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The Rated Importance, Scientific Validity, and Practical Usefulness of Organizational Behavior Theories: A Quantitative Review

JOHN B. MINER

I analyze rated importance, extent of recognition, validity, and usefulness of 73 established organizational behavior theories, differentiating between the views of judges with expertise in organizational behavior and in strategic management. The results indicate an increasingly mature science with many more positive relationships among the variables considered than existed previously. The findings have major implications for learning and education activities, such as textbook writing and organizational behavior course design in that they indicate which theories should be stressed and which should be given minimal, if any, attention at different levels of the educational process.

At various points scientific disciplines need to take stock of their progress and use the information thus marshaled as feedback to readjust their goals and approaches. By drawing upon knowledge of past successes and failures of a discipline, they can often recast its thrust into the future. Organizational behavior is no exception, and I attempt here to make a contribution of this kind to the field. Specifically, the objective is to take stock of 73 established theories of organizational behavior (broadly defined), and to determine from this assessment what implications emerge for the future of the discipline. I sought the same objective in an earlier evaluation of much the same kind carried out from 1977-1982 and published somewhat later (see Miner, 1984, 1990). In essence, then, this is a 20+ year update on the earlier analysis which takes into account the growth and other changes that have occurred in organizational science over the interim, and extends that analysis in several new directions.

Some time ago Kurt Lewin indicated that "nothing is as practical as a good theory" (1945: 129). This statement has been treated as something of a dictum (Van de Ven, 1989). However, if "practical"

is viewed as meaning that which is useful in an applied setting to achieve some goal, and "good theory" refers to theory of a kind that produces valid scientific knowledge (understanding, prediction, truth), then Lewin's statement becomes a testable hypothesis. I propose to do so here.

A third contribution to which I aspire is to provide information on the extent that consensus prevails with regard to organizational behavior theory, and thus the extent to which a solid knowledge base exists within the field. There appears to be a widespread belief that the degree of consensus among knowledgeable scholars that marks any mature science and that produces positive consequences for members is lacking in organizational behavior (Pfeffer, 1993, 1995). Fragmentation caused by controversy and partisan politics are said to be rampant and are even extolled on occasion (Clegg, Hardy, & Nord, 1996). The analyses reported here provide input regarding this issue as of the year 2000.

Fourth, I compare data from the past with the current scene. What has changed? Has there been any improvement? Is organizational behavior moving toward maturity (or away from it)? How do

comparisons over time contribute to the development of mandates for the future?

Finally, I hope to provide assistance to those who teach organizational behavior courses at any level in selecting which theoretical content to emphasize; in doing this I draw upon findings related to all four of the preceding issues.

ESTABLISHING THEORIES TO BE STUDIED

The theories judges were asked to evaluate were accumulated in several different ways; I present and analyze all 73 in Miner (2002a). In 1984 I evaluated a number of theories where the selection process was guided by a survey of knowledgeable scholars of the time who nominated theories for inclusion. To this list was added an even larger group of theories which also met the criteria that (1), the author(s) had produced substantial theoretical work; (2), this theoretical work is identified with the field of organizational behavior; and (3), the theory is recognized as significant within organizational behavior. The third point was addressed by drawing on various published sources including Bedeian (1992–1998), Pugh and Hickson (1993), Pollard (1974, 1978), Wren and Greenwood (1998), Tosi (1984), Mathur (1990), and Donaldson (1995). Note that four of these sources were written by authors from outside the United States.

These theories may be divided as to content into categories labeled general (7); motivation and perception (16); leadership (17); organizationwide, i.e., system concepts, bureaucracy related, and other such (27); and decision making (6). They also may be categorized to represent the various stages in the historical development of organizational behavior from those that predate the actual creation of the field, all of which are general in nature and cover multiple content areas (7); to first-generation theories, which were initiated in the period from the mid-1950s, or in a few cases somewhat earlier, to the initial part of the 1970s (46); to *bridging* theories, defined as having clear ties to earlier first-generation theories, but appearing initially somewhat later, from 1975 up through the 1980s (7); and finally to second-generation theories, which came on the scene from the mid-1970s on into the 1990s (13). In this connection note that in most instances it takes roughly 10 years for sufficient research to emerge to assess a new theory adequately. These 73 theories are listed by name and author(s) in Table 1. Of these theories, 17 have authors who have substantial ties to countries other than the United States.

ESTABLISHING JUDGES TO ASSESS THE THEORIES

The sources of the judges (knowledgeable scholars) were essentially the same as those used in the prior analysis—past presidents of the Academy of Management, past editors of the *Academy of Management Journal*, past editors of the *Academy of Management Review*, and editorial (review) board members from both of these publications (in this instance for the years 1999 and 2000). This process produced 226 individuals who were contacted by mail, of whom 95 provided usable responses for a 42% response rate; this contrasts with a 35% response in the earlier study (Miner, 1984). Two rounds of mailings were involved, the first round yielding 67 judges who replied from November, 2000 through January, 2001, and the second round 28 judges who replied during February and March, 2001.

The judges ranged in age from 32 to 74 years with a mean of 48.1 years. The sex breakdown was 78% male and 22% female. There were 17 who resided outside the United States in 9 countries. All appear to have held doctorates. Data were obtained on the subject area of the doctorate, as well as areas of research specialization, teaching specialization, and consulting specialization. From this information judges were assigned to groups as having primary expertise in either strategic management or organizational behavior. The strategic management group numbered 24, with 67% having degrees in that field and another 17% in management. The 71 organizational behavior specialists had 49% of their degrees in OB, 21% in psychology (industrial/organizational or social), and 15% in human resources or industrial relations. There was some limited overlap across groups in that 29% of the strategic management group indicated some OB activity and 13% of the organizational behavior group indicated some strategic activity. Nevertheless, these two groups were clearly distinct; they were the only distinct groups of any size that could be identified. Thus strategic management, in addition to organizational behavior, was studied because the data available made it possible to do so.

