REFLECTIONS ON THE MICRO-MACRO DIVIDE: IDEAS FROM THE TRENCHES AND MOVING FORWARD

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ABSTRACT

This essay provides insights into the reasons why efforts to integrate micro and macro perspectives continue to face challenges. We incorporate the reflections of several experienced researchers on the persistence of the micro-macro divide, organize those reflections into broad themes, and discuss associated insights, implications and challenges. We note that while immense challenges remain, efforts should continue as greater integration can improve the position of our field in the broader social sciences and lead to substantial contributions. Several suggestions are provided to help this research agenda move forward. Specifically, we advocate developing new process-oriented theories and methods as well as adopting broader and more inclusive researcher identities, encouraging “intellectual generosity”, and acknowledging that for some research, integration is neither necessary nor desirable.

Keywords: micro-macro, multilevel, microfoundations, emergence, researcher identities
INTRODUCTION

A considerable amount of scholarly activity has been devoted to bridging the divide between, and encouraging more integration of, micro- and macro-oriented management research. Several articles (e.g., Buckley et al., 2011; Molloy et al., 2011) and books (e.g., Klein and Kozlowski, 2000; Tosi, 1992) have focused on addressing this issue. Additionally, several leading management journals have published special issues that have attempted to link micro and macro areas (e.g., Aguinis et al., 2011; Felin et al., 2012; Hitt et al., 2007; Klein et al., 1999; Wright et al., 2014), and it is common for academic conferences to have a number of workshops and symposia aimed at lessening the divide.

While the volume of research that integrates micro- and macro-oriented perspectives has increased over the last several decades (Buckley et al., 2011; Rousseau, 2011), considerable diversity remains in the literature, with little consensus regarding whether and how to integrate these perspectives (e.g., Felin et al., 2015; Nyberg and Wright, 2015; Wright et al., 2014). Moreover, collaborative teams of micro- and macro-oriented researchers remain rare (cf. Nyberg et al., 2018). As a result of the continued divide, Aguinis and Edwards (2014) renewed micro and macro integration as one of the biggest challenges facing organizational studies.

The purpose of this essay is to improve understanding of why the micro-macro divide continues to be a pervasive aspect of organizational research. To accomplish this goal, we offer the reflections of five senior scholars representing a diverse set of backgrounds, in a number of different roles where micro-macro issues arise. In particular, we asked these seasoned researchers to: 1) describe why the micro-macro divide continues to persist; and 2) indicate what (if anything) can or should be done to rectify this problem. Their responses raise new considerations and reveal underlying tensions that explain why the field continues to face
headwinds in seeking integration. Specifically, one scholar sees the micro-macro divide as a theoretical-methodological problem, two of them view it as an issue of researcher attitudes and identities, while the other two suggest that bridging efforts may be chasing a “red herring”. We present each reflection in the scholar’s own words and group them into these three broad themes. We then draw out the unique implications arising from these perspectives and conclude by suggesting a path forward and identifying challenges that remain.

**BRIDGING THE MICRO-MACRO DIVIDE AS A THEORETICAL-METHODOLOGICAL PROBLEM**

**Emergence and Process Dynamics – Steve W. J. Kozlowski**

There are two primary forces that drive organizational system dynamics and behavior, top-down contextual effects and bottom-up emergent phenomena (Kozlowski and Klein, 2000). Macro-contextual factors such as strategy, structure, and culture cross levels to constrain different lower-level meso and micro phenomena that are embedded in the organizational system (Rousseau, 1985). For example, macro organizational structure (e.g., formal controls vs. informal mechanisms) influences job design at the meso level, which has implications for individual perceptions of job autonomy. At the micro-level, bottom-up emergent phenomena arise from individuals interacting with others in a system context, manifesting at the meso level. “A phenomenon is emergent when it originates in the cognition, affect, behaviors, or other characteristics of individuals, is amplified by their interactions, and manifests as a higher-level, collective phenomenon” (Kozlowski and Klein, 2000, p. 55). For example, as individuals are exposed to contextual influences, they collaborate, exchange perceptions over time, and develop emergent cognitive (e.g., mental models), motivational (e.g., collective efficacy), and behavioral phenomena (e.g., coordination) at the team (meso) level. Similarly, meso interactions can yield
emergent phenomena at the macro level, such as human capital, that have direct implications for firm strategy and effectiveness (Ployhart and Moliterno, 2011); these are the microfoundations of strategy. Thus, single-level explanations – micro, meso, or macro – that fail to incorporate top-down and the bottom-up mechanisms that capture emergent phenomena and process dynamics are inherently incomplete (Kozlowski and Chao, 2012; Roberts et al., 1978).

