© *Academy of Management Journal*
2022, Vol. 65, No. 1, 1–10.
https://doi.org/10.5465/amj.2022.4001

FROM THE EDITORS

APPLYING COLEMAN'S BOAT IN MANAGEMENT RESEARCH: OPPORTUNITIES AND CHALLENGES IN BRIDGING MACRO AND MICRO THEORY

Over the years, ongoing conversations in *Academy of Management Journal*—and the broader management literature—have emphasized the value of research that bridges the macro and micro domains (Hitt, Beamish, Jackson, & Mathieu, 2007; Molloy, Ployhart, & Wright, 2011; Morgeson & Hofmann, 1999; Paruchuri, Perry-Smith, Chattopadhyay, & Shaw, 2018). Calls for cross-boundary work typically argue that bridging these two domains is required to understand and solve the complex management issues that societies face (George, Howard-Grenville, Joshi, & Tihanyi, 2016; House, Rousseau, & Thomas-Hunt, 1995; Kozlowski & Klein, 2000). Responses to the organizational challenges posed by the COVID-19 pandemic, or to societal problems like increasing economic inequality, highlight the ways in which individual and organizational actions intersect with both macro and micro levels. Macro research typically investigates questions related to how the broader economic and social environment influences organizational characteristics, actions, and outcomes—for example, how regulatory or financial market pressures shape firms' choices regarding environmental sustainability (Flammer, 2013). At the micro level, research questions focus on the factors and dynamics that influence individuals' affect, behavior, choices, and cognition—for instance, how self-evaluations impact individuals' support of environmental issues (Sonenshein, DeCelles, & Dutton, 2014). Consequently, developing theory that seeks to bridge these levels has the potential to facilitate better understanding of complex challenges and potential solutions for addressing them. The growing microfoundations movement in organization theory and strategy research provides evidence of the substantial theoretical and practical contributions that can come from such boundary-spanning approaches (Felin, Foss, & Ployhart, 2015; Miron-Spektor, Ingram, Keller, Smith, & Lewis, 2018; Reinecke & Ansari, 2021).

As a "big tent" management journal, AMJ welcomes and receives many papers that bridge macro and micro traditions. Indeed, we ourselves represent a cross-section of macro- and micro-focused associate editors who often receive such manuscripts. The diversity in research orientation that characterizes AMJ's editorial team and review board uniquely positions the journal to support, develop, and disseminate empirical research that bridges the macro and micro domains. Yet, during our tenure, we have observed recurrent challenges that can hinder the journey of such manuscripts through the review process. Some of these challenges are methodological or empirical in nature (e.g., Bliese, 2000; Bliese, Schepker, Essman, & Ployhart, 2020; Hill, Johnson, Greco, O'Boyle, & Walter, 2021). However, many others are fundamentally theoretical. Given the emphasis that AMJ places on theoretical contributions, we have spent considerable time working with author and reviewer teams to find ways to successfully overcome these challenges and, thus, publish articles that AMJ readers with different theoretical and methodological backgrounds will value.

Building on our collective experiences, we highlight three primary theoretical challenges that prevent researchers from fully realizing the value of integrating macro and micro approaches, along with some potential solutions that we hope will prove useful to scholars in addressing these issues in their own work. In doing so, our intention is not to focus on limitations of macro or micro research. Rather, we aim to facilitate the success and impact of authors conducting cross-level work by highlighting a set of common theoretical challenges that such papers often encounter. We define and explore these challenges using "Coleman's boat" (Coleman, 1990) as an organizing framework for understanding macro–micro linkages.

CONCEPTUALIZING MACRO–MICRO LINKAGES

Coleman's (1990) framework is particularly useful for conceptualizing the connections necessary to craft a robust, integrated theory that bridges macro and micro levels. The framework is premised on the idea that one must account for the role of human agents

when theorizing about the mechanisms that explain macro-level associations. Often referred to as Coleman's "boat," the framework (see Figure 1) highlights that important macro-to-micro "situational mechanisms" (Arrow [1] in Figure 1), micro-level "action-formation mechanisms" (Arrow [2]), and micro-to-macro "transformational mechanisms" (Arrow [3]) fundamentally undergird macro-level associations (Arrow [4]). As scholars increasingly seek to bridge the macro and micro levels, Coleman's boat draws attention to the key ingredients needed to develop sound theory. In particular, it highlights the need for engagement with the situational and transformational mechanisms (Arrows [1] and [3], respectively) that theoretically connect macro- and micro-level dynamics.[1]