ESTABLISHING KEY VARIABLES TO BE MEASURED

Rated Importance of Theories

Each judge was asked to rate each of the 73 theories on a 7-point scale of importance from *low* (1) to *high* (7). A *theory* was defined as including models, definitional systems, analytical schema, and powerful constructs. The criteria indicated to evaluate

TABLE 1
Theories Included in Study Sample and Importance Ratings

Theories Evaluated (Listed by Generation and Content)	Mean Importance Rating			% Who Did Not Evaluate
	Total	Organizational Behavior	Major References	
Preorganizational Behavior (General)				
1. Conceptualizations Derived from the Hawthorne Studies (Elton Mayo, Fritz Roethlisberger, William Dickson)	4.51	4.65	Mayo (1933); Roethlisberger & Dickson (1939)	0
2. The Functions of the Executive Concepts (Chester Barnard)	4.33	4.41	Barnard (1938)	5
3. Social Psychological Views of Leadership and Change (Kurt Lewin)	5.15	5.31	Lewin (1947); Lewin, Lippitt, & White (1939)	7
4. Social Philosophy and Prophetic Statements on Management (Mary Parker Follett)	3.15	3.28	Follett (1924); Metcalf & Urwick (1940)	25
5. Theory of Bureaucracy (Max Weber)	5.74	5.90	Weber (1947, 1968)	2
6. General and Industrial Management Formulations (Henri Fayol)	3.48	3.73	Fayol (1949)	13
7. Scientific Management Formulations (Frederick Taylor)	4.47	4.63	Taylor (1903, 1911)	2
First Generation Theories (Motivation)				
8. Need Hierarchy Theory (Abraham Maslow)	4.14	4.14	Maslow (1954, 1962)	2
9. Existence, Relatedness, and Growth Theory (Clayton Alderfer)	3.41	3.58	Alderfer (1972)	15
10. Achievement Motivation Theory (David McClelland)	4.88	5.15	McClelland (1961, 1975)	5
11. Psychoanalytic Theory Applied to Organizations (Harry Levinson)	2.75	2.84	Levinson (1964, 1973)	23
12. Motivation Hygiene Theory (Frederick Herzberg)	3.73	3.81	Herzberg, Mausner, & Snyderman (1959); Herzberg (1966, 1976)	5
13. Job Characteristics Theory (Richard Hackman, Edward Lawler, Greg Oldham)	5.28	5.61	Hackman & Lawler (1971); Hackman & Oldham (1980)	5
14. Expectancy Theory—Work and Motivation (Victor Vroom)	5.62	5.96	Vroom (1964)	3
15. Expectancy Theory—Managerial Attitudes and Performance (Lyman Porter, Edward Lawler)	5.23	5.41	Porter & Lawler (1968); Lawler (1973)	1
16. Cognitive Evaluation Theory (Edward Deci, Richard Ryan); <i>A bridging theory</i>	4.08	4.27	Deci (1975); Deci & Ryan (1985)	25
17. Operant Behavior and Reinforcement Theory (Clay Hamner)	4.07	4.25	Hamner (1974a, 1974b)	12
18. Organizational Behavior Modification (Fred Luthans, Robert Kreitner)	4.01	4.31	Luthans & Kreitner (1973, 1975, 1985)	13
19. Equity Theory (Stacy Adams)	5.57	5.93	Adams (1963, 1965)	6
20. Goal-Setting Theory (Edwin Locke, Gary Latham)	5.56	5.97	Locke (1968, 1970); Locke & Latham (1990)	4
21. Role Motivation Theory (John Miner)	3.99	4.05	Miner (1965, 1993)	25
First Generation Theories (Leadership)				
22. Theory X and Theory Y (Douglas McGregor)	4.21	4.39	McGregor (1960, 1967)	1
23. Consideration and Initiating Structure (John Hemphill, Ralph Stogdill, Carroll Shartle)	4.38	4.60	Stogdill & Coons (1957); Shartle (1979)	17
24. Managerial Grid Theory of Leadership (Robert Blake, Jane Mouton)	3.06	2.98	Blake & Mouton (1964); Blake & McCauley (1991)	15
25. Situational Leadership Theory (Paul Hersey, Kenneth Blanchard)	3.26	3.28	Hersey & Blanchard (1969)	5
26. Path-Goal Relationship Theory (Martin Evans)	3.99	4.11	Evans (1970, 1974)	19
27. Path-Goal Theory of Leader Effectiveness (Robert House)	4.35	4.58	House (1971); House & Mitchell (1974)	7
28. Leadership Pattern Choice Theory (Robert Tannenbaum, Warren Schmidt)	2.93	3.02	Tannenbaum & Schmidt (1958)	37
29. Normative Decision Process Theory (Victor Vroom, Philip Yetton, Arthur Jago)	4.26	4.44	Vroom & Yetton (1973); Vroom & Jago (1988)	6
30. Influence Power Continuum Theory (Frank Heller)	2.54	2.71	Heller (1971); Heller & Wilpert (1981)	47
31. Contingency Theory of Leadership (Fred Fiedler)	4.21	4.33	Fiedler (1967); Fiedler & Chemers (1974)	5

(table continues)

TABLE 1
Continued

Theories Evaluated (Listed by Generation and Content)	Mean Importance Rating			% Who Did Not Evaluate
	Total	Organizational Behavior	Major References	
32. Cognitive Resource Theory (Fred Fiedler, Joseph Garcia) <i>A bridging theory</i>	3.20	3.29	Fiedler & Garcia (1987)	31
33. Vertical Dyad Linkage/Leader Member Exchange Theory (George Graen)	4.40	4.69	Graen, Dansereau, & Minami (1972); Graen & Cashman (1975); Graen & Scandura (1987)	16
First Generation Theories (Systems Concepts of Organization)				
34. Theory of Systems 1-4 and 4T (Rensis Likert)	3.48	3.66	Likert (1961, 1967); Likert & Likert (1976)	14
35. Control Theory and the Control Graph (Arnold Tannenbaum)	3.46	3.58	Tannenbaum (1968); Tannenbaum, Kavcic, Rosner, Vianello, & Wieser (1974)	32
36. Group-Focused Systems Theory (Ralph Stogdill)	3.24	3.44	Stogdill (1959, 1966)	39
37. Social Psychology of Organizations (Daniel Katz, Robert Kahn)	5.19	5.33	Katz & Kahn (1966, 1978)	4
38. Sociotechnical Systems Theory (Eric Trist, Fred Emery)	4.83	5.09	Emery & Trist (1973); Trist, Emery, & Murray (1990, 1993, 1997)	8
39. Sociological Open Systems Theory—Organizations in Action (James Thompson)	5.48	5.60	Thompson (1967)	5
40. Mechanistic and Organic Systems (Tom Burns, G. M. Stalker)	5.12	5.42	Burns & Stalker (1961)	2
41. Technological Determinism (Joan Woodward)	4.20	4.33	Woodward (1965, 1970)	8
42. Technology in a Comparative Framework (Charles Perrow)	4.27	4.38	Perrow (1967)	9
43. Contingency Theory of Organizations—Differentiation and Integration (Paul Lawrence, Jay Lorsch)	5.38	5.39	Lawrence & Lorsch (1967); Lawrence & Dyer (1983)	2
First-Generation Theories (Bureaucracy-Related Concepts)				
44. Theoretical Underpinnings of the Aston Studies (Derek Pugh, David Hickson, C. R. Hinings)	4.24	4.28	Pugh, Hickson, & Hinings (1969); Pugh & Hickson (1976); Pugh & Hinings (1976); Pugh & Payne (1977)	12
45. Structural Contingency Theory (Lex Donaldson) <i>A bridging theory</i>	4.27	4.33	Donaldson (1985, 1995, 1996)	14
46. Theory of Differentiation in Organizations (Peter Blau)	4.18	4.31	Blau & Schoenherr (1971); Blau (1974)	13
47. Dysfunction of Bureaucracy (Victor Thompson)	3.22	3.38	Thompson (1961, 1969, 1976)	27
48. Compliance Theory (Amitai Etzioni)	3.85	3.95	Etzioni (1961, 1975)	23
49. Goal Congruence Theory—Personality and Organization (Chris Argyris)	4.26	4.38	Argyris (1957, 1964, 1973)	7
50. Theory of Organizational Learning and Defensive Routines (Chris Argyris) <i>A bridging theory</i>	4.20	4.23	Argyris (1990, 1992); Argyris & Schön (1996)	12
51. Theory of Bureaucratic Demise (Warren Bennis)	2.66	2.75	Bennis (1966); Bennis & Slater (1968)	32
52. Grid Organization Development (Robert Blake, Jane Mouton)	3.03	3.03	Blake & Mouton (1968, 1969)	17
53. Process Consultation Theory of Organization Development (Edgar Schein)	3.90	4.02	Schein (1969, 1987, 1988)	16
54. Theory of Organizational Culture and Leadership (Edgar Schein) <i>A bridging theory</i>	4.61	4.85	Schein (1985, 1992)	8
55. Alpha, Beta, and Gamma Change in Organization Development (Robert Golembiewski) <i>A bridging theory</i>	3.48	3.77	Golembiewski, Billingsley, & Yeager (1976); Golembiewski (1986)	31
First-Generation Theories (Organizational Decision Making)				
56. Theory of Administrative Behavior/Organizations (Herbert Simon, James March)	5.76	5.81	Simon (1947); March & Simon (1958)	1

