

INTRODUCTION TO SPECIAL TOPIC FORUM

MULTILEVEL THEORY BUILDING: BENEFITS, BARRIERS, AND NEW DEVELOPMENTS

KATHERINE J. KLEIN

University of Maryland at College Park

HENRY TOSI

University of Florida

ALBERT A. CANNELLA, JR.

Texas A&M University

During the past decade, a number of authors (e.g., Cappelli & Sherer, 1991; House, Rousseau, & Thomas-Hunt, 1995; Tosi, 1992) have lamented the division of micro and macro camps within the organizational sciences and the resulting dearth of true multilevel theory and research. These laments have inspired a slow but steady stream of multilevel work. The stream is slow because the barriers to such work are substantial, yet it is steady because the benefits are real. In this article we review the benefits of and barriers to multilevel theory building. We then describe new developments in multilevel theory building—developments, illustrated by the articles of this special topic forum, that we believe will broaden and strengthen the stream of multilevel theory and research to come.

BENEFITS OF MULTILEVEL THEORY BUILDING

The benefits of multilevel theories have been extolled in a number of recent commentaries (e.g., House et al., 1995; Klein, Dansereau, & Hall, 1994; Tosi, 1992). Multilevel theories span the levels of organizational behavior and performance, typically describing some combination of individuals, dyads, teams, businesses, corporations, and industries. Multilevel theories, thus, begin to bridge the micro-macro divide, integrating the micro domain's focus on individuals and groups with the macro domain's focus on organizations, environment, and strategy. The result is a deeper, richer portrait of organizational life—one that acknowledges the influence of the organizational context on individuals'

actions and perceptions and the influence of individuals' actions and perceptions on the organizational context. Thus, multilevel theory building fosters much needed synthesis and synergy within the organizational sciences. Multilevel theories connect the dots, making explicit the links between constructs previously unlinked within the organizational literature. They begin to complete the gestalt of organizational behavior and theory.

Further, although multilevel theories are necessarily complex, their complexity may yield important practical insights. Multilevel theories illuminate the context surrounding individual-level processes, clarifying precisely when and where such processes are likely to occur within organizations. Similarly, multilevel theories identify the individual-level characteristics, behaviors, attitudes, and perceptions that underlie and shape organization-level characteristics and outcomes. Thus, multilevel theories may illuminate the steps organizational actors may take, individually and collectively, to yield organizational benefits.

BARRIERS TO MULTILEVEL THEORY BUILDING

Because multilevel theories span the levels of the organizational discipline, the theorist who seeks to develop a new multilevel theory usually must draw from both organizational behavior and organizational theory, and often from these fields' parent disciplines—psychology, sociology, anthropology, political science, and economics—as well. Accordingly, the first bar-

rier to multilevel theory building is simply the mass of potentially relevant research and theory available to the would-be theorist. When is he or she to stop reading and start writing?

A second barrier to multilevel theory building is more subtle and more insidious than the sheer volume of research and theory available to the aspiring multilevel theorist. This is the barrier of interests, values, and heuristics. The training that researchers receive as doctoral students seldom is multilevel in nature. Hence, individual-level behaviors and attributes may seem of little interest and import to the macro-trained theorist. Conversely, organizational behaviors and outcomes may appear intractable and uninteresting to the micro-trained scholar. The statement that "organizations don't behave; people do" may be a truism for the micro theorist but a misguided cliché for the macro scholar. The micro scholar may be unable or simply disinclined to see the forest for the trees, whereas the macro scholar may be unable or disinclined to see the trees that make up the forest.

A third barrier to the development of multilevel theory is the difficulty of determining the appropriate scope for such theory. Some works of multilevel theory appear simplistic. A theorist builds on a set of single-level propositions by adding a construct or two from a higher or lower level of analysis. Or a theorist shifts a theoretical proposition from one level of analysis to another: "We know that when individuals do *x*, *y* occurs. Therefore, when groups do *x*, *y* must also occur." Such a simple translation may not yield profound theoretical insights. At the opposite extreme are multilevel theories of overwhelming complexity, describing a jumble of moderating and mediating variables and relationships at several levels of analysis. The central insights from these theories may be overshadowed by the number of relationships posited in the model. The appropriate middle ground—not too simple, yet not too complex—may be difficult to find.

