

# Construal Level Theory and Spatial Distance

## Implications for Mental Representation, Judgment, and Behavior

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**Abstract.** Growing evidence points to a bidirectional relationship between spatial distance and level of mental representation, whereby distant (vs. near) events are represented by a higher level of representation, and higher levels of representations increase perceptions of distance. In the current article, we review research that establishes this association and explores its implications. We begin by briefly describing construal level theory, the theoretical framework that gives rise to this associative prediction, and then review a set of theory-consistent findings that serve to illuminate the way that spatial distance influences cognition and behavior and the way in which people make judgments about spatial distance. Finally, we discuss open questions for future research on spatial distance using a construal level theory approach.

**Keywords:** construal level, abstraction, spatial distance, psychological distance

The amount of spatial or geographical distance that exists between people during daily communication has risen dramatically within the last decade as mobile telecommunication and social networking websites continue to increase in popularity (Horrigan, 2008; Stone, 2007; Wortham, 2009). Indeed, large spatial distance is now a common aspect of many of the contexts within which individuals form judgments and make decisions. For example, employees now routinely interact with their superiors, customers, and colleagues over large distances through email or instant messaging systems (Derfler, 2000), and many nonprofessional interactions (e.g., romantic relationships) occur with large amounts of spatial distance between people (Stafford, 2005). Interestingly, humans appear to be uniquely equipped in their ability to coordinate their lives around information that is not immediately present (Atance & O'Neill, 2001; Roberts, 2002), with some even arguing that the ability to navigate beyond the here and now has played a key role in facilitating humans' success as a species (Suddendorf & Corballis, 2007).

Much of the research that has examined interactions across different magnitudes of spatial distance is grounded in the assumption that relatively larger magnitudes of spatial distance tend to reduce the impact or relevance of objects and events (Latané, 1981). For example, Latané, Liu, Nowak, and Bonevento (1995) demonstrated that people were less persuaded by physically distant others. Similarly, Williams and Bargh (2008) suggested that simply priming

large distances leads people to feel less connected to significant others. In the present article, we review research that has examined spatial distance using a construal level theory (CLT) approach. CLT argues that distant events are not just less relevant and, thereby, less impactful, but that they are also mentally represented in a fundamentally different manner than spatially proximal events. We begin by briefly introducing the central tenets of CLT. We then describe how this approach has informed our understanding of both the consequences of small versus large magnitudes of spatial distance and antecedents of spatial distance estimates. We conclude by suggesting directions for future research. We describe CLT's basic propositions and focus only on recent explorations that apply this approach to understand how spatial distance impacts cognition and behavior (for broader reviews, see Liberman, Trope, & Stephan, 2007; Trope & Liberman, 2010; Trope, Liberman, & Wakslak, 2007).

## Construal Level Theory of Distance

### Level of Construal

According to CLT, an individual's distance from objects and events is associated with how abstractly he or she will

represent or construe them. Construing objects and events at lower versus higher levels of abstraction reflects conceptual differences (what information is brought to mind) as well as perceptual differences (how information is processed; Liberman & Förster, 2009b). Conceptually, the content of more abstract, higher level construals consists of the perceived essence, gist, or summary of the given information about objects and events, whereas the content of more concrete, lower level construals consists of more contextual, readily observable features (Medin & Ortony, 1989; Schul, 1983). Perceptually, higher level construals involve broad and global processing of information about objects and events, whereas lower level construals involve narrow and localized processing of such information (Fujita, Trope, Liberman, & Levin-Sagi, 2006; Liberman & Förster, 2009b; Stapel & Semin, 2007).