(table continues)

TABLE 1
Continued

Theories Evaluated (Listed by Generation and Content)	Mean Importance Rating			% Who Did Not Evaluate
	Total	Organizational Behavior	Major References	
57. Behavioral Theory of the Firm (Richard Cyert, James March)	5.60	5.43	Cyert & March (1963)	1
58. Garbage Can Model of Organizational Choice (Michael Cohen, James March, Johan Olsen)	4.33	4.38	Cohen, March, & Olsen (1972); Cohen & March (1974); March & Olsen (1976)	2
59. Organizational Learning Concepts (James March) <i>A bridging theory</i>	5.31	5.20	Levitt & March (1988); March (1991)	6
60. Social Psychology of Organizing/Sense-making Theory (Karl Weick)	5.51	5.41	Weick (1969, 1995)	2
Second-Generation Theories (Motivation and Perception)				
61. Theory of Behavior in Organizations (James Naylor, Robert Pritchard, Daniel Ilgen)	3.74	3.94	Naylor, Pritchard, & Ilgen (1980)	28
62. Attributional Model of Leadership and the Poor Performing Subordinate (Terence Mitchell, Stephen Green)	4.02	4.18	Green & Mitchell (1979); Mitchell & Wood (1980); Mitchell, Green, & Wood (1981)	12
Second-Generation Theories (Leadership)				
63. Implicit Leadership Theories—Leadership and Information Processing (Robert Lord, Karen Maher)	3.61	3.84	Lord & Maher (1991)	27
64. Substitutes for Leadership (Stephen Kerr)	4.22	4.46	Kerr & Jermier (1978); Kerr & Slocum (1981)	15
65. Charismatic Leadership Theory (Robert House)	4.43	4.76	House (1977); Shamir, House, & Arthur (1993)	8
66. Transformational and Transactional Leadership Theory (Bernard Bass)	4.70	5.06	Bass (1985, 1998)	5
67. The Romance of Leadership (James Meindl)	3.29	3.46	Meindl (1990, 1995)	27
Second-Generation Theories (Concepts of Organization)				
68. Resource Dependence Theory—The External Control of Organizations (Jeffrey Pfeffer, Gerald Salancik)	5.35	5.29	Pfeffer & Salancik (1978)	3
69. Organizational Ecology (Michael Hannan, John Freeman, Glenn Carroll)	4.90	4.88	Hannan & Freeman (1989); Hannan & Carroll (1992)	3
70. Neoinstitutional Theory—Institutional Environments and Organizations (John Meyer, Richard Scott)	4.80	4.79	Meyer & Scott (1983); Scott & Meyer (1994)	17
71. Neoinstitutional Theory—Institutionalization and Cultural Persistence (Lynne Zucker)	4.64	4.51	Zucker (1977, 1988)	20
72. Neoinstitutional Theory—Institutionalism in Organizational Analysis (Walter Powell, Paul DiMaggio)	5.26	5.22	DiMaggio & Powell (1983); Powell & DiMaggio (1991)	23
Second-Generation Theories (Organizational Decision Making)				
73. Image Theory (Lee Roy Beach, Terence Mitchell)	3.66	3.65	Mitchell & Beach (1990); Beach (1990, 1993)	35

a theory as important were that the theory (1) should have proved useful in understanding, explaining, and predicting the functioning of organizations or the behavior of people in them; (2) should have generated significant research; and (3) should have clear implications for practice and application in some area of management or organizational functioning. However, respondents were asked to utilize any other criteria of importance that they might consider useful. Thus the importance ratings were expected to subsume strongly held values and institutionalization processes in addition to the three criteria specifically noted.

Importance was selected for rating because it had been measured in the prior study (Miner, 1984) and because it has the potential for incorporating values and institutional processes (Miner, 1990).

The mean importance ratings given by the total group of judges ($N = 95$) and by the organizational behavior component ($N = 71$)—those considered to be the most knowledgeable scholars with regard to a sample of organizational behavior theories—are presented in Table 1. There the total group means range from 2.54 to 5.76; those for the organizational behavior raters from 2.71 to 5.97. Table 1 also contains in the last column information on the percent

who did not evaluate each theory. Further treatment of this failure-to-rate factor occurs in Appendix A.

Clearly the ratings do discriminate well among the various theories. But do they discriminate in the same manner as the nominations used in the earlier study? This is an empirical question that can best be answered by correlating the frequency of nomination for the 34 theories considered in 1977 with the mean rating given by the organizational behavior judges in the current study to the same theories. Few judges with a strategic management specialization were included in the early group, and accordingly, this is the appropriate comparison. The correlation is a highly significant .49**. Further evidence on the reliability of the importance ratings comes from the correlation of the mean of the first round ratings of each theory (the first 67 judges) with the mean for the second round subjects (the last 28). This test-retest value across roughly 10 weeks is .92**.

Estimated Scientific Validity and Usefulness in Practice

I rated estimated scientific validity on a 5-point scale intended to indicate whether "good theory," and thus improved understanding and prediction had been attained. The extent of logical consistency and other criteria of "good theory" were invoked here (see Miner, 2002a), but the key consideration was the extent to which true research tests of the theory had indeed been carried out, and if they had, whether they supported the theory. Details on these ratings are given in Appendix B. I also made estimated usefulness ratings on a 5-point scale with the objective of testing Lewin's hypothesis. Details on these ratings are given in Appendix C. Further thoughts on the measurement of both validity and usefulness appear in Appendix D.

ESTABLISHING THAT THE GROUP OF JUDGES IS REPRESENTATIVE

Evidence on the probability of nonresponse bias in surveys such as this (where 58% did not respond) may be obtained by comparing the responses on the study variables related to individuals of the first-round respondents (numbering 67) with those of the second-round respondents (numbering 28). These are the samples used in the test-retest analysis. If differences are minimal, it is also likely that no differences would be found comparing the respondents and nonrespondents. If differences are found from Round 1 to Round 2, this trend should be perpetuated into the nonrespondent group, and the representativeness of

the respondent group of judges comes into serious question (Rogelberg & Luong, 1998).

Comparisons between the first- and second-round respondents were made for the mean importance ratings for each theory; the frequency of failure to rate for each theory; for the mean overall importance rating given by the individual; the proportion of strategic management versus organizational behavior respondents; the proportion of first-generation (50 years or older) versus second-generation (under 50 years) respondents; and for the proportion of respondents who proposed additional theories beyond the base 73 when given a chance to do so versus those who did not.

Of these 150 comparisons between Round 1 and Round 2, six yielded significant results, all at $p < .05$. Five of these were on the importance ratings and one on failure to rate. By chance alone one would expect to find 7.5 differences at $p < .05$ in 150 comparisons. Thus, the evidence supports the representativeness of the group of judges, and appears to rule out nonresponse bias. Note also that the mean theory ratings across rounds correlated .92.

ESTABLISHING THAT THE LIST OF THEORIES STUDIED IS COMPLETE

After responding to the 73 items dealing with particular theories, the judges were asked the following question:

Are there any other theories that should have been included in this list? Please indicate the importance of each theory you nominate using the (1 to 7) scale.

Of the 95 judges 52 (55%) left this section blank. Among those who did respond, the mean number of theories nominated was 3.0. Names of theory authors were provided in only 47% of these cases, and importance ratings were given 77% of the time.

Most frequently nominated were strategic management theories—resource-based (12 nominations); agency (10 nominations); transaction costs (10 nominations); I/O economics (6 nominations). Of these nominations 79% came from strategic management judges. There was a scattering of other strategic management and economics theories as well, typically nominated by the strategic management judges and when rated given high ratings (6s and 7s), as were the other more frequently nominated strategic management theories. The problem here is that these are not organizational behavior theories, and thus do not meet the specified criteria of the analysis.

When consideration is given to the nominations

of appropriate, organizational behavior theories, three emerge with more than two nominations; all with six nominations, almost exclusively noted by organizational behavior judges, and typically given high ratings. These three theories are labeled *organizational justice, network, and identity*, but with little consistency as to the authors specified. No other theories have any meaningful numbers, and these three receive nominations from only 6% of the judges; 8% of the organizational behavior group. On this evidence it seems appropriate to conclude that the original 73 theories represent a reasonably complete listing. Note also that nominations by judges from outside the United States unearthed few new theories of an international nature and did nothing to change this conclusion.

DIFFERENCES BETWEEN GROUPS OF JUDGES

Strategic Management vs. Organizational Behavior

At various points in the preceding discussion the strategic management–organizational behavior differential among judges has come up. However, Table 1 indicates the issue most forcefully: If one compares the mean importance ratings for the total group of judges with those for the organizational behavior group only, certain patterns become manifest. With only a few exceptions (theory numbers 8, 24, and 52), the importance ratings for the total group are consistently lower than those for organizational behavior through all first-generation theories until the organizational decision-making theories are reached. Within this latter set of first-generation theories, however, the pattern shifts so that the total means are more often than not higher. Among the second-generation theories of motivation and leadership the balance moves back to favor the organizational behavior judges, but this does not hold true for the concepts of organization and decision-making theories; there the total group means are consistently higher.¹

¹ The above is only a rough analysis. What is different about the total group data is that it contains the strategic management judges; thus, to really understand what is happening a comparison needs to be made between the strategic management and the organizational behavior groups. The results of such a comparison indicate that there are 17 instances where the organizational behavior means are higher at $p < .01$, and another 7 at $p < .05$; differences at $p < .10$ were calculated as well, and there are 10 of these. In contrast only one strategic management mean is higher and that is for the Cyert and March behavioral theory of the firm, a theory with a strong affinity with economics and an economist as its primary author. The mean of means

Taking all the evidence and the logical facts of the situation into account, it seemed best to concentrate on the organizational behavior group of judges as being the truly knowledgeable scholars here, and it is their data that are used in the following analyses. Strategic management, with its close affiliation with economics, is apparently a distinct entity as opposed to organizational behavior (see Miner 2002a, for a discussion of the issues involved here). Accordingly, one might expect that were strategic management theories under consideration, the same tendencies to fail to rate and to rate lower would appear among organizational behavior judges. A by-product of this analysis is the strong recommendation that publications be evaluated (peer reviewed) only by those whose disciplinary orientations fit the material; otherwise, the possibility of rejecting manuscripts which make a substantial contribution is high.

First- vs. Second-Generation

In the same ways that strategic management and organizational behavior judges were expected to differ, a similar differential was anticipated as between first-generation (50 and over) and second-generation (under 50) judges. Specifically, first-generation judges were believed likely to rate second-generation theories lower and to fail to rate them more frequently; the same tendencies should exist when second-generation judges rated first-

across all theories is 3.80 for the strategic management group and 4.40 for the organizational behavior judges ($t = 9.12^{**}$). Clearly the strategic management raters give lower scores to most organizational behavior theories. The pattern noted for Table 1 is once again manifest.

Data were also obtained on the failure-to-rate factor. One might expect that organizational behavior judges would rate more of their own theories and strategic management judges would feel less capable of making these ratings of theories outside their field. Indeed that is what happens. In 28 cases the organizational behavior raters evaluate the theory significantly more frequently; the reverse occurs only twice. Although usually with a slightly lower proportion of significant results, the same pattern of findings across generations and content areas noted for the mean ratings is found for number of ratings (or failure to rate) as well. The strategic management group feel less able to rate most of these organizational behavior theories, except for those dealing with decision-making and second-generation theories of an organizationwide nature.

One result of the pattern noted is that while 20 theories earn a really good rating (a score of 5.0 or higher) from the organizational behavior judges, only 10 do so when the strategic management judges are involved. Furthermore, the theories so rated by the strategic management group are without exception of a decision-making or organizationwide nature; the good theories as rated by the organizational behavior group are more balanced, and include a number of microformulations.

generation theories.² I discuss the rationale behind this generational differentiation in Miner (2002a). This analysis does not overlap with the previous one since the relationship involved was not close to being significant ($\chi^2 = 2.63$, *ns*; *df* = 1).

From the evidence only 7 of the 146 comparisons were significant at the .05 level or better. All fit theoretical expectations, but the numbers involved are not above chance levels. Certainly there is no basis here for choosing one set of ratings over another, as was the case in choosing the organizational behavior judges over those of a strategic management nature; the differentiation in terms of the generation of the group doing the judging is not that strong.