The realities of academic publishing present a fourth potential barrier to the development of multilevel theory building. Upon reading a multilevel, interdisciplinary theoretical essay, a micro reviewer may find the macro elements of the paper irrelevant and unnecessary, whereas a macro reviewer may have the opposite response: too little macro, too much micro. Further, an interdisciplinary and multilevel work may

paradoxically be at home everywhere and nowhere: of some interest and appeal to numerous disciplines and journals but of central interest and appeal to none.

The difficulty of conducting multilevel research presents a final barrier to the scholar's development of multilevel theories. The analysis of multilevel data has been the topic of considerable debate (e.g., Bliese & Halverson, 1998; George & James, 1993; Yammarino & Markham, 1992), but perhaps even more daunting than multilevel data analysis is the task of multilevel data collection. Rigorous tests of multilevel theories may require the researcher to gather data from multiple individuals across multiple units and organizations. The single-organization study, so common within micro-organizational behavior, may not suffice, nor may the single-observation-per-organization study, so common within macro-organizational research. As our field embraces multilevel organizational theory, we may be forced to relax some of our research standards, recognizing, if temporarily, the tradeoffs sometimes necessary when researchers begin work in a new area.

NEW DEVELOPMENTS IN MULTILEVEL THEORY BUILDING

In recent decades, discussions and debates regarding multilevel data analysis have far outnumbered works of multilevel theory. Thus, the mere existence of a special issue of *AMR* devoted to multilevel theory represents an important new development in multilevel theory building. The 54 submissions to this special issue, illustrated by the 6 selected for publication, reveal the growing scope, sophistication, and subtlety of multilevel theory building. The articles suggest numerous avenues for further multilevel theory building and research. Here, we highlight five themes that cut across the articles and herald the increasing maturity of multilevel theory.

Specification, Explication, and Flexibility of Levels

Guidelines for the development of multilevel theory (e.g., House et al., 1995; Klein et al., 1984) direct authors to specify and explicate the level of their constructs with care and precision. Such specificity yields theories that are clear and

testable. Yet, admonishments to specify and explicate the level of constructs may inadvertently create the impression (1) that construct levels inevitably match the *formal* groupings and subgroupings of organizations (e.g., individuals, formal groups, distinct units, and so on) and (2) that construct levels are static. The articles in this special issue counter these impressions, bringing new flexibility—with no reduction in specification or explication—to the definition of construct levels.

In defining the level of the construct *organizational creativity*, Drazin, Glynn, and Kazanjian (this issue) deliberately eschew the most obvious formal units of the organization: the individual, the formal group, or the organization as a whole. Building upon prior discussions of inclusion (House et al., 1995; Rousseau, 1985), Drazin and his colleagues note that

partial inclusion means that an individual occupies multiple organizational roles and is influenced by membership in all of them. . . [This] complicates cross-level research because effects can no longer be attributed to membership in a single hierarchical group; researchers need to account for multiple, and often competing, influences that cause individuals to situate themselves in accord with this complexity (p. 289).

The authors evoke a sensemaking perspective (e.g., Weick, 1979, 1995) to explore creativity at three levels of analysis: (1) the intrasubjective level, (2) the intersubjective level, and (3) the collective level. Their discussion of creativity provides a useful model for theorists who wish to explore levels of theory that transcend formal boundaries internal and external to the organization.

Dansereau, Yammarino, and Kohles (this issue) tackle the issue of the stability of levels of theory. Building on the variant approach to levels of analysis (Dansereau, Alutto, & Yammarino, 1984), these authors suggest that constructs may shift levels over time. Thus, for example, a number of individuals who are independent with respect to work attitudes and values may coalesce over time to form a homogeneous group, united by shared work attitudes and values. Or an interorganizational alliance may break apart, yielding not one alliance but two independent organizations. Dansereau, Yammarino, and Kohles' exploration of changes in the levels of constructs over time counters implicit assumptions of levels stability within

the organizational literature and will, we hope, inspire new theoretical models and studies of levels change over time.