Coleman's framework is quite flexible in terms of the exact definition of what constitutes "macro" or "micro." In management research, it is often useful to conceptualize the macro level in terms of an aggregate social entity, such as an organization, industry, or economy, and the micro level in terms of individuals.[2] The top of the boat represents the macro level of analysis. Arrow 4 in Figure 1 represents a causal claim about how, say, characteristics of macro entities (e.g., organizational capabilities) are related to some outcome also articulated at the macro level (e.g., firm performance). This arrow is dotted to signify that such associations are often theoretically incomplete without consideration of the underlying micro processes (Abell, Felin, & Foss, 2008; Hedström & Ylikoski, 2010). Similarly, Arrow 2 in Figure 1 represents the micro level of analysis. It represents arguments about how individual characteristics (e.g., skills, beliefs) might affect behavior (e.g., effort, creativity).

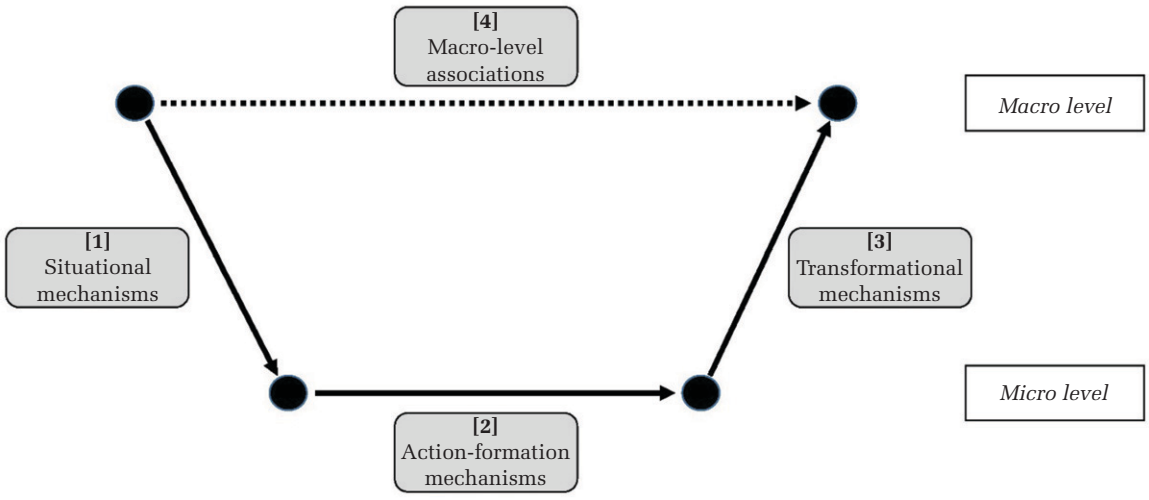
A central insight of the framework is that the macro and micro levels of analysis are connected through situational and transformational mechanisms. Arrow 1 in Figure 1 represents situational mechanisms—or how macro-level artifacts come to influence individual affect, behavior, choices, cognition, decisions, preferences, values, etc. As the arrow's name implies, situational mechanisms are fundamentally about the contextualizing of micro-level phenomena; for example, exploring how micro-level behaviors (e.g., corporate inventors' efforts) might be shaped by different cultural, institutional, or organizational contexts (e.g., organizational incentive schemes; Giarratana, Mariani, & Weller, 2018; Johns, 2018). For its part, Arrow 3 in Figure 1 represents transformational mechanisms—or how the aggregation of micro-level phenomena comes to explain what we observe at higher levels of analysis. Eldor's (2021) study linking managers' leadership by example to a store's productivity and service quality provides an example of such transformational/aggregation mechanisms. Integral to this study is the author's theorizing (and empirical demonstration) of mechanisms (e.g., employee engagement) that "translate" managers' leadership activities into employee behaviors that ultimately yield positive store-level outcomes.