RELATIONSHIPS AMONG VARIABLES

The analyses that follow are modeled after Miner (1984), although the results are far from being the same.

Importance and Validity

Whereas previously there was no evidence of any relationship between importance and validity, now such a relationship is apparent, although the chi-square reaches only the $p < .10$ level (see Table 2). When, however, the full range of values are brought to the analysis, the correlation with importance emerges as .44**. Thus, we now have evidence that the two are significantly related; it appears that a real change has occurred in this regard.

Importance and Usefulness

The organizational behavior ratings of importance exhibit a significant relationship to estimated usefulness in practice (see Table 3)—not strong, but a real improvement over what was indicated in the

²Data comparing mean importance ratings by the age-based generation of the raters in fact yielded only one significant difference (at $p < .05$); a second-generation theory which was rated higher by the second-generation raters. In two instances the ratings of first-generation theories by first-generation raters gave evidence of a tendency toward being significantly higher, but only at $p < .10$. In spite of this dearth of results the first-generation mean of 4.32 was above the second-generation mean of 4.23 ($t = 2.79$ **), presumably because there were more first-generation theories and because the ratings of the two generations were highly correlated ($r = .94$). Insofar as the number of ratings is concerned, the picture is somewhat more differentiated, all involving pre-OB or first-generation theories that were rated more frequently by first-generation (older) judges. There were six such instances at $p < .05$ or better.

TABLE 2
Estimated Scientific Validity in Relation to Mean Organizational Behavior Importance Rating

Estimated Scientific Validity	Organizational Behavior Importance Rating		
	Low (2.71–3.99)	Medium (4.00–4.99)	High (5.00–5.97)
High (4 & 5)	3	11	11
Mixed (3)	9	9	6
Low (1 & 2)	10	11	3

$$\chi^2 = 9.14; p < .10; df = 4.$$

Miner (1984) report. Yet the correlation using the full range of variables is only .17 ($p = .14$), still better than the p value reported previously, but lacking significance. It appears overall that the usefulness factor does contribute to the importance ratings, and certainly this relationship has improved over the years, but it is still not strong.

Validity and Usefulness

Although the Lewin hypothesis was not supported in the Miner (1984) analysis, it is now. Perhaps what is needed to confirm an hypothesis of this type is a more mature science. The chi-square value in Table 4 is significant at $p < .01$ and the correlation obtained is .32**.

There are 18 theories that score higher on usefulness than on validity. In these cases the applications appear to have detached themselves from the underlying theory, developing a life of their own, presumably through a process of trial and error (Weick, 1987). This process appears to be particularly characteristic of theories having a tie to organization development in some form. Of the 18 theories involved, 13 have such a tie. Also 3 more are of a pre-OB nature, where practical applica-

TABLE 3
Estimated Usefulness in Application in Relation to Mean Organizational Behavior Importance Rating

Estimated Usefulness in Application	Organizational Behavior Importance Rating		
	Low (2.71–3.99)	Medium (4.00–4.99)	High (5.00–5.97)
High (4 & 5)	0	3	7
Questionable (3)	10	14	5
Low (1 & 2)	12	14	8

$$\chi^2 = 12.26; p < .05; df = 4.$$

TABLE 4
Relationship Between Estimated Usefulness in Application and Estimated Scientific Validity

Estimated Usefulness in Application	Estimated Scientific Validity		
	Low (1 & 2)	Mixed (3)	High (4 & 5)
High (4 & 5)	(N = 0)	(N = 2) 38. Trist & Emery 43. Lawrence & Lorsch	(N = 8) 3. Lewin 10. McClelland 13. Hackman et al. 18. Luthans & Kreitner 20. Locke & Latham 21. Miner 29. Vroom et al. (Normative) 66. Bass
Questionable (3)	(N = 12) 1. Mayo et al. 6. Fayol 7. Taylor 12. Herzberg 22. McGregor 30. Heller 34. Likert 50. Argyris (Learning) 51. Bennis 52. Blake & Mouton (OD) 53. Schein (OD) 54. Schein (Culture)	(N = 6) 11. Levinson 31. Fiedler (Contingency) 47. V. Thompson 49. Argyris (Congruence) 55. Golembiewski 64. Kerr	(N = 11) 5. Weber 14. Vroom (Expectancy) 15. Porter & Lawler 17. Hamner 19. Adams 33. Graen 44. Pugh et al. 46. Blau 68. Pfeffer & Salancik 70. Meyer & Scott 73. Beach & Mitchell
Low (1 & 2)	(N = 12) 2. Barnard 4. Follett 8. Maslow 23. Hemphill 24. Blake & Mouton (Leadership) 25. Hersey & Blanchard 28. R. Tannenbaum & Schmidt 40. Burns & Stalker 41. Woodward 42. Perrow 59. March 60. Weick	(N = 16) 9. Alderfer 16. Deci & Ryan 26. Evans 27. House (Path Goal) 32. Fiedler & Garcia (Cognitive) 36. Stogdill 37. Katz & Kahn 39. J. Thompson 45. Donaldson 48. Etzioni 57. Cyert & March 58. Cohen et al. 61. Naylor et al. 67. Meindl 69. Hannan et al. 72. Powell & DiMaggio	(N = 6) 35. A. Tannenbaum 56. Simon & March 62. Mitchell & Green 63. Lord & Maher 65. House (Charismatic) 71. Zucker

$$\chi^2 = 16.90; p < .01; df = 4.$$

tions have often outdistanced the validity of the underlying theory.

Even more frequent are cases in which a theory's validity outdoes its usefulness; a number of good theories have not proven very practical. In all 39 theories were considered to have higher validity than usefulness. Of these, 11 were second-generation theories (of the 13 such theories considered) and 4 were bridging theories developed from first-generation sources but in the second-generation time period (out of the 7 such theories considered). It appears from these data that the recent period has stressed the validity of its theorizing, but at the expense of practical application. The need for a

new breed of "application theorists" who can take the good theories of others and extend them into the world of practice appears to be accelerating.

The Validity-Usefulness Matrix and Theory Content

The validity-usefulness matrix of Table 4 may be completed, not with specific theories, but with the contents, or areas, of theory formulation (see Table 5). The high-high theories deal mostly with motivation, but include some in the leadership area. When the net is extended more broadly in one direction or the other, the mix of theory content is

TABLE 5
The Validity–Usefulness Matrix in Terms of Areas of Theory Formulation

Estimated Usefulness in Application	Estimated Scientific Validity		
	Low (1 & 2)	Mixed (3)	High (4 & 5)
High (4 & 5)		Systems (38, 43)	Motivation (10, 13, 18, 20, 21) Leadership (29, 66) General-Motivation (3)
Questionable (3)	Bureaucracy (50, 51, 52, 53, 54) General (1, 6, 7) Leadership (22, 30) Motivation (12) Systems (34)	Bureaucracy (47, 49, 55) Leadership (31, 64) Motivation (11)	Motivation (14, 15, 17, 19) Bureaucracy (44, 46) Organization (68, 70) General-Bureaucracy (5) Leadership (33) Decision Making (73)
Low (1 & 2)	Leadership (23, 24, 25, 28) Systems (40, 41, 42) General (2, 4) Decision Making (59, 60) Motivation (8)	Leadership (26, 27, 32, 67) Motivation (9, 16, 61) Systems (36, 37, 39) Bureaucracy (45, 48) Decision Making (57, 58) Organization (69, 72)	Leadership (63, 65) Motivation (62) Systems (35) Decision Making (56) Organization (71)
Validity–Usefulness	Areas of Theory Formulation		
	Other Than Motivation	Motivation	
(4 & 5, 4 & 5) (3, 4 & 5) (4 & 5, 3)	11	10	
Other combinations	45	7	

$$\chi^2 = 9.72; p < .01; df = 1.$$

expanded considerably, even though the motivational factor continues to add numbers. Since in the Miner (1984) study, motivation theories clearly dominated this analysis, holding all of the positions in the high–high category and yielding a very significant chi-square, the significance of this finding was tested once again using the more recent data. The results at the bottom of Table 5 indicate a similar situation in 2000–2001. Motivation continues to hold a highly significant position, even though forced to share its dominance with theories of other kinds. If one wishes to create a highly valid theory, which is also constructed with the purpose of enhanced usefulness in practice in mind, it would be best to look to motivation theories, often with a more limited domain, for an appropriate model.

The Validity–Usefulness Matrix and Professional Degree Source

A different type of overlay for Table 4 may be obtained by entering into the matrix the department or program from which the highest professional degree of the theorist(s) was obtained. When there are multiple authors, the predominant discipline among them is used; thus, the number of entries equals the number of theories. The most

frequent disciplinary origin among the theories is psychology with 52%; second is sociology with 12%, followed by organizational behavior at 10% and political science at 8%. No other discipline extends beyond 4%, although there are a number of fields represented.

The Miner (1984) findings using this matrix indicated a highly significant dominance of psychology among the various disciplines represented. In fact psychology held almost all of the top spots. However, this is no longer true in 2000–2001, and many more theories set forth by psychologists are further down in the validity–usefulness matrix. The result is that psychology no longer occupies a significantly strong position ($\chi^2 = 2.57, p < .20, df = 1$). I suspect that this represents a trend into the future, and that psychology's hold on theoretical dominance in the field will continue to shrink.

Implications for Teaching and Learning: Undergraduates

Given this assessment of the current state of theory in organizational behavior, and drawing upon the data of Table 1, it is possible to specify something about the implications for course development. I start with my suggestions for what should be emphasized in undergraduate courses, where in my

view we should stress what the field considers to be important, and cease to give equal billing to theories which used to be considered important (but are not now) or never were evaluated very positively. These suggestions are broken down by content areas and hold both for a general course in organizational behavior and for more specialized courses in the various subject areas.

Motivation (and Perception)

Motivation theory has not only exhibited considerable validity and usefulness over the years, but also it generates a mean importance rating of 4.59. Certainly motivation, and personality theory more broadly, are not engaged in a "great disappearing act" as some have claimed (Nord & Fox, 1996). In fact 6 of the 16 such theories are rated at 5.00 or above in importance. A number of these latter theories have increased in importance over the past 20 years including McClelland's achievement motivation theory, Hackman and Oldham's job characteristics theory, Adams's equity theory, and in particular Locke's goal-setting theory. The declines have been primarily in some of the more humanistic theories. All the above, plus the Vroom and Porter and Lawler versions of expectancy theory, deserve detailed exposition, in textbooks and in class.

Leadership

Leadership theory is in ferment at the present time, probably because there are so few dominant positions. The mean importance rating is 4.00 among the 17 theories, and only Bass's transformational theory is rated above 5.00. The latter is closely followed by House's charismatic theory and Graen's leader member exchange theory, which has moved up substantially in importance over the years. Yet the decline of path-goal theory in its various forms and of Fiedler's theorizing has left something of a void in the leadership area. Perhaps the best way to deal with the lack of important leadership theories is to combine motivational and leadership content under a "micro" umbrella. There are, in fact, some new theories, such as the Miner (2002b) extension of role motivation theory into the leadership domain, that bridge these two subject areas.

Organizations

Macrotheories of organizational structuring and functioning cover a wide range from organization development to systems concepts, to bureaucracy-

related views, to the more recent positions such as neoinstitutional theory. Across the 27 such theories (28 if one includes Weber himself) the mean importance rating is 4.38 (4.43 with Weber); 7 achieve values of 5.00 or above (8 with Weber). Several organization development theories have declined in importance, but two others remain at the top level: Trist and Emery's sociotechnical theory, and Lawrence and Lorsch's contingency theory of organizations. Both of the latter are systems theories as well, as are the Katz and Kahn theory, James Thompson's theory, and the Burns and Stalker view of mechanistic and organic systems. Although these theories have held positions in the over-5.00 category, other systems theories, such as Likert's systems 1 to 4 and Woodward's technological determinism, have declined sharply.

Interestingly, none of the bureaucracy-related views (other than that of Weber) achieve the top category on importance, although Schein's theory of culture and leadership comes close. The group of theories with 5.00 or better importance ratings is rounded out with Pfeffer and Salancik's resource dependence theory and Powell and DiMaggio's version of neoinstitutional theory. Indeed recent institutional approaches seem to have moved beyond the "neo" stage already (Dacin, Goodstein, & Scott, 2002). This is an important area to stress. Whether systems theory, which has probably passed through the period of its greatest popularity, will continue to hold its current high importance rating remains something of a question. However, the continuing thrust of organization development practice will almost certainly drive a reemergence of theory building in that area, perhaps working from the frameworks provided by sociotechnical theory and Schein's theory of organizational culture. This remains a significant subject area to teach, one with considerable practical relevance.

Decision Making

There are only six entries on our list of organizational decision-making theories, but they are impressive. The mean importance rating is 4.98, and 4 theories are rated at 5.00 or above. These four are the work in the 1940s and 1950s of Simon and March, the Cyert and March behavioral theory of the firm, March's views on organizational learning, and Weick's theories of organizing and sense making. Theories in this area are probably not given the attention in undergraduate teaching that they should be. My suggestion is to combine them with the macrotheories of organization, thus giving them greater visibility.

Implications for Teaching at the Masters (MBA) Level

Much of what I have said above holds at the masters level as well, especially for general and executive MBA courses in organizational behavior. In addition, a historical perspective should be incorporated not because these concepts are currently of great value but because they indicate the multidisciplinary origins of organizational behavior and point up the need for the scientific base that ultimately emerged. This would require incorporating the views inherent in the seven preorganizational behavior perspectives in Table 1, especially those of Lewin and Weber, which continue to exert an influence today.

Another issue here involves the teaching of applications. Masters-level students need to understand the applications to practice that organizational behavior's theories have generated, and they need to understand them in depth. In fact, I have in mind to write a book on this topic, simply to provide a synopsis of material that is not adequately emphasized in current textbooks. Such a book would draw upon the implications for practice of the 27 theories in the four upper right cells of Table 4. It would not deal with the 34 theories having little usefulness because these theories either lack specific applications or have applications that have been discredited by research; nor would it introduce the 12 additional theories with low validity because some degree of validity is necessary to generate a truly useful application (in a scientific sense).

I am well aware that many of the theories that I have excluded above continue to have considerable appeal for textbook writers, for organizational behavior practitioners, and for practicing managers, especially certain of the theories listed in the low-low cell of Table 4. In part this is a function of institutionalization; in part it is a consequence of the continuing, but declining appeal of a humanistic ethic; in part it is a carryover from organizational behavior's successes of the past. But this is a different time with new theories and new research, and consequently, with new understandings. If we continue to have faith in science and its products, then these anachronisms will eventually take care of themselves. One way that this might happen is that certain of the excluded theories would come to generate supportive research on both their propositions and their applications of a kind that simply does not exist at present (and thus relegates them to the excluded cells of Table 4).

Implications for Teaching at the Doctoral (PhD) Level

As one moves to more specialized courses primarily at the doctoral level, it becomes important to teach not only good theory, but also not-so-good theory. Now the goal increasingly becomes one of critiquing theories to teach skills in evaluating any new theory that comes on the scene, and perhaps even develop the ability to create new theory. Capabilities such as these require teaching which contrasts theories at different levels of "goodness" and with different degrees of research support. Material for this purpose may be found in my *Organizational Behavior* (Miner, 2002a). Here it becomes absolutely essential to integrate content courses with teaching dealing with research design.

At the doctoral level it is also important to introduce students to the original materials. Table 1, under the heading Major References provides what is needed for this purpose. These references are primarily to key books that present the theories in their original form, but in some instances journal articles and book chapters are noted as well. I have selected these references for the purpose of providing statements of the content of each theory. However, some sources also contain original research and research reviews.

OTHER KEY FINDINGS

Several other sets of findings, related to consensus within the field and to changes over time, also require elaboration. The range of importance ratings given to the various theories suggests a substantial lack of consensus, something that has been widely bemoaned, and occasionally extolled, in the organizational behavior field in the past (see for instance Roberts, Weissenberg, Whetton, Pearce, Glick, Bedeian, Miller, & Klimoski, 1990). When all 95 judges are invoked, 86% of the theories have all rating points from 1 to 7 filled, and another 12% have 6 points filled. As indicated in Appendix E, however, these data clearly overstate the case in a negative sense. There are problems in calculating consensus estimates that need to be taken into account.

Change

With regard to change the concern here is first with whether there has been a change in the theories introduced in the second generation, as opposed to the first. The answer is that only in the case of estimated validity is a significant difference ob-

tained. The 13 second-generation theories are more valid than the 60 other theories ($\chi^2 = 8.95^*$, $df = 2$). Usefulness, importance, and failure to rate do not produce significant differences, although the validity of the second-generation theories is well above their estimated usefulness.

Changes from the first analysis (Miner, 1984) to this one in rated importance have been noted previously. Although no change of more than one cell occurred, using the 3-point system of the earlier analysis, some 47% retained their original rating, with upward and downward shifts being equally prevalent. Changes in estimated validity and usefulness occurred less frequently, and those that did occur were due to supplemental theory or new research added since the initial analysis.

CONCLUSIONS

In 1984 I concluded with the following summary:

Overall, in spite of pockets of substantial success, the picture presented by this stock taking of organization theories is not highly positive. The feedback is at least as negative as it is positive, sufficiently negative so that a readjustment of goals, paradigms, and basic processes appears worth considering (Miner, 1984: 303).

Now, however, this negative picture appears to have changed substantially; the feedback is much more positive, consistent with a more mature science. Organizational behavior is clearly differentiated from strategic management. Validity and usefulness are contributors to perceptions of theoretical importance. Lewin's dictum (hypothesis) regarding the tie between theory and practice receives solid support. Psychology has come to share its dominant position in the validity-usefulness matrix with other disciplines, thus creating a more diversified knowledge base. A consensus regarding the theoretical knowledge possessed by the field appears to be emerging, although it is not clear how strong this consensus is. Our newer theories, and a number that have survived from the previous generation, are of high validity.

All this bodes well for the future of organizational behavior. A call for a readjustment of goals, paradigms, and basic processes no longer seems warranted. Yet we have to a degree lost sight of the usefulness criterion, and the matter of practical application; perhaps some will believe that we have become too academic. In any event I do not wish to argue from the results reported here that organizational behavior should be satisfied with

what it has accomplished and cease to develop. There is much more to accomplish as I have indicated elsewhere (Miner, 2002a). The present stock taking indicates, however, that a solid base has been created on which to build for the future.

In concluding this article I want to say a word about the process of conducting surveys of this kind. My impression is that the current approach represents a major advance over what was done 20+ years ago. Yet there are areas in which further improvements could be made, especially with regard to consensus measurement. Also, there are questions that might be raised regarding the cultural limitations of the data presented here. Certainly such cultural variations exist (see Lammers, 1990). I have noted at other points in this article where individuals and theories from outside the United States have been introduced. My guess is that insofar as English language theories are concerned, the coverage is quite appropriate. Beyond that, however, it is impossible to say; some cultural bias surely exists, but data to indicate how much are not available.

Finally, a comment on the relevance of the findings presented for learning and education: I would hope that these data will not only influence theory formulation and development, but also the content of texts and course offerings in the field. We need to point up those ideas that have established value, and to stop emphasizing those that have not. Organizational behavior's body of valid and useful knowledge is now sufficient so that we do not need to embellish it with our failures.

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APPENDIX A

Failure to Rate a Theory

From the beginning I recognized that some of the judges would not be able to rate certain theories and that this failure-to-rate variable might yield useful information in its own right. Accordingly after each theory there was a line that read:

Cannot assess _____ Reason? _____

Although not all who checked "cannot assess," and thus did not rate, provided a reason, most did. These reasons were as follows:

Not familiar	Unfamiliar	Haven't studied carefully
Never heard of	Don't know enough	Not too familiar
No knowledge of	Don't remember	Unknown
Not sure of	Lack of familiarity	Outside area
Do not know	Unaware	

It is apparent that checking "cannot assess" characteristically meant a lack of knowledge of the particular theory. In addition, there were instances where the item was simply skipped; in such cases there was less basis for attributing causation; but knowledge deficiencies may well have been involved here too.

Of the 95 judges, 20 actually rated all 73 theories. From there the failure-to-rate variable rose to as high as 50 theories, with a mean of 9.78 per judge overall. Of the total possible ratings, 13.4% were not made—.7% involving skipping and 12.7% "cannot assess."