Within-Unit Agreement and Disagreement

Many levels scholars (e.g., Dansereau et al., 1984; James, 1982; Rousseau, 1985) have asserted that within-unit agreement is a necessary and perhaps sufficient condition for (1) the theoretical assertion that the level of a given construct is the unit and (2) the aggregation of individual-level data regarding the construct in question to the unit level. Accordingly, within-unit agreement may appear to be a hurdle that must be cleared on the way to theoretical specification and statistical analysis of unit-level constructs. The authors of several of the articles in this special issue take a different approach, however, shining a bright light on the determinants and consequences of within-unit agreement (homogeneity) and disagreement (variability or heterogeneity). In these articles within-unit agreement emerges not just as a hurdle to clear but as a phenomenon worthy of study in and of itself.

Waldman and Yammarino's (this issue) model of the consequences of CEO charismatic leadership rests on the assumption that organizational members are homogeneous in their attributions of CEO charisma, in their cultural values, and in their perceptions of environmental volatility. But, in the final pages of the article, the authors revisit their assumptions of within-organization agreement, exploring the possibility and consequences of within-organization heterogeneity in attributions of CEO charisma, cultural values, and perceptions of environmental volatility.

Assumptions of between-unit agreement (fit) and disagreement (misfit) play a central role as well in Kostova's (this issue) model of the transnational transfer of strategic organizational practices. Kostova suggests, for example, that the transfer of a strategic organizational practice from a parent company to a recipient organizational unit is most likely to be successful when the parent company and recipient unit share institutional characteristics.

Drazin, Glynn, and Kazanjian (this issue) also consider the sources and consequences of within-organization agreement and disagreement as they explore technicians' and managers' sensemaking frameworks of creativity. These articles

invite conceptual and statistical analysis of the determinants, nature, and consequences of within-unit agreement *and* of within-unit disagreement regarding the key constructs of multilevel models.

Creating Organizational Context: Individuals' Influence

Multilevel theoretical models may take several different forms (Klein et al., 1994; Rousseau, 1985). Perhaps the most common form—and a very useful one—is the cross-level model in which higher-level variables are hypothesized to moderate the relationship of two or more lower-level variables. Far less common are models focused not on the role of organizational context in moderating individual-level relationships but on the role of individuals in shaping the organizational context. In two of the articles in this special topic forum, the authors take this relatively unusual, but quite beneficial, tack.

Waldman and Yammarino (this issue) examine the influence of one individual—the CEO—in engendering cohesion and effort among the top management team and, ultimately, among lower-level organizational members as well. Morgeson and Hofmann (this issue), in contrast, focus not on the influence of a single individual but on the influence of multiple individuals in shaping organizational (or collective) characteristics and constructs. Drawing on the work of Parsons (1951), Allport (1962, 1967), and Giddens (1979, 1993), among others, Morgeson and Hofmann argue that

the structure of any given collective (e.g., a work team) can be viewed as a series of ongoings, events, and event cycles between the component parts (e.g., individuals). This structure, in turn, forms the basis for the eventual emergence of collective constructs. . . . The collective structure that emerges from this interaction . . . assumes an a posteriori permanence that can subsequently influence individual and collective action. That is, the constructs that emerge can have a reality that is partly independent of the interaction that gave rise to it (pp. 252–253).

Both Waldman and Yammarino's perspective and Morgeson and Hofmann's perspective offer an important antidote to the excesses of organizational anthropomorphism (the attribution of individual volition and actions to organizations) *and* to the excesses of individual reductionism (the dismissal of organizational characteristics

and constructs in favor of individual acts and attitudes).

Insights into and Examples of Isomorphism

Isomorphic models posit that the relationship between two or more variables at one level of analysis is replicated at one or more other levels of analysis. Staw, Sandelands, and Dutton's (1981) threat-rigidity model, which suggests that individuals, groups, *and* organizations that experience a threat often respond in a rigid fashion, is an oft-cited example of an isomorphic model. Isomorphic models are praised for their parsimony and their integration of phenomena at diverse levels of analysis: one size fits all. But they have proved difficult to develop for at least two reasons. First, these models may appear simplistic. For example, the statement that, at multiple levels of analysis, the dependence of entity A on entity B enhances the power of B over A is hardly noteworthy. Isomorphic models must transcend the obvious. Second, the structure and meaning of isomorphic constructs can be a stumbling block. What is the relationship, for example, between individual and organizational memory?