To date, in management scholarship, Coleman's boat has primarily been used to motivate the need for microfoundations research (e.g., Abell et al., 2008). Yet, Coleman's framework can be useful for at least two additional reasons. First, it highlights potential opportunities for bridging macro and micro research in *both* directions—using macro perspectives to contextualize micro processes, and exploring how micro phenomena aggregate to explain macro outcomes. Second, it provides guidance on the key theoretical elements that are needed to successfully connect the macro and micro levels—and vice versa. Accordingly, we leverage Coleman's framework to more broadly discuss some of the recurring pitfalls that emerge in the cross-boundary submissions we receive at AMJ. In the section that follows, we start by discussing an overarching problem, which is the tendency to use multilevel methods as a substitute

[1] In line with Coleman's framework, the present text focuses primarily on research that investigates "mechanistic" cause–effect relationships between phenomena operating at different levels. This reflects the majority of cross-level research that we have received during our tenure at AMJ. However, we acknowledge that there is a growing stream of interdisciplinary research that looks at other types of cross-level relationships such as composition, compilation, and clustering effects (see Kozlowski & Klein, 2000). In an effort to go beyond unidirectional effects, some of these studies take into account the fact that the relationships between industries and industry substrata, organizations and their business/departmental units, and teams and their individual members often involve mutual dependencies, such that phenomena operating at different levels mutually reinforce each other. Although some of the arguments we offer in this essay might seem more germane to research that follows a more mechanistic approach, many solutions we discuss are also applicable to this growing body of work.

[2] We reserve consideration of groups/teams and meso-level research for a later section. That said, we note that Coleman's mechanisms for bridging micro and macro levels can also be applied to developing theory that connects meso-level dynamics to those at the micro and macro levels.

FIGURE 1
Coleman's Boat[a]



[a] Adapted by Hedström and Ylikoski (2010).

for robust multilevel theorizing. We then consider the misapplication of micro theories in exploring macro phenomena (Arrow 2, Figure 1), the need for more nuanced macro contextual considerations in cross-boundary research focused on micro phenomena (Arrow 1, Figure 1), and the lack of attention to aggregation processes in bridging both levels (Arrow 3, Figure 1).

COMMON THEORETICAL PITFALLS

Multilevel Methods versus Multilevel Theory

One of the most common challenges we have observed concerns manuscripts that make bold claims about boundary spanning, but where empirics—for example, using a mix of macro and micro variables—are really the only "bridge" between levels. Such challenges can arise when authors make claims based solely on the use of sophisticated methods but fail to develop the theoretical arguments that undergird the selection of those methods—or the arguments that are needed to draw robust conclusions about the findings. For instance, a problem typical of multilevel data regards the potential non-independence of micro-level observations nested in macro-level units. Accounting for the problem with clustered standard errors, random effects, or fixed effects estimations may technically solve some of the issues involved, but it does not provide a theoretical explanation of the multilevel dynamics. Some manuscripts with these features have the *potential* to build significant contributions. However, they often fall short of sufficiently explaining the theoretical mechanisms that undergird the cross-level dynamics that they capture methodologically. In other words, they do not theoretically develop the rationale behind Arrows 1 and 3 in Figure 1.

Luckily, the solution to overcome this difficulty is straightforward, if not always easy: a more complete theoretical story is required. To the extent that authors primarily seek to explore the micro-level dynamics of the phenomena under study (Arrow 2, Figure 1), their integration of macro-level variables calls for specifying the situational mechanisms in play (Arrow 1, Figure 1). The challenge is not to simply add a series of control variables to "account for" macro-level influences. The challenge is to engage with the theoretical mechanisms that underpin these alternate explanations and integrate them into a cohesive theoretical model. This calls for authors to address why, when, and how a macro-level construct impacts the individual perceptions, cognitions, emotions, or decisions that are the focus of their work. In other words, the task is to develop theory about how context shapes micro-level associations.

When authors are primarily focused on the micro-to-macro dynamics of a phenomenon, the integration of micro-level variables or specific modeling techniques (e.g., multilevel modeling) should be aligned with development of the theoretical aggregation

mechanisms (Arrow 3, Figure 1). In their investigation of the organizational performance implications of participating in an acquisition wave, for instance, McNamara, Haleblian, and Dykes (2008) developed theory about the effects of acquirer entry timing. To motivate their theoretical predictions, the authors drew from the literature on institutional bandwagons (mimicking early movers to avoid appearing different) and competitive bandwagons (fear of missing out on opportunities captured by early movers). Although it did not specifically test the extent to which top management teams justified their acquisition choices using these rationales, their study carefully elucidated micro-level theoretical mechanisms to explain a macro-level outcome (acquisition returns). It is this sort of theorizing that we seek to encourage with the present editorial essay. Nevertheless, in seeking to develop more robust theory that teases out these macro–micro connections, authors can encounter a number of specific, cross-level challenges. We discuss three of these below.