Since the turn of the century, there has been an explosion of cross-level research for micro and meso topics, yet the micro-macro divide looms as large as ever. Why? Top down research can be conducted with cross-sectional data – which dominates in organizational science – providing a snap-shot of how macro characteristics shape micro factors. However, static research designs cannot examine how micro characteristics – evolving and emerging over time – beget meso or macro phenomena or how they may affect macro outcomes. To examine those microfoundations, research would have to focus on emergent phenomena and process dynamics. Such research would explicitly link levels of phenomena that would help to bridge the divide. There is a reason that such research has been neglected; it is difficult to accomplish. It takes time to trace phenomena upwards across levels and intensive longitudinal data to capture emergence, evolution, and subsequent dynamics (Cronin et al., 2011; Langley, 1999; Kozlowski, 2015).

Until recently, efforts to directly investigate emergence and process dynamics have primarily been the province of qualitative research (e.g., participant observation, ethnography), whereas efforts to investigate emergence quantitatively have been indirect (Kozlowski and Chao, 2012). However, innovative methodologies are helping to fuel advances in quantitative research that can unpack emergent phenomena and process dynamics (Kozlowski, 2015). The increasing availability of “digital traces” (i.e., web search, text-based communication, location services, video surveillance) and advances in technology put us on the cusp of a computational
organizational science (Lazer et al., 2009). Computational models (CM), agent-based modeling (ABS), and other system simulation techniques are innovative quantitative methodologies that can model process mechanisms that underlie emergence and can trace its implications for system-level outcomes (Grand et al., 2016; Ilgen and Hulin, 2000; Kozlowski et al., 2013). These new techniques necessitate far more theoretical precision than is currently the norm for the narrative theories that dominate micro, meso, and macro research. They also necessitate new ways of theorizing. Emergent phenomena and process dynamics cannot be represented or captured by boxes and arrows models incorporating “chain-like unidirectional cause-effect relationships” (McGrath et al., 2000, p. 97) that dominate quantitative organizational research and, incidentally, make it easy to stay at a single level. They necessitate process-oriented theory that focuses, not on observed construct relations, but on the underlying process mechanisms that give rise to manifest phenomena and ultimately are responsible for such observations (e.g., Grand et al., 2016). A push to examine emergent phenomena and process dynamics will go a long way toward bridging the macro-micro divide.

**Discussion and Implications**

Kozlowski suggests that greater consideration of emergent phenomena would naturally lead to integration of micro and macro perspectives because examinations of such process-oriented phenomena inherently require consideration of lower level (i.e., micro) and higher level (i.e., macro) factors and their dynamic and iterative interactions. This implies that more primacy on emergence and its associated process dynamics would result in greater integration of micro and macro research areas. In this way, the microfoundations agenda in strategic management, where emergence is often central (Felin et al., 2015), offers an important bridge between micro and macro perspectives.
Kozlowski suggests, however, that increased attention to emergent phenomena is only part of the solution. The bigger challenges are theoretical and methodological in nature. Theory focusing on emergent phenomena has to be process-oriented (Kozlowski, 2015); processes evolve, they are not a box in a model. This forces precision in explaining process mechanisms that drive interaction and exchange to yield meso and macro phenomena. Thus, we need more theorizing related to emergence that is truly process-oriented before the study of such phenomena can provide a framework for micro-macro integration. The potential for emergent phenomena to provide an integrative framework is also constrained by the availability of methodological approaches to appropriately examine the complex, process-oriented nature of such phenomena. The development of methods and analytical tools is therefore essential to bridge micro and macro areas. By extension, efforts aimed at new methods and statistics to examine emergent phenomena - such as the special issue on multilevel methods at Organizational Research Methods (see the July 2017 call for papers) and efforts to incorporate new approaches to collecting and examining big data (e.g., Kozlowski et al., 2015) - would greatly aid in the integration of micro and macro perspectives.

The contention that theoretical and methodological considerations are key to understanding the micro-macro divide has been argued previously (e.g., Felin et al., 2015). However, much of this work suggests that needed learning involves the “other side’s” theories and methodologies (Molloy et al., 2011) and/or the adoption of multilevel approaches (e.g., Aguinis and Edwards, 2014; Aguinis and Molina-Azorina, 2015). While these efforts are important, Kozlowski suggests that learning existing approaches and theories (albeit micro/macro or multilevel) is not enough – instead, we need to develop and advance process-
oriented theory and use new methods that are explicitly aimed at examining emergent phenomena if we want to truly integrate these perspectives.