To illustrate the differences between lower and higher level construals at a conceptual level, consider an individual thinking about the behavior of another person (e.g., a man laughing at a joke made by a woman). One can construe that person's behavior at a higher level by thinking about the overall motive driving the behavior (e.g., he laughs to convey that he is attracted to her) or the traits the behavior conveys about the person (e.g., he laughs because he is flirtatious). These motives and traits comprise higher level construals because they provide a general gist or summary of what people are essentially like across multiple contexts and situations (Semin & Fielder, 1988; Vallacher & Wegner, 1989). Construing the same behavior at a lower level involves not thinking beyond what can be perceived concretely by the senses, such as when people only think about the means that a person uses to carry out behavior (e.g., he increases his volume to laugh at her joke) or contextual influences operating on a person that influence his behavior (e.g., he laughs because the silence after the joke she tells compels him to). To illustrate the differences between lower and higher level construals at a perceptual level, consider an individual viewing a vast collection of trees. One can construe the trees at a higher level by focusing on the overall gestalt (a forest). Construing the same trees at a lower level would involve not integrating the trees into a composite but rather focusing on individual trees separately.

## Construal and Distance

According to CLT, people typically have limited information about the concrete, readily observable features of objects and events that relate to distant locations, including the context in which they will be encountered and alternative means that might be used to carry out actions toward them. To conceptualize distant events, people rely on high-

er levels of construal (e.g., schemas, prototypes), because higher-level features are less likely to change and more likely to be reliable across different degrees of distance (e.g., Liberman et al., 2007; Trope & Liberman, 2003, 2010). CLT suggests that over time people develop a bidirectional association between distance and construal (e.g., see Bar-Anan, Liberman, & Trope, 2006), whereby more distant events evoke higher-level construals, and higher-level construals confer a sense of greater distance. Importantly, CLT assumes that this association is generalized, affecting processing even in situations where individuals have reliable information about the concrete, low-level features of distant objects and events.<sup>1</sup>

## Consequences of Spatial Distance

A CLT approach has been used to inform our understanding of how small versus large magnitudes of spatial distance influence individuals' construal, judgments, and behavior. We review this research below.

### Construal

When people think about objects and events as spatially farther away from them, CLT posits that they will construe these stimuli in more abstract, higher level terms, even when concrete information about them is available and reliable. Fujita, Henderson, Eng, Trope, and Liberman (2006) provided the first evidence in support of this hypothesis. In one study, Fujita et al. found that when participants imagined behavior occurring in spatially distant rather than near locations they were more likely to think about the general motives driving behavior rather than the particular means one might use to carry out behavior. In a second study, Fujita et al. found participants who viewed a video purportedly taped in a distant rather than near location used more abstract language to describe the content of the video. Similarly, Rim, Uleman, and Trope (2009) found participants were more likely to spontaneously infer abstract traits from the same behavioral information about others when they were framed as spatially far rather than close.

Other potential signatures of an effect of spatial distance on construal have been examined as well. Henderson, Fujita, Trope, and Liberman (2006; Study 1), for example, examined the effects of different magnitudes of spatial distance on the construal of ongoing behavior using a behavior segmentation technique (Newtson, 1973). They found that participants engaged in broader unitizing of behavioral sequences that were framed as spatially far rather than close. Using a different approach, Amit, Algom, and Trope (2009) examined the effect of spatial distance on identification of pictures, which are a concrete way of representing

<sup>1</sup> The relationship between distance and construal level is not necessarily symmetrical, as the effect of changes in distance on construals may be stronger or weaker than the effect of changes in construal level on distance.

an item, versus words, which are a more abstract mode of representation. Using pictures with depth cues to manipulate the perceived spatial distance of target stimuli, they found that participants more quickly classified pictures when they were in a spatially proximal than distal location, but more quickly classified words when they were in a spatially distal than proximal location. These findings are consistent with the notion that spatially distant stimuli are typically construed in higher level terms.