Misapplication of Micro Theory

To engage in theory building around how individuals' idiosyncratic psychological responses impact behavior (Arrow 2, Figure 1) and, ultimately, organizational (or other macro-level) outcomes (Arrow 3, Figure 1), management scholars need to rely on micro-level theory. However, appreciating the complexity of unfamiliar theories is not an easy undertaking for anyone. It requires understanding central assumptions and operating mechanisms, in addition to basic predictions. Many excellent reviews of psychological theories abound, not only in core disciplinary journals but also across the many fields where these theories have been applied. Nevertheless, relying on derivatives of classic theories runs the risk of overlooking their key nuances. We find that misconceptions or overly simplified applications of psychological theory often limit the effectiveness of authors in crafting robust boundary-spanning work.

Psychological identity theorizing provides a good illustration of some of the challenges involved. For example, although social identity theory was originally developed to explain *intergroup* behavior (Tajfel & Turner, 1979), its basic assumptions are also well suited for explaining intra-group processes in organizations (Ashforth & Mael, 1989). For this reason, many management scholars use this theory when studying the inner workings of teams or organizations. Yet, inconsistent findings can easily arise when one overlooks later intergroup extensions of the approach, such as the role of category fit in determining which definition of the self is most important to people (Ellemers, de Gilder, & Haslam, 2004). Fit effects can explain why, within very similar teams or organizations, employees may still report different levels of identification depending on the social referent categories they use in their broader (macro) context, and how salient these categories are to them (Turner, Hogg, Oakes, Reicher, & Whetherell, 1987).

Psychological research on individual identity has also informed macro theorizing about the existence and implications of *organizational* identity (Cornelissen, Haslam, & Werner, 2016). Such anthropomorphizing (i.e., humanizing of the organization) has proven productive (e.g., in work on organizational identity and organizational knowledge) and can have a place in theory building; however, it also introduces risks related to misapplication (Ashforth, Schinoff, & Brickson, 2020; Shepherd & Sutcliffe, 2015). These often arise when authors use anthropomorphizing to sidestep theorizing about aggregation, or when they "borrow" other psychological concepts or theories without careful consideration of if, or how, these concepts translate to the organizational level (Shepherd & Sutcliffe, 2015).

There are many other popular micro theories, concepts, and constructs that require specific attention when applied in the management field. One example is the cross-boundary examination of how individual-level dispositional constructs, like narcissism or extraversion, affect firm-related outcomes. In the psychological literature, these constructs are presumed to be relatively stable over time and fundamental to one's personality (Grijalva, Harms, Newman, Gaddis, & Fraley, 2015). Yet, management scholars have measured these traits either by priming individuals with these personality tendencies, inferring them from an individual's communication style or actions during a single episode, or by letting people imagine that they possess this trait. Such measures do not capture the innateness of personality constructs. We recognize that, in micro theory, the trait–state distinction is not clear cut: most psychological variables are expected to contain both state and trait components to varying degrees (e.g., Deinzer et al., 1995). It thus becomes important to consider both aspects of people's behavior. In cross-level research, however, doing so becomes theoretically more valuable when propositions about people's states and traits—and the methods used to assess them—are deliberate about distinguishing these concepts and accurately describing their effects (i.e., state effects being explained as dynamic behavioral

displays; trait effects being explained as more stable behavior).

Management scholars have also engaged in work focused on understanding how the histories of industries, organizations, and leaders affect current outcomes. "Imprinting" draws from biological research on learning and behavior, and has been applied at multiple levels in organizational research (Marquis & Tilcsik, 2013; Stinchcombe, 1965). At the individual level, imprinting is the notion that, during critical transition periods, individuals adopt behavioral patterns that can persist in later life stages independent of their functionality (Nagel & Malmendier, 2011). Work in this domain often has cross-boundary aspirations—for example, research on how CEO decision-making, and, in turn, firm outcomes, reflects the imprint of the particular economic or political conditions that executives were exposed to growing up (e.g., Kish-Gephart & Campbell, 2015; Wang, Du, & Marquis, 2019). In pursuing such studies, however, it is important to recognize that imprinting typically occurs during developmental phases in people's lives when they are undergoing key transitions. For imprinting to occur, the individual must not only experience change, but must also be sufficiently attuned to their environment to acquire new behavioral patterns. Moreover, imprinting can happen at multiple points of transition in people's lives. These experiences are not limited to childhood, but also occur in adulthood (e.g., at work), such that people can be influenced by multiple, intersecting imprints (McEvily, Jaffee, & Tortoriello, 2012). This is also true for CEOs, who may be strongly shaped by their educational or professional experiences and, as a result, develop new imprints later in life (Kish-Gephart & Campