 Slater, M. D. 149–150
 smartphones *see* mobile communication
 smoking: accessibility 87; identity 185; narrative effects 134; social cognitive theory 106
 soap operas: cultivation theory 75; social cognitive theory 107

- social behaviors *see* behaviors
- social capital 378–379
- social categorization theory 249–250
- social cognitive theory 9, 101–104; citations of term **20**, 21, 22; emotions 171; health 310–311, 314; identity 185–186; importance of historical context 100–101; limitations and future directions 109–110; media effects 104–108; narrative effects 132; new and emerging media 108–109; selectivity paradigm 25; video games 347; violence 104–105, 213–214
- social comparison theory 171–172, 334
- social compensation hypothesis 379
- social context: connectedness 187, 262, 265–266; cross-cultural media effects research 428; eudaimonic entertainment 265–266; health 317; interactive media technologies 358; reception and enjoyment 334–335; selective exposure 155–156; video games 342, 344
- social coordination, use of mobiles 390–391, 395–396
- social distance: health 315; virtual reality 413–414
- social effects: accelerated futures 412; advertising 276–278
- social enhancement hypothesis 379
- social identity theory 249–250
- social judgment, narrative effects 136–137
- social learning *see* social cognitive theory
- social media: advertising 281, 282, 285; areas of research and theorizing 376–381; conceptualizing 373–376; cultivation theory 77; definition 374; distinctions from other computer-mediated communication 373; emotions 173; future research 381–384; news 41–43; and self 181, 182; and sexuality 232; social cognitive theory 108–109
- social networking sites (SNSs) 373–374, 376; *see also* social media
- social norms: accessibility 87; advertising effects 285; cultivation theory 69–70; deliberative and spontaneous behaviors 88–89; health 311, 313; persuasion 115–116; self-awareness 180–181; sexually explicit media 235
- social psychology of media effects model 9
- social realism: children’s media 297; video games 349–350
- social resources, social media 378–379
- social sciences 5–6
- social self 179, 181, 183, 186–189
- social skills 136
- social support, social media 378–379
- sociological approaches: cultivation theory 71; framing theory 52
- speech communication studies 4
- spiral of silence theory: citations of term **20**; social media 42–43
- spiritual self 179–180
- spontaneous behaviors 88–89
- state predictors 260–261
- stereotypes 243–244; accessibility 93, 248–249; African Americans 93, 244–246, 248–249; Asian Americans 93, 247, 249; cultivation theory 249; future research 250–251; gender 93, 244; Latinos 246–247; Native Americans 247–248; priming theory 92–93, 248–249; prominence 244; selective exposure 155; social cognitive theory 106; social identity theory/social categorization theory 249–250; virtual reality use in reducing 408–410, 413
- Steyer, J. 211
- stories *see* narratives
- streaming 76–77
- strong media effects 7–8
- survey methods, selective exposure 150
- suspense 332–333
- Sutherland, Ivan 404
- symbolic catharsis 332
- symbolic environment, cultivation theory 70
- symbolization capability 101–102
- synchronicity, social media 375
- systematic bias 147
- tangible user interfaces (TUIs) 405
- TEBOTS (Temporarily Expanding the Boundaries of the Self) 138
- technological affordances 365–366
- telecooing 392
- television: cultivation theory 69–71, 73–77; educational media for children 295–296; emotions 171; multiplication of channels 39; on-demand 76–77; parasocial relationships 186; priming theory 90; selective exposure 147–148; social cognitive theory 107–108
- Temporarily Expanded Boundaries of the Self (TEBOTS) 187–188, 189
- Tewksbury, D. 92
- texting, social coordination 390–391
- thematic variations, persuasion 119–120
- theory of interactive media effects (TIME) 282, 363
- theory of mind (ToM) 136, 297–298
- theory of planned behavior (TPB) 310–311
- theory of reasoned action (TRA): deliberative and spontaneous behaviors 88–89; health 310–311; norm accessibility 87–88; persuasion 115–116
- third-generation (3G) mobile networks 389, 393–394
- third-person effects **20**, 424, 425
- toddlers, educational media for 290–291, 292
- tracking, virtual reality 406–407
- trait predictors 260
- transactional media effects 8
- transactional model for behavior 8
- transactionality paradigm 25–26
- transactive model of attitude accessibility 86–87
- transcendence: and emotions 166; eudaimonic entertainment 262; narrative effects 137–138
- transnational audiences 429
- Transportation-Imagery Model (TIM) 130–131
- transportation, narrative effects 132–133, 135, 139
- transtheoretical model (TTM) 117–118
- Trump, Donald 243
- trust: cultivation theory 74; news effects 38
- truth scales 44
- Turing tests 383–384
- Tversky, A. 74
- Twitch 383

- Twitter: frame distribution 62; political environment 42; use of data 382–383
- two-step flow theory 8, **20**, 42, 121
- unintended effects: social cognitive theory 104–106; video games 347–349
- United States, cultural context 422, 423–424, 425–426
- universal affordances 374–375
- user-generated content: emotions 173; self-disclosure 77; social media definition 374
- uses and gratifications: citations of term 18, **20**, 21; conditionality paradigm 26; cross-cultural media effects research 423; entertainment 325; selective exposure 148–149; selectivity paradigm 24; social media 376; transactionality paradigm 25
- validity, framing theory 61–62
- Valkenburg, P. M.: conditionality paradigm 26–27; differential susceptibility to media effects model 10–11; microlevel media-effects theories 9; selective exposure 150; violence and aggression 218–219
- vicarious capability 101–102
- vicarious participation 332
- vicarious reinforcement 103, 108, 110
- victimization, emotions 171
- video deficit effect 295–296
- video games 342–343, 350–352; cultivation theory 77; educational media for children 295–296; entertainment as intended key effect 343–346; learning and persuasion as intended effects 346–347; priming theory 90, 94; side effects 349–350; social cognitive theory 104–105; violence and aggression 216–217, 347–349
- video-malaise 37
- violence: cultivation theory 70, 71; desensitization theory 214–215; differential susceptibility 217–219; effect sizes 218, 219–221; emotions 171; enjoyment and reception 331–332; excitation transfer theory 216; General Aggression Model 216–217; historical context 211–213; mood management theory 153; priming theory 90–91, 215; research conclusions 221–222; research context 211; social cognitive theory 104–105, 213–214; video games 216–217, 347–349; *see also* aggression
- virtual environments (VEs) 406
- virtual reality 404; accelerated futures 410–413; avatars 30, 94; conceptual premises 406–407; effects of the self 407–408; future research 268; mixed reality continuum 404–406; psychological effects 408–410; research challenges and opportunities 413–415; self 180; social cognitive theory 108–109
- visual images *see* imagery
- voting: influence of social media 380–381; news effects 37
- Walter, N. 18, **19**, 22, 24, 27–28
- weak media effects 7–8
- wearable tech 318, 360
- Weaver, D. 18, **19**
- Web of Science (WoS) 22
- weight-loss, social cognitive theory 108
- well-being: emotions 172–173; eudaimonic entertainment 265; social media 379–380
- White viewer effects 250
- working self-concept 180
- World War I 7
- World War II 4
- Zillmann, D. 151, 164, 332–333