Intriguingly, evidence supporting different construals of spatially near and distant events has emerged not only in experimental work such as that described above, but also through archival studies of real-world event descriptions. For example, Magee, Milliken, and Lurie (2010) examined individuals' verbatim reactions to the terrorist attacks of September 11, 2001 in the United States, culled from a variety of media sources. Although the primary focus of this work was the effects of power, corollary results suggested an effect of spatial distance: speakers who were spatially close to a disaster site (i.e., in the metropolitan area of New York City, Arlington, VA, or Shanksville, PA) used more concrete language than speakers who were farther away (i.e., on the East Coast of the United States but outside of the metropolitan areas of the disaster sites)<sup>2</sup>.

While the work we just described examined effects of increased horizontal spatial distance, Meyers-Levy and Zhu (2007) examined the effects of increased vertical space, finding that people exhibit a higher degree of integration and abstractness of ideation when larger vertical spaces (i.e., ceiling heights) are salient. Higher ceilings led participants to use broader categories and more abstract language to classify objects. These findings suggest that both horizontal and vertical spatial distances may have similar effects on people's construals. Future research, however, will need to establish whether these findings are uniquely driven by the vertical distance of the ceiling from the participant or by a more general increase in the perceived size of the room.

## Prediction

How people construe events as a function of spatial distance has important implications for how people make predictions. The higher level construals prompted by greater spatial distances are more schematic and abstract, leading people to make predictions that correspond to a greater extent to what has prototypically occurred in the past. For example, research indicates that people evidence a stronger tendency to predict that typical events are more likely and atypical events less likely when making predictions of events occurring in a spatially distant rather than near location (Henderson et al., 2006; Study 3). As more schematic representations, the higher level construals promoted by great-

er spatial distance also promote a tendency in prediction to give less weight to information that represents a more specific, concrete exception to a more general, abstract rule. One study testing this hypothesis presented participants with data reflecting a general trend accompanied by a recent local deviation from the trend. When asked to predict outcomes for spatially distant (vs. near) locations, participants were more likely to extrapolate from the general trends and less likely to consider the local deviations (Henderson et al., 2006; Study 4).

The favoring of general and global information over specific and local information also extends to individuals' preference for how information should be presented to them. For example, in a recent study, participants were asked to choose whether they would like to see stock performance data averaged over larger intervals (e.g., every month) or smaller intervals (e.g., daily performance). Participants' preference was increasingly tilted toward data averaged across larger intervals when they were told that the stock was traded on a distant stock exchange rather than a nearby stock exchange (Wakslak, 2010). Since the way in which such data is presented can dramatically influence the trends that are depicted, such findings have important practical implications for decision-making.

## Social Judgment

If one's construal of an object or event changes as a function of spatial distance, then one's social judgments should also change accordingly. Specifically, person perception should be more schema-based and trait-centered when the spatial distance from a target is larger. For example, in one study, Henderson et al. (2006) examined whether greater spatial distance would promote attributing behavior to traits rather than situational specifics (see also Rim et al., 2009). Whereas trait attributions reference abstract and global dispositions that transcend specific contexts and actions, situational attributions highlight those concrete, unique context-specific features that lead people to behave in a certain way. Consequently, if individuals represent spatially distant stimuli more abstractly, then they should be more likely to attribute the behavior of spatially distant (vs. near) targets to traits and to make corresponding predictions for future behavior. Findings examining the correspondence bias supported this argument: Participants expected the future behavior of a spatially distant (but not spatially near) target to be consistent with the trait-implications of a described behavior, regardless of whether this behavior was caused by situational constraints (e.g., the target had been instructed to write an essay with a particular position).

Construal effects of spatial distance also have implications for the degree of individuation of social targets. With decreasing distance from objects, people should exhibit a narrower

<sup>2</sup> Note, however, that there was no effect of a speaker being very far away from one of the disaster locations (outside of the East Coast of the United States).

breadth of categorization as a result of the increased focus of lower level construals on individuating, idiosyncratic features of objects. Evidence supporting this assertion has been provided by Henderson and his colleagues (Henderson, 2009; Henderson & Lount, 2011), who recently demonstrated that when people perceived their spatial distance from members of a task group to be smaller, they increasingly construed those members as unique individuals rather than as interchangeable constituents of a group. This resulted in reduced confidence that the members possessed features that were prototypical of the group (i.e., that they had common goals). Henderson and Wakslak (2010) extended this logic to the domain of priming, reasoning that when individuals form judgments of a spatially close target (e.g., a person skydiving in a nearby location), they should process the target in a more localized manner; specifically, they should judge the target as an individual about which they have no a priori opinion rather than as a member of a general category (e.g., “skydivers”) about which they already have a general impression. In line with this, they found that participants’ evaluative judgments of a target were more influenced by available semantic primes for targets that were spatially close rather than far. Furthermore, reasoning that individuals hold general attitudes about social categories (e.g., people who skydive) and that individuals tend to favor general information more for distant judgments, Henderson and Wakslak also found that participants’ general attitudes about a target’s category were a better predictor of their evaluative judgments of a spatially distant rather than a close target.

Like evaluation of others, evaluation of self-related aspects such as one’s own performance can also be influenced by spatial distance cues. Researchers have generally found that the more an object or event is construed in abstract, higher-level terms, the more weight is typically given to the important, primary information rather than incidental, secondary information about objects and events (Henderson & Trope, 2009; Trope & Liberman, 2000). Building on this distinction, Wakslak and Fukukura (2010) recently examined the effects of spatial distance on self-assessment following mixed feedback on primary or secondary aspects of a project. In one study, for example, participants were asked to imagine that they were taking a class through an online university, which was located in a nearby or distant location, and that they completed an assignment as part of the class requirements. When the university was based in a distant location participants reacted less favorably to negative feedback that focused on primary rather than secondary aspects of the assignment; when the university was based in a proximal location, however, participants were equally disappointed with negative feedback aimed at primary and secondary assignment aspects.

## Behavior

Several lines of research have demonstrated behavioral consequences of different magnitudes of distance across a

variety of domains. Some of these studies examined the consequences of communicating with someone who was close versus far away. For example, given that high-level construals entail a focus on primary over secondary information (see Trope & Liberman, 2000), Henderson (2011) argued that spatially distant negotiators should be more successful at focusing on their most important negotiation concerns. His results indicate that participants who negotiated via instant text exchange with another person who was purportedly far rather than close were more likely to maintain their priorities across the negotiation issues and consequently achieve more mutually beneficial agreements.

Interestingly, although not conducted a priori from a CLT perspective, Moon (1999) manipulated the magnitude of spatial distance in the context of computer-mediated communication (CMC) and found results that are consistent with CLT. Specifically, Moon found participants were more persuaded to change their opinion after receiving concrete, detailed messages from a spatially near rather than distant source. These results fit well with recent CLT work on distancing and persuasion, which found that persuasion was highest when participants experienced a small (as opposed to large) amount of distance and received low-level, concrete (rather than high-level, abstract) persuasive messages (Fujita, Eyal, Chaiken, Trope, & Liberman, 2008; Kim, Rao, & Lee, 2009).

Studies have also examined the consequences of providing spatially near or distant cues for task behavior. Jia, Hirt, and Karpen (2009) reasoned that more abstract, higher level construals should facilitate creativity (see also Förster, Friedman, & Liberman, 2004) and demonstrated that portraying a creative task as originating from a far rather than close location led participants to provide more creative responses and perform better on a problem-solving task that required creative insight. Shani, Igou, and Zeelenberg (2009) examined the role of distance and construal during information search. They argued that unpleasant potential truths (e.g., being overcharged by a photographer) represent relatively unimportant, low-level features of events (e.g., wedding day) and posited that people who adopt higher level construals should give less attention to such potential truths and consequently be less motivated to seek information that confirms such truths. As expected, Shani et al. found that participants were less affected and less likely to seek information about a potential unpleasant truth (e.g., missing an opportunity on the stock market) when it concerned a distant rather than near situation (i.e., foreign vs. local company).