APPENDIX B Rated Validity

The rating scale used to appraise validity ranged from 1 at the low end (where the research evidence was either nonsupportive or did not exist to a sufficient degree, in spite of the fact that adequate time had elapsed to permit studies to be conducted) to 5 at the high end (where substantial segments of the theory had been supported by a sizable body of subsequent research). These ratings were based on many years of study of the individual theories and related research; they were made in late 2000 and were not informed by the results of the importance rating procedure. The rationales underlying these validity estimates are spelled out in considerable detail in Miner (2002a). Thus a specific source exists providing documentation for each rating. Although made by one person, these ratings incorporated the views of many others, both critics and enthusiasts.

All five points on the validity scale were in fact utilized; the mean rating was 3.05 and the distribution was essentially normal. Evidence of the lack of bias inherent in such ratings derives from their relationship to similar ratings provided by others for overlapping theories. Locke and Henne (1986) published data on 8 motivation theories which overlapped; the correlation with my early ratings was .94. Lee and Earley (1988) provided validity data obtained from a survey of 127 scholars on 13 motivation and leadership theories which overlapped; the correlation with those same ratings was .75. On this limited evidence it appears that the ratings for estimated scientific validity were themselves valid. Evidence of reliability for the theories rated in 1977 was calculated by correlating these earlier ratings with those given in 2000–2001. This lower bound test-retest value across a 20+ year interim, within which much new input to the rating process was absorbed, was .89**.

APPENDIX C Rated Usefulness

The rating scale used to evaluate estimated usefulness in practice extended from 1 at the low end (where the theory clearly had not contributed to practice in any meaningful way, either because applications were not generated or because research or experience had proved them essentially useless) to 5 at the high end (where one or more highly viable applications had been generated and shown by research to produce the intended results). These ratings made in late 2000 are also documented in Miner (2002a). Again, although made by a single person, they utilized the views of many others who had published regarding the theory.

Again all five points on the scale were utilized; the mean rating was 2.47. There was, however, a heavy weighting toward the low end of the scale (1s and 2s) and a deficit on the high end (4s and 5s). Questions have been raised regarding this type of analysis (Brief & Dukerich, 1991) and indeed comparative data involving theory ratings provided by others are lacking. Nevertheless, I believe that data on the potential for practical application of our theories are needed, and that tests of Lewin's hypothesis should be carried out periodically. The test-retest lower bound value, obtained in the same manner as for the validity estimate, was .83**.

APPENDIX D Thoughts on Measuring Validity and Usefulness

The validity and usefulness measures described suffer from the possibility that they are biased in that they derive from the judgments of a single person. In that respect this review is similar to other literature reviews; the views of the author, both as to selection of the underlying literature and as to interpretation of that literature, are paramount. The ratings made here derive from extensive study of the writing (critique, research, meta-analyses, etc.) surrounding each theory (Miner, 2002a).

One reason for using this measurement procedure was to replicate the earlier (Miner, 1984) study at a 20+ year interval. But there were also reasons for not using alternative measurement approaches. Meta-analyses of the research surrounding a theory could have been relied upon, except that this would have severely restricted the number of theories that could have been considered. Furthermore, meta-analyses do not necessarily cover any more studies than a thorough literature search, often fail to weight the better conducted studies appropriately, and neglect many of the findings from a given study because of the independence requirement. There are even instances where different meta-analyses of the research on a given theory reach conclusions that are at variance with one another (see Miner, 2002a). In any event, theory usefulness is rarely the subject of meta-analysis.

Another measurement possibility is the use of citation counts. Unfortunately, however, research indicates that publications which perform particularly well on these counts do so less because of their perceived quality or because of their usefulness to practitioners than because of their usefulness to scholars in carrying out professional tasks (research methodology, etc.). This does not appear to be the kind of measure that would yield the type of information desired (Shadish, 1989).

This brings us back to some type of rating procedure, perhaps using knowledgeable practitioners to provide input as to usefulness in application. Yet even well-educated practitioners seem on the evidence to lack any real understanding of organizational behavior theories (Priem & Rosenstein, 2000). Thus, this approach comes up short insofar as providing a truly informed group of judges to assess validity and usefulness.

This same problem of possessing adequate knowledge of theories themselves, the research on them, and the relevant literature plagues other approaches to rating theory validity and usefulness, as opposed to the much more global importance ratings. It is relatively easy to find specialists who can evaluate motivation or leadership theories in this manner. This has been done, and the results compare well with my own ratings. Generalizing from these samples to other theoretical content domains within organizational behavior seems entirely justified. The added contributions of domain specialists does seem to support at least the validity part of the equation.

Rating all the theories across domains is another matter. Ed Locke in his review of Miner (2002a) says "It must have taken about ten years to put this book together." Counting the input from various earlier versions, this estimate is not far from the truth. The point is that reviewing all the evidence (including meta-analyses) to make meaningful ratings of the validity and usefulness of 73 widely distributed theories is not something we in the field do often. I did it only to write a book, and then only in my retirement. It is too much to ask that others do the same, and as Locke says "I doubt anyone will again for the next 20 years."

For all these reasons I believe the type of quantitative (but still personal) review I have settled upon is the most feasible approach to evaluating the theories of organizational behavior at the present time. For those who remain skeptical I ask only that they read the documentation on which the ratings are based in Miner (2002a); then reevaluate their position.

APPENDIX E

Problems With Consensus Calculations

When the analysis is limited to the 71 judges in the organizational behavior group, the figures are reduced to 71% with all 7 ratings filled and 25% with 6 points occupied. This analysis suffers because a number of theories have outliers with only a single judge's rating at one or both of the extremes. When these instances are eliminated, the organizational behavior judges' figures fall to 41 and 41%. Applying a goodness-of-fit analysis to these data, with figures for the total sample of 95 supplying the expected values, a significant difference is obtained ($\chi^2 = 16.07^{**}$, $df = 2$). Consensus is clearly greater among the organizational behavior raters than for the total group. This position is confirmed by the smaller average standard deviation of the organizational behavior ratings than is found in the total group ($t = 3.84^{**}$).

A problem exists, however, due to the variation in standards applied by different judges. The average rating by an organizational behavior judge was spread across 3.66 scale points; for the total group this spread was 4.48. Quite evidently some judges consistently apply negative standards, others are more positive. What we do not know is to what extent these judges with apparent strong response tendencies would continue to exhibit the same behavior on other rating scales with quite different content, thus demonstrating the use of stable differences in standards. The research as currently conceived does not permit a correction for disparate standards. Yet such differences must exist; consensus clearly is greater than the current data indicate. Furthermore, comparison data utilizing the key theories of other disciplines and appropriate raters from those disciplines are lacking. Thus in certain respects, with regard to consensus, this analysis represents a pilot investigation serving more to unearth design needs and key variables than to provide definitive answers.

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