**BRIDGING THE MICRO-MACRO DIVIDE AS A SOCIAL IDENTITY PROBLEM**

**How Identity Dynamics Fuel the Persistence of the Micro-Macro and Macro-Micro Divides**

– Gerard P. Hodgkinson

All too frequently, micro- and macro-oriented researchers alike oversimplify or assume away the central problems of emergence (in particular, the twin traps of reductionism and reification) that lie respectively at the heart of micro-macro and macro-micro divides. This is surely hampering substantive progress across the management and organization studies writ large. Each contributing discipline (principally, although by no means exclusively, economics, psychology, and sociology) has its own routines and conventions that define and maintain scholarly boundaries and criteria of excellence (Whitley, 2000). Micro-oriented researchers, for example, typically assume that individual-level psychological mechanisms ‘scale up’ automatically to account for macro-level organizational outcomes, an assumption that, although commonly taken for granted, is highly contestable, on both philosophical and theoretical grounds (Healey and Hodgkinson, 2014, 2015). Conversely, as observed by Felin et al. (2015), many macro-oriented scholars are no less dismissive of the work of their micro-oriented counterparts, declaring that micro-level mechanisms are largely inconsequential, error variance in the bigger scheme of things, and that attempts to explicate the microfoundations of organizational behavior and effectiveness are an unnecessary distraction that might ultimately “lead the macro disciplines astray” (p. 577).

A primary reason for this impasse, I conjecture, is that in the course of advancing management and organizational studies as a multidisciplinary field, we have unwittingly created
a series of conflicting and seemingly immutable institutionalized constraints that are shaped, and ultimately driven, by the divergent personal and social identity concerns of the constituent members of our scholarly community (see also Hodgkinson, 2013). Supporting this line of reasoning, there is empirical evidence (Peters et al., 2014), underpinned by a considerable body of work in the social identity tradition (e.g., Haslam and Ellemers, 2005; Tajfel and Turner, 1986), that scholars’ judgments of the quality of management and organizational studies journals are shaped by personal and social identities, which define their fundamental sense of who they are as professional academics.

Extrapolating from the Peters et al. (2014) study, I want to suggest that scholars’ judgments of the quality and relevance of ideas are shaped similarly by personal and social identities (see also Hodgkinson and Haslam, 2017). In particular, I maintain scholars’ fundamental identity concerns are triggered whenever ideas are encountered (be that in the capacity of editor, reviewer, or researcher) that challenge their primary disciplinary training and assumptions, and that they resolve those concerns by rejecting (or downplaying) the significance of the ideas in question. I also suggest that the psychological mechanisms at the root of this problem are as much emotional as they are cognitive (Hodgkinson, 2013; Hodgkinson and Healey, 2011).

The identity concerns I have alluded to above both reflect and are reinforced by the way in which management and organization studies is currently organized. Many of our leading journals, for example, are associated more closely with a psychological (micro) or sociological (macro) orientation (Peters et al., 2014). The editorial teams of our more general top-level journals are typically composed in ways that maintain this division. The *Journal of Management*, for example, subdivides its team of editors, me included, on the basis of macro and
micro expertise. Such a division of labor is surely antithetical to the advancement of scholarship that seeks to comprehend the intricate complexities of organizational behavior and effectiveness.

The fundamental shift in attitudes regarding the quality and value of micro- and macro-oriented research that is ultimately required to realize the vision of a more integrative and nuanced body of scholarship will only come about when actors on both sides of the micro-macro divide embrace willingly one another’s identity concerns, openly and constructively. Doing so requires us all—journal editors, reviewers, and authors alike—to revisit our fundamental sense of self as scholars; for in the final analysis, top-down and bottom-up perspectives need to be integrated if we are to avoid the twin pitfalls of reductionism and reification (Fulmer and Ostroff, 2016; Healey and Hodgkinson, 2014, 2015).

**The Need for Attitudinal Changes – Thomas P. Moliterno**

In his essay “Tips to Article-Writers” Ezra Zuckerman notes that “we should not like a paper simply because it proudly displays the colors of our tribe.” That is, we should not favor a certain theory or methodological approach (Zuckerman calls this an “aesthetic motivation”) just because that theory or approach is the one we find most appealing. Rather, we should favor “substantive motivations” which actually help us understand a particular research question, regardless of whether or not we feel it has aesthetic appeal.

Zuckerman seemingly presaged the current state of multilevel scholarship: the area is rife with aesthetic preferences and motivations. And how could it be otherwise? By definition, multilevel research integrates micro- and macro-level theories and empirical approaches. So both micro- and macro-level scholars encounter in multilevel work approaches to theorizing and empirical measurement and testing that seem commonplace and routine -- when they derive from
their area of expertise -- as well as those that seem more exotic when they come from research traditions in which they were not trained.