## Antecedents of Spatial Distance Judgments

As noted earlier, the central tenet of CLT is that increasing distance is associated with more abstract construals (e.g., Bar-Anan et al., 2006). The research described to this point highlight findings that support this association in one direction: the impact of spatial distance on construal and con-

strual-dependent judgment and behavior. CLT, however, also suggests that given a cognitive association between distance and construal, the opposite should be true as well. That is, abstract construals should impact people's perception of spatial distance. Consistent with this assertion, Liberman and Förster (2009a, Study 2) presented participants with Navon letters (larger letters made up of smaller letters; Navon, 1977). On a subsequent spatial distance estimation task, those participants who were asked to identify the larger letters (those induced to construe events more abstractly) judged distances to be greater than those asked identify the smaller constituent letters (those induced to construe events more concretely).

Intriguingly, from a CLT perspective, spatial distance is one of a number of interrelated distance dimensions. Accordingly, the same general principles that apply to spatial distance also hold for other psychological distance dimensions (Liberman et al., 2007): as experiences get closer temporally (e.g., a conversation with a person tomorrow rather than a year from now; Liberman & Trope, 1998), socially (e.g., a conversation with a similar rather than dissimilar person; Liviatan, Trope, & Liberman, 2008), or probabilistically (e.g., a high rather than low likelihood of conversing with a person; Wakslak, Trope, Liberman, & Alony, 2006), people construe experiences in more concrete and specific terms that involves more localized, individuating cognitive processing (Liberman & Förster, 2009b). Moreover, these four distance dimensions (space, time, social, and probability) are interrelated, a finding that emerges in studies that make use of a modified Stroop paradigm (e.g., see Bar-Anan, Liberman, Trope, & Algom, 2007). For example, in one series of studies participants were shown landscape photographs that had arrows pointing at either a proximal or distal point in the landscape, with the arrows containing a word denoting either psychological proximity (e.g., tomorrow, we, sure) or distance (e.g., year, others, maybe). Participants' task was to classify the words as quickly as possible, and results revealed that individuals responded to the stimuli more quickly when they were distance congruent rather than incongruent (i.e., a spatially distant arrow containing a word that denoted temporal distance, social distance, or low likelihood, or a spatially proximal arrow containing a word that denotes temporal proximity, social proximity, or high likelihood).

This cognitive association between distance dimensions suggests that changing the magnitude of one distance dimension should influence explicit judgments of the magnitude of a different distance dimension. Consistent with this idea, Stephan, Liberman, and Trope (2010) found that participants who observed a speaker address another person using more socially distant language (formal phrases) rather than socially close language (colloquial phrases) estimated greater spatial distance between the communicators. Moreover, in another study, Stephan et al. found that participants who were forced to address another person using more socially distant rather than close language actually choose to maintain greater spatial distance from the addressee.

Another cue for spatial distance recently examined within the context of CLT is fluency. Alter and Oppenheimer (2008) argue that fluency is an ecologically valid distance cue, as distant objects are typically difficult to see and less frequently encountered and, thus, more perceptually and conceptually disfluent. Specifically, Alter and Oppenheimer posit that objects and events *feel* psychologically close to the extent that they feel easy to process, and are represented in lower-level, more concrete terms as a result. In line with this, they found that fluently processed stimuli were inferred to be spatially closer than disfluently processed stimuli. Moreover, object fluency was associated with lower level mental representation. For example, in one study participants estimated their distance from several U.S. cities; when reporting their estimates on a questionnaire that was relatively difficult to read (disfluent stimuli), participants estimated greater distances than when reporting their estimates on a questionnaire that was relatively easy to read (fluent stimuli). Similarly, in a different study, participants were primed with certain cities and asked to report their distance from the primed cities as well as novel cities, which were presumably less fluently processed. As expected, participants judged novel cities as more spatially distant than the primed cities.

## Future Research

### Spatial Distance Effects Across Key Domains

In many ways, the world is shrinking. Modern technology enables us to work remotely, to develop a romantic relationship with someone across the globe, and to follow someone else's local news. From business to education to politics, events that happen in distant locations can have a dramatic influence on our lives, and we, therefore, grapple with and try to understand events even when they are geographically remote. Given our increased interaction across distances, future research should continue to examine the effects of different magnitudes of spatial distance for people's judgments and behavior. Some of this work should undoubtedly occur in the lab, attempting to isolate effects of spatial distance on basic cognitive and behavioral processes. At the same time, we hope to see more research that examines such effects within highly relevant, real-world contexts.

Two important institutions come to mind as examples of important societal domains where distance is increasingly a concern: education and health care. While each of these is an area that until recently was primarily characterized by proximity, technological advances now enable interactions within these domains with fewer geographical constraints. Thus, more and more, different magnitudes of distance are being experienced between educators and students in the higher education system (Tallent-Runnels et al., 2006) and doctors and patients in the health care system (DeVoe, Fry-

er, Straub, McCann, & Fairbrother, 2007; Mohr, Vella, Hart, Heckman, & Simon, 2008). Although distance is often viewed as creating a set of problems that must be overcome (Kiesler & Cummings, 2002; Wilson, Straus, & McEvily, 2006), a CLT perspective suggests that there might be both benefits and costs associated with more or less distance. We call for future research to examine whether and how distance might benefit or harm people's judgments and actions within these important domains.

### Unique and Joint Effects of Spatial Distance and Its Covariates

Several variables tend to covary with different magnitudes of spatial distance. For example, objects and events that are distant tend to be less familiar, and individuals may expect to interact with them in the future to a lesser degree. Increased distance from objects and events likely reduces their perceived relevance, as individuals presumably receive fewer benefits (e.g., support) as well as burdens (e.g., threat) from objects and events that are farther away from them (see Mobbs et al., 2007; Perrings & Hannon, 2001). Given that the amount of effort individuals tend to devote when thinking about objects and events is less when they are less relevant to them (e.g., Darke & Chaiken, 2005), it is also possible that people will engage in less effortful thinking about objects and events when they are farther away (Petty & Cacioppo, 1979; Petty, Cacioppo, & Schumann, 1983). Note, however, that while increased distance might reduce the degree of effortful processing, changes in individuals' construal level as a function of different magnitudes of distance have been shown to be unrelated to their degree of effortful processing in some studies (Fujita & Han, 2009). Moreover, other studies have even shown that when relevance is held constant, greater distance can *increase* effortful processing under certain circumstances (Fujita et al., 2008).

When the object in question is another person, an additional factor that may be relevant is the degree of expected anonymity, as individuals may infer a smaller overlap in their social network with others that are farther away from them and, thus, expect there to be a lower chance that distant others will be familiar with them. Similarity to others on certain attributes also tends to decrease with increased spatial distance. For example, people who share membership in salient social categories such as age, ethnicity, nationality, religion, and socioeconomic status tend to live closer to each other (although at large magnitudes of distance, the relationship between similarity and distance likely breaks down for some categories such as SES and age).

Most of the existing research on spatial distance that has adopted a CLT approach has attempted to examine the effects of distance independent of its covariates. That is, past research typically held constant any variables that might naturally covary with spatial distance (e.g., familiarity,

similarity) and examined the effects of small versus large magnitudes of distance on cognition and behavior (e.g., Fujita et al., 2006; Henderson, 2009). This is an important step that has allowed this research to isolate the unique effects of spatial distance above and beyond other variables with which it might tend to covary, something that is especially important since it is unlikely that distance has a one-to-one relationship with any of its covariates. For example, while people who live in close spatial proximity might, on average, be similar, it is certainly possible for someone to live next door to a completely dissimilar person. Likewise, while, on average, people have more contact with those who are nearby, a person in a large city might have more contact with a colleague in a distant city than with their barely acknowledged next-door-neighbor.