Huy's (this issue) presentation of an isomorphic model of emotional intelligence and emotional capability is anything but simplistic. Building on recent research and theory (e.g., Goleman, 1995), Huy argues that as an individual's emotional intelligence facilitates his or her adaptation and change, so an organization's emotional capability facilitates the organization's adaptation and change. Huy's model is complex, elegant, and stimulating. It illustrates the potential power and creativity of isomorphism.

Morgeson and Hofmann (this issue) do not offer an isomorphic model but shed light on the nature of isomorphism. These authors differentiate between the *structure* and the *function* of collective constructs. They suggest that isomorphic constructs that span levels of analysis have a similar function or causal output but differ in their structure. Thus, for example, individual and organizational memory have the same function—the recollection of the past—but differ markedly in their structure. Individual memory reflects biochemistry and cognition, whereas organizational memory reflects organizational routines and interactions. Morgeson and Hof-

mann's analysis, nicely illustrated by Huy's model, may inspire renewed attention to isomorphic models.

New Levels of Analysis and New Topics for Multilevel Theory

The multilevel organizational literature is dominated by a focus on two levels of theory and analysis—individuals and organizations—and on a few select topics, most notably climate (e.g., Glick, 1985; James, 1982; Schneider, 1990) and leadership (e.g., Avolio & Bass, 1995; Graen & Uhl-Bien, 1995; Hall & Lord, 1995). The articles of this special topic forum reveal a broadening of theorists' focus, to encompass additional levels of theory and additional topics, as well. As we have already noted, Drazin, Glynn, and Kazanjian focus not on individuals and organizations but on technicians and managers, and more generally on clusters or subgroupings that share intersubjective agreement. Similarly, Kostova focuses neither on individuals nor on organizations but on interorganizational dyads—the pairing of parent company and recipient organizational unit. Further, in these two articles, as well as in Waldman and Yammarino's, the authors describe the influence of senior managers and of the senior management team. We have seen in the organizational literature a tendency to equate "the organization" with the actions and views of the CEO or top management team. These articles offer a more precise characterization of senior managers and the influence of senior managers on organization-level outcomes.

Finally, several of the articles of this special issue are united by their focus on organizational change and innovation. Drazin, Glynn, and Kazanjian; Huy; and Kostova all address this topic, as to a considerable extent do Dansereau, Yammarino, and Kohler. Perhaps theoretical analyses of organizational change and innovation require a simultaneous consideration of individual behaviors and perceptions, of occupational subgroupings, and of organizations as wholes. Certainly, organizational change and innovation processes appear a promising target for multilevel theory and research.

CONCLUSION

For decades, micro-organizational scholars have worked diligently to gain an understanding of individual and group behavior within organizations, while macro-organizational scholars have worked diligently to gain an understanding of the behavior of organizations. Relatively few scholars, however, have examined the influence of the organization on individual and group behavior or the influence of individual and group behavior on the organization as a whole. Such work is intellectually and practically challenging *and* intellectually and practically rewarding. The articles in this special issue illustrate the rewards of multilevel theory building. The articles are a diverse lot, rich with stimulating new insights. Enjoy!

REFERENCES

- Allport, F. H. 1962. A structural-conceptual conception of behavior: Individual and collective. *Journal of Abnormal and Social Psychology*, 64: 3-30.
- Allport, F. H. 1967. A theory of enestrucence (event-structure theory): Report of progress. *American Psychologist*, 22: 1-24.
- Avolio, B. J., & Bass, B. M. 1995. Individual consideration viewed at multiple levels of analysis: A multi-level framework for examining the diffusion of transformational leadership. *Leadership Quarterly*, 6: 199-218.
- Bliese, P. D., & Halverson, R. R. 1998. Group size and measures of group-level properties: An examination of eta-squared and ICC values. *Journal of Management*, 24: 157-172.
- Cappelli, P., & Sherer, P. D. 1991. The missing role of context in OB: The need for a meso-level approach. In L. L. Cummings & B. M. Staw (Eds.), *Research in organizational behavior*, vol. 13: 55-110. Greenwich, CT: JAI Press.
- Dansereau, F., Alutto, J. A., & Yammarino, F. J. 1984. *Theory testing in organizational behavior: The variant approach*. Englewood Cliffs, NJ: Prentice-Hall.
- George, J. M., & James, L. R. 1993. Personality, affect, and behavior in groups revisited: Comment on aggregation, levels of analysis, and a recent application of within and between analysis. *Journal of Applied Psychology*, 78: 798-804.
- Giddens, A. 1979. *Central problems in social theory: Action, structure, and contradiction in social analysis*. Berkeley, CA: University of California Press.
- Giddens, A. 1993. *New rules of sociological method: A positive critique of interpretive sociologies* (2nd ed.). Stanford, CA: Stanford University Press.
- Glick, W. H. 1985. Conceptualizing and measuring organizational and psychological climate: Pitfalls in multilevel research. *Academy of Management Review*, 10: 601-616.

- Goleman, D. 1995. *Emotional intelligence*. New York: Bantam Books.
- Graen, G. B., & Uhl-Bien, M. 1995. Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *Leadership Quarterly*, 6: 219-247.
- Hall, R. J., & Lord, R. G. 1995. Multi-level information-processing explanations of followers' leadership perceptions. *Leadership Quarterly*, 6: 265-288.
- House, R., Rousseau, D. M., & Thomas-Hunt, M. 1995. The meso paradigm: A framework for the integration of micro and macro organizational behavior. In L. L. Cummings & B. M. Staw (Eds.), *Research in organizational behavior*, vol. 17: 71-114. Greenwich, CT: JAI Press.
- James, L. R. 1982. Aggregation bias in estimates of perceptual agreement. *Journal of Applied Psychology*, 67: 219-229.
- Klein, K. J., Dansereau, F., & Hall, R. J. 1994. Levels issues in theory development, data collection, and analysis. *Academy of Management Review*, 19: 195-229.
- Parsons, T. 1951. *The social system*. Glencoe, IL: Free Press.
- Rousseau, D. 1985. Issues of level in organizational research: Multilevel and cross level perspectives. In L. L. Cummings & B. M. Staw (Eds.), *Research in organizational behavior*, vol. 7: 1-37. Greenwich, CT: JAI Press.
- Schneider, B. 1990. The climate for service: An application of the climate construct. In B. Schneider (Ed.), *Organizational climate and culture*: 383-412. San Francisco: Jossey-Bass.
- Staw, B. M., Sandelands, L. E., & Dutton, J. E. 1981. Threat-rigidity effects in organizational behavior: A multilevel analysis. *Administrative Science Quarterly*, 26: 501-524.
- Tosi, H. 1992. *The environment/organization/person contingency model: A meso approach to the study of organizations*. Greenwich, CT: JAI Press.
- Weick, K. E. 1979. *The social psychology of organizing*. Reading, MA: Addison-Wesley.
- Weick, K. E. 1995. *Sensemaking in organizations*. Thousand Oaks, CA: Sage.
- Yammarino, F. J., & Markham, S. E. 1992. On the application of within and between analysis: Are absence and affect really group-based phenomena? *Journal of Applied Psychology*, 77: 168-176.

Katherine J. Klein is an associate professor of industrial and organizational psychology at the University of Maryland at College Park. She received her Ph.D. from the University of Texas at Austin. Her current research interests include multilevel theory building and research methods, innovation and organizational change, interorganizational relationships, and part-time work.

Henry Tosi is the McGriff Professor at the Warrington College of Business Administration, the University of Florida. He received his Ph.D. from the Ohio State University. His current research interests are managerial discretion, internal organizational control mechanisms, compensation, agency theory, and meso-organizational issues.

Albert A. Cannella, Jr., is an associate professor and James Earl Rudder Faculty Fellow at Texas A&M University. He received his Ph.D. in strategic management from Columbia University and is interested in executives, strategy, and linking individual-level actions to organization-level outcomes.