Nowhere was this clearer than in a 2014 special issue on strategic human capital that Pat Wright, Russ Coff, and I co-edited. Our objective for the issue was to integrate Human Resource Management (HRM) and Strategic Management perspectives on human capital, and create a volume that compiled work bridging the two scholarly domains. One mechanism we identified to pursue this agenda was the assignment of each paper to two reviewers, one HRM scholar and one strategy scholar. As we described in our editorial to the special issue (Wright et al., 2014), this yielded dramatic, and informative, results. The two reviewers seldom agreed – and often were diametrically opposed – in their assessment of the manuscript’s approach to theorizing, construct measurement, and empirical design. So even reviewers recruited for a special issue explicitly focused on bridging levels of analysis could not avoid aesthetic motivations and preferences in their assessment of the manuscripts.

Indeed, we all come by our aesthetic preferences honestly. Graduate school trains us to be expert in leveraging a particular paradigm and to argue a particular theoretical perspective using a particular empirical approach. We also become expert at dismissing other paradigms, critiquing other theoretical perspectives, and identifying shortcomings in other empirical approaches. These are the tools of the trade that we carry into academic careers where tenure, promotion, and scholarly status all redound to us in proportion to our ability to produce research that is aesthetically appealing to a select group of researchers in the same literature. And the cycle begins again when new students join our doctoral programs “because they want to work with us.”
Thus, the average academic career calcifies scholarly attitudes and perspectives, and this rigidity is anathema to a multilevel perspective. The multilevel perspective is one of integration: looking across theories and empirical approaches specifically to find insights in domains in which we were not trained. As such, the multilevel perspective requires intellectual generosity. We need to acknowledge that we might, in fact, have something to learn from other scholarly domains, and that the integration of those perspectives might uncover limitations and boundary conditions to the way each of us has been trained to understand organizations. But we might also see something that only comes into resolution through the lens of those new (to us) perspectives. These are the “substantive motivations” that Zuckerman describes: the pursuit of understanding our multilevel world in its entirety, even if it means moving outside our scholarly comfort zone.

**Discussion and Implications**

Hodgkinson and Moliterno suggest that issues around identity are central to the existence and persistence of the micro-macro divide. They argue that there is a tendency to think of one’s academic identity as aligned with certain levels of analysis and/or disciplines and this results in in-group/out-group distinctions. These distinctions, in turn, create an underlying tension between micro- and macro-oriented research that limits integration. It follows that lessening the divide entails modifying identities and adopting diverse and inclusive theoretical perspectives.

In a related way, Hodgkinson and Moliterno highlight the importance of attitudinal shifts regarding the quality of micro- and macro-oriented research. They note that research on the “other side” should be valued and the focus should be on understanding, rather than dismissing. This implies that researchers should shift attitudes from protectionist and cynical perspectives to those of openness and inclusion, where the “other side” is given the benefit-of-the-doubt. That is,
shifting toward a mindset of “intellectual generosity” is suggested to be an essential aspect of bridging the divide.

Prior scholarly work on the micro-macro divide has noted the tendency for researchers to associate with certain levels of analysis and disciplinary orientations (e.g., Molloy et al., 2011). This prior work has focused on different theoretical and methodological assumptions and discussed techniques to leverage alternative perspectives. Although these technical-oriented suggestions are helpful in bridging the micro-macro divides, Hodgkinson and Moliterno highlight social identity-oriented issues derived from levels of analysis and disciplinary orientations. This draws attention to the “softer” elements of identities and attitudes that influence the creation and persistence of conflict between micro and macro perspectives. It also suggests that integration requires social psychological-oriented techniques that involve broadening identities and lessening the tendency for aesthetic-elements and preferences to bias views of research on the “other side”.

**BRIDGING THE MICRO-MACRO DIVIDE AS A RED HERRING?**

**The Micro-Macro Divide as an Urban Legend – Brian K. Boyd**

In the research methods community, there is an interesting series of articles and books on methodological myths and urban legends – e.g., that more control variables are always preferable to fewer, or that there is a fixed minimum ratio of observations to indicators (e.g., Carlson and Wu, 2012). As with urban legends in popular culture, the problems themselves are sometimes illusory, and, in some cases, the ‘conventional wisdom’ solutions may do more harm than good. Is there a micro-macro divide in management? And, if so, is it unique to our domain? Discussion of the divide has many of the attributes of an urban legend, and the role of researcher identity and associated assumptions may help to clarify matters.
The focus on different units of analysis in a discipline often leads to branched streams of research that are internally consistent, yet not well integrated across branches. Physics, for example, has well developed streams on both quantum and relativistic theory. While a gross oversimplification, quantum theory studies phenomenon at an extremely fine gradation – atomic and subatomic levels. In contrast, relativistic theory has a broader scope of analysis – stars and galaxies. In addition to dramatically different foci, these perspectives are fundamentally diametric in their assumptions (Powell, 2015). Additionally, although there are shared variables, such as time, each branch has a very different perspective on the common construct.

The field of management has similar fragmentation. Consider two of the largest Academy of Management (AOM) divisions: organizational behavior and strategic management. In 2000 (data supplied to author by AOM), 2.6 percent of members reported holding dual membership of these divisions. By 2010, that ratio had declined to 2.3 percent. Thus, although our definitions of “small” and “large” are not as extreme as for physicists, there does appear to be a gulf in the self-identification of management scholars. However, how much of this gap is meaningful? And, what are the implications of gaps within a branch?

Consider the topic of organizational environments and environmental uncertainty. While this would be considered to be a fairly specific stream of research, there is little consistency in the conceptualization of key constructs. The first gradation is the distinction between objective and perceptual measures of uncertainty. The former rely on archival data sources, whereas the latter are most often created via survey measures. Even when conceived at overlapping levels of analysis, the two categories of measures co-vary only weakly (Boyd et al., 1993). Additionally, there are multiple levels of analysis, and subsequently different meanings applied, within both the archival and perceptual streams. Consider, for example, archival-based measures of the slope
of sales data over time. This variable, when operationalized at the industry level, is used to measure market munificence, or the abundance of resources (Dess and Beard, 1984). When operationalized at the firm level, though, it is considered a measure of managerial discretion (Hambrick and Finkelstein, 1987). Conceptually, these are viewed as distinct constructs, despite a strong correlation between them (Boyd and Gove, 2006). The differences extend well beyond simple construct definition, and encompass contrasting assumptions regarding the role of managers. Munificence, for instance, is rooted in work on population ecology (Aldrich, 1979), which takes a deterministic view of organizations. In comparison, managerial discretion is based on upper echelons theory (Hambrick and Mason, 1984), which espouses a strategic choice perspective. Despite nearly identical measures, there is virtually no cross-citation bridging these two research streams (Boyd and Gove, 2006).

In other words, a simple ratio variable has mutually incompatible assumptions when framed at different levels of analysis (see Figure 1). Yet, within each level, there is a strong body of work validating the respective assumptions of each approach. Such problems are not unique to management studies. Quantum physics, for example, views the world as probabilistic, while relativist scholars take a deterministic stance. And, while there is a good deal of consensus within each perspective, the region between the two perspectives is unclear.

What are the takeaways of this comparison across and within these areas? First, the notion of “a” divide is overly simplistic: Even within the macro management community, different levels of analysis fundamentally alter the meaning of a simple measure. Consequently, scholars should recognize that divides are ubiquitous features of the research landscape. Second,
as research becomes more fine-grained, we should not become too concerned about the proliferation of silos: Physics as a discipline benefits when advances are made in either quantum or relativistic domains. Similarly, the challenge of understanding organizations can benefit greatly from further work done at a single level. Finally, the challenge of synthesizing levels might never bear fruit – e.g., micro and macro physicists and management researchers have a quandary of reconciling fundamentally incompatible assumptions. While such activities have a lower likelihood of success, the potential rewards are tremendous. Management scholars would therefore benefit greatly from moving outside the levels and perspectives that consume much of their research time.

**Levels of Analysis, Scope and Time Horizon – William H. Starbuck**

**Seeing the Forests versus the Trees**

All scientific fields have distinct theories about micro phenomena and macro phenomena, and no fields have created two-way bridges between them. Macro studies focus on forests, offer only general observations about trees, and say nothing about leaves. Micro studies focus on leaves, offer only general observations about trees, and say nothing about forests. Middle-range studies focus on groves of similar trees, seeking to make somewhat specific statements about both leaves and forests. Thus, each kind of study contributes differently – usually very differently.

A central problem for integrating micro and macro perspectives has been the large differences between the observed phenomena. What researchers see depends strongly on the ways they go about seeing – how they obtain and analyze data, how detailed they want their theories to be. Phenomena that appear to be related when regarded from afar often turn out to be quite distinct when viewed up close. Interestingly, micro and macro perspectives can be
simultaneously very different from each other and equally valid (e.g., see Sutton and Rafaeli, 1988). As a result, researchers’ abilities to find meaningful relationships depend overwhelmingly on how they disaggregate data and how they take account of contingencies.

Phenomena that appear important in macro data may be unimportant for understanding the processes that generate micro data. For example, the Aston studies looked for patterns in aggregated data from organizations of all sorts. Their main general finding was that larger organizations possess more documents than smaller organizations (Starbuck, 1981). Although undoubtedly true, this observation says nothing useful about operations inside any single organization.