Indeed, this latter point underscores the importance of not only examining the unique, independent effect of spatial distance, but also of examining the way in which spatial distance might interact with the other variables with which it sometimes (but not always) covaries (see Trope et al., 2007, for a similar discussion and Kim, Zhang, & Li, 2008 for an initial empirical demonstration of joint effects of distance). For example, future research should examine how people who are more or less similar to each other communicate with each other across small versus large magnitudes of spatial distance. Research should also examine the consequences of matching versus mismatching various dimensions of distance on variables such as trust and relationship commitment. One might expect that the fluency of processing promoted by matches in distance (and matches in construal level) will increase trust and engagement between individuals and between groups. Additionally, future research should examine how people form and apply stereotypes toward members of unfamiliar versus familiar groups who are spatially close or far away. More generally, such research would identify boundary conditions for effects of different amounts of spatial distance as well as the relative strength of effects associated with spatial distance and its covariates. Such research would also add to the growing body of work supporting the idea that spatial distance serves as a fundamental dimension upon which other variables are anchored. Researchers have noted, for example, that people's understanding of whether something is far away in time or social distance is rooted in their understanding of basic spatial concepts of close versus far (Williams & Bargh, 2008). Indeed, the ability to process spatial information appears to be critical for cognitive development and functioning (Boroditsky, 2000; Casasanto & Boroditsky, 2008).

### Relationship Between Construal Level and Distance

The present article reviewed research that has examined the effects of different magnitudes of spatial distance on vari-

ous outcomes. Notably, most research conducted within the framework of CLT has studied distance at two levels (near vs. distant). Therefore, it remains an open question of *exactly* how distance relates to level of construal. That is, although research has shown that events that are framed as spatially near versus distant elicit different levels of construal (Fujita et al., 2006; Henderson et al., 2006), this research did not identify the form of the distance function. Is there a linear relationship in which people's level of construal continues to become more abstract with increasing distance from a location? Is there a negatively accelerated relationship in which individuals move to a very abstract level of construal as distance is initially increased but then become gradually more abstract as distance is further increased, such as how pay affects employee reactions (Worley, Bowen, & Lawler, 1992)? Is there a positively accelerated relationship in which individuals gradually move to an abstract level of construal as distance is initially increased but then become very abstract as distance is further increased?

An additional possibility is that the relationship between distance and construal level is one in which distance influences construal level in a categorical fashion, such as how sounds affects speech perceptions (Liberman, Harris, Hoffman, & Griffith, 1957) or light affects color perceptions (Bornstein & Korda, 1984). That is, it is possible that there is a spatial cutoff point that varies by individual, at which events that are located within a certain spatial radius are construed at the same level of concreteness and events that are located beyond that radius are construed at the same level of abstractness. The final word on this issue will have serious consequences for people's judgments and behavior, as an understanding of how a large (vs. small) amount of distance from objects and events will affect how people deal with those objects and events will depend on the extent to which the relevant spatial location triggers a certain level of construal in the first place. Future research should, thus, more carefully measure these possibilities.

## Coda

CLT offers an integrative approach for understanding the antecedents and consequences of spatial distance. Research findings have supported a bidirectional association between spatial distance and abstraction, suggesting that people judge abstractly processed stimuli to be more remote and construe geographically remote objects and events in a more abstract fashion. Moreover, research grounded in this perspective has pointed to a range of implications of this relationship, suggesting that changes in construal are one way through which spatial distance broadly impacts judgment and behaviors. We believe, however, that this research agenda is still largely in its infancy, and that there is much more to learn about the precise way in which spatial

distance influences cognition and behavior, both in the laboratory and beyond.

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