Conversely, phenomena that appear important in micro data may be unimportant for understanding processes that generate macro data. Studies have documented the complexity and iterative looping of decision-making within individual organizations (Mintzberg et al., 1976), but they do not explain why the survival rates of organizational populations resemble the outcomes of random events (Levinthal, 1991) or why the strategic moves of a single organization appear to incorporate much randomness over time (Thietart, 2016).

**Scope and Time Horizon**

Over the last century, management scholars have often argued about differences between micro and macro perspectives. Some arguments have arisen from a belief that macro theories should be consistent with micro data, or vice versa. Such arguments make sense only if everyone agrees that micro and macro phenomena are alternative perspectives on the same behaviors. But this complementarity is not always present because causal processes that dominate macroscopic phenomena may be insignificant in microscopic phenomena, or vice versa.
Other arguments have erupted because scholars did not recognize that they were talking about quite different phenomena. The arguments have often related to two dimensions of contexts being described: scope and time horizon. These arguments might be more useful if scholars would acknowledge the differences between contexts (see Table 1).

As the Table indicates, the economic theory of the firm adopts a macroscopic perspective regarding the kinds of firms it describes. It places no restrictions on the firms it describes, so implicitly it purports to describe firms of all types – large, small, new, and old, in every society. Population ecology places no restrictions on the kinds of organizations it describes, so it implicitly purports to describe organizations of all types; and it also concedes that a current situation may deviate from an idealized balance that should occur in a long-run future. In contrast, business histories and longitudinal case studies seek to describe long-run developmental trajectories, but they focus on single firms.

Debates about the economic theory of the firm during the 1950s illustrate issues that arise from differences in scope and time horizon (Salgado et al., 2002). Discussions, debates, and arguments about this theory arose to a great extent from language that created ambiguity about the level of analysis, but clearer language might not have eliminated controversies because the ambiguous language was obscuring the fact that scholars were asking a single theory to achieve multiple goals that may be mutually contradictory.

A group of economists at Oxford University engaged in a series of interactions and large-scale surveys with executives in the early 1900s and found that most managers had no understanding of concepts that figured prominently in their theory of the firm (Hall and Hitch,
These empirical findings by the Oxford economists gave added impetus to debates that had been escalating for about a century. What was the purpose of the theory of the firm? What phenomena should this theory describe? How accurate should the theory be? Whom should the theory serve? One result was that Cyert and March (1963) offered a “behavioral theory of the firm” that took account of micro behaviors – the rules used by managers in their everyday decision-making. Although behavioral theory has been widely accepted as a description of micro behavior, economists continue to teach the more traditional theory of the firm on the ground that it describes macro behavior. Two arguments persuaded economists to adhere to the macro theory. Alchian (1950) proposed that economists do not have to look at actual decision processes in order to predict the behaviors that survive in the long run because firms survive by making optimal decisions; nonoptimal decisions, he said, cause firms to go out of business. Friedman (1953) proposed that economic theory does not have to describe firms’ actual behaviors accurately as long as the theory helps economists to analyze behaviors. That is, a macro theory can help researchers understand micro behavior even if it is inconsistent with micro data.

Terminology has sometimes had strong effects on debates about the differences between micro and macro. Again, the economic theory of the firm illustrates how terminology can cause confusion and disagreement. When economists created the theory in the eighteenth century, they called it a theory about “the firm”. This label implies that the theory applies generically to all firms, a macroscopic claim. The economists hedged this extreme claim by saying that theorized behavior might only be observable in the very long-run, another macroscopic claim. But the definite article in “the firm” also implies that the theory applies to this specific firm being studied right now, two claims of microscopic relevance.
Discussion and Implications

Boyd and Starbuck highlight considerations relating to feasibility and utility of micro-macro integration efforts. They both note that fragmentation and specialization are common attributes of most scientific fields, and that the micro/macro distinction is just one way to categorize research. The lack of micro-macro integration is part of a broader challenge in integrating research that focuses on different phenomena and operates from a basis of fundamentally different and potentially irreconcilable assumptions.

Boyd’s comments suggest that while bridging perspectives may be desirable, such efforts can be risky, and not necessarily productive in the short term, whereas Starbuck’s comments raise questions as to whether a focus on bridging is productive. Specifically, if the micro-macro distinction is just one divide among a much broader set of possibly incompatible differences present in many scientific fields, then it may be unrealistic to expect that we will accomplish meaningful integration. It is suggested that a focus on bridging and integrating micro- and macro-oriented research may be a “red herring” of sorts in that: 1) a narrow focus on differences between micro and macro researchers misses the systemic issue driving the lack of integration across perspectives; and 2) these different perspectives may be so diametrically opposed that integration is simply not possible.

The notion that micro-macro integration involves the bridging of multiple divides that are related to different disciplinary and other distinctions has been noted previously (e.g., Molloy et al., 2011). Much of this work implies that these differences can be reconciled and that such efforts can be steps towards successful micro-macro integration. Boyd and Starbuck depart from this suggestion in that they indicate these differences are perhaps so complex and incompatible
that integration may not be possible. Thus, they suggest that explicitly focusing on bridging micro-macro work may not be worthwhile and may be a distraction.

Further, the perspectives outlined by Boyd and Starbuck draw attention to a key potential reason why efforts to bridge micro and macro areas have not gained widespread adoption: not all management researchers see it as a valuable. This reminds us that the quest to integrate perspectives is not shared by all researchers. Indeed, with pressure to publish and limited space available in high quality journals, doubts regarding integration may be a central reason why approaches to bridge micro-macro work continue to face headwinds.

**GENERAL IMPLICATIONS AND NEXT STEPS**

Drawing on the perspectives of experienced researchers, this essay identifies three reasons why the micro-macro divide continues to persist: 1) adequate process-oriented theory and methods to explore the notion of emergence (an essential micro-macro bridging concept) are not readily available; 2) integration of micro and macro areas requires difficult modification of researcher identities and attitudes to become broader, more inclusive, and intellectually generous; and 3) not all researchers believe micro- and macro perspectives can or should be integrated. These insights highlight technical and social-psychological challenges surrounding micro-macro integration and shed new light on hurdles involved with bridging divides between micro and macro perspectives.

Although reconciling these viewpoints and moving forward is challenging, we believe it is important for two key reasons. First, as House and colleagues (1995) note, the integration of different levels of analysis and disciplinary orientations is perhaps the central source of comparative advantage that the field of organizational studies has over the traditional social sciences of economics, psychology, and sociology. Thus, efforts to bridge and integrate micro
and macro perspectives are important for the broader legitimacy and knowledge creation efforts of the field. Second, as Boyd notes above, the potential rewards of successfully integrating micro and macro (and other seemingly opposed perspectives) can result in major contributions. This idea aligns with research showing that many influential scientific advancements stem from the novel bridging of existing knowledge (Uzzi et al., 2013). Such success is apparent when one considers several recent winners of the Nobel Prize in economics. For example, Angus Deaton’s 2015 Nobel Prize was due, in part, to his work linking detailed individual factors and choices to distal aggregate outcomes. Additionally, the Nobel Prizes in 2017 (Richard Thaler) and 2002 (Daniel Kahneman and Vernon Smith) were due to work that involved the development and integration of psychological theories and experimental methods into economics and finance. In short, integrating micro and macro perspectives is a high risk and challenging task but if we are successful it will improve the position of our field and could lead to large returns.

To this end, and with an eye toward the points noted in the themes identified above, we believe there are several actions that can and should be taken. First, it is important to emphasize development of new process-oriented theories and methodological approaches to collect and analyze data and test theories related to emergent phenomena and other bottom-up, top-down and reciprocal processes. Methodological developments play an important role in helping us to see phenomenon in a new light and address research in unique ways (Aguinis and Molina-Azorin, 2015). Much of the explosion of research on top-down cross-level effects can be tied to the development of Hierarchical Linear Modeling/Random Coefficient Modeling and other methodological developments in the 1990s and 2000s (cf. Aguinis et al., 2009). It is therefore likely that a new wave of research focused on emergence and bottom-up, top-down and reciprocal processes would follow from the development of methods designed to study such
As these phenomena and processes inherently require the integration of micro and macro perspectives, the increased research brought about from new methods would greatly improve our ability to bridge the associated divide. Additionally, such methodological developments can help reconcile some of what appears to be incompatible differences between micro/macron and other perspectives. For example, methods to look at bottom-up, top-down and reciprocal processes may shed light on the specific mechanisms and dynamics involved with how lower-level factors, such as individual behaviors, impact on, and are impacted by, higher-level factors, such as firms’ actions. Indeed, these are the very type of issues that Starbuck notes have plagued debates within the field of economics on the seemingly disconnected links between manager decisions and aggregate firm outcomes.

Second, we should encourage broad and inclusive identities and limit value-laden statements regarding different research perspectives. This involves structural changes to aspects of the field of organizational studies as well as more nuanced factors related to social interactions between and among faculty and doctoral students. Regarding the structural considerations, it would be helpful if we deemphasized the use of micro-macro distinguishing categories in department groupings within business schools, interest groups in the AOM, and our scholarly journals. Emphasis on such categorizations encourages the formation of micro- and macro-oriented groups and fuels unhelpful in-group/out-group dynamics and attendant intergroup biases. It would also be helpful to promote the formation of structures and groups that focus specifically on integrating micro and macro research areas. An example would be the creation of a network of meso and/or multilevel scholars at AOM. Such groups would encourage the development and/or modification of broader and more inclusive identities, and aid in shifting the view of micro and macro researchers from “us and them” to “we” (cf. Hewstone et al., 2002).
Lastly, we should modify coursework in doctoral programs to promote the development of more broad and inclusive identities. For example, we suggest that all management PhDs should take seminars and demonstrate competence in micro and macro areas. Additionally, seminars and other elements of doctoral training could explicitly focus on integrating micro and macro research and consider emergent phenomenon. Doctoral programs with such structures would signal to students the value of micro and macro perspectives and the potential benefits of integration.

With regards to social interactions, we should limit making and reacting to value-laden statements when collaborating and interacting with colleagues that focus on a different level of analysis and/or disciplinary orientation. Comments that have a negative connotation about one’s research area can trigger defensiveness and reduce communication, thereby entrenching divides rather than working towards bridging them. Thus, we encourage researchers to go into such collaborations and interactions with the premise that high-quality and important research is present at all levels of analyses and disciplines. At the same time, scholars can and should attempt to mitigate tendencies to personally absorb value-laden comments about research – instead, shifting the focus back to the content of the study and emphasizing that the ultimate purpose is to enhance understanding of organizational phenomena. From our own experience, this is often easier said than done, as there is a natural inclination to defend the background and training associated with one’s research (i.e., to defend one’s identity and associated ideologies). This is therefore something that needs consistent attention and enduring patience.

We should also be mindful of how our identities and perspectives can influence PhD students. This means explicitly encouraging intellectual openness and inclusiveness and being aware of the implicit messages conveyed by our statements and interactions with students. For
example, one of us witnessed a faculty member tell a macro-oriented student that they had gone to the “dark side” by collaborating with micro-oriented researchers. While this may have been said (partly) in jest, it conveyed a suggestion that macro research is more enlightening than micro research. This is, of course, not true, but it potentially sent a negative message to the doctoral student regarding micro-oriented research.

These suggestions regarding modifications to the structure of our field, PhD programs and social interactions are not easy. However, given the significant issues noted by Hodgkinson and Moliterno regarding scholarly identities and attitudes, they are essential to move forward integrations of micro and macro perspectives. It is important to note that our suggestions are primarily focused on those researchers, departments, interest groups and journals that see value in and want to pursue an agenda of integrating micro and macro perspectives.

Lastly, and related to the foregoing point, it is important that we recognize and appreciate that not all research questions, researchers or topics want/need to focus on integrating across levels or micro and macro perspectives. Within-level and domain research has and should continue to illuminate understanding of organizational phenomena. Moreover, some topics may be more conducive to multilevel and micro-macro perspectives than others. For example, while the work on strategic human capital (e.g., Nyberg et al., 2014) and strategy process (e.g., Wooldridge et al., 2008; Kouame and Langley, in press) are ripe with opportunities for integration, it may matter less for research areas that are inherently more macro or distal from human action (e.g., corporate diversification, population ecology).

The field of organizational studies is vast and there should be room for both within-level and multilevel researchers to coexist. Additionally, and more importantly, given the general value of diverse approaches to knowledge creation (McFadyen and Cannella, 2005; Nonaka, and
Nishiguchi, 2001), our field as a whole is likely served better by pursuing both agendas in concert.

**FOOTNOTES**

1. Our recommendation is not to eliminate micro and macro distinctions or specializations. Such factors, as pointed out by Boyd, are a natural aspect of most scientific fields. Rather, our suggestion is to lessen the salience of categorizing research and researchers with either a “micro” or “macro” label.
REFERENCES


FIGURE 1

CONSTRUCT ASSUMPTIONS ACROSS LEVELS

Level of Analysis

Assumptions Regarding External Constraints

Strategic Choice

Deterministic

Individual  Firm  Industry

Sales / Time Slope

Discretion

Munificence

Sales / Time Slope

### TABLE 1

**SCOPE OF CONTEXT AND TIME HORIZON DIFFERENCES AMONG SEVERAL MANAGEMENT THEORIES/PERSPECTIVES**

<table>
<thead>
<tr>
<th>Important differences between contexts</th>
<th>Time Horizon</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Long Run (macro)</td>
</tr>
<tr>
<td>Scope of Contexts</td>
<td></td>
</tr>
<tr>
<td>General patterns (macro)</td>
<td>Theory of the firm</td>
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<tr>
<td></td>
<td>Population ecology</td>
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<tr>
<td>Specific events (micro)</td>
<td>Business histories</td>
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<tr>
<td></td>
<td>Longitudinal case studies</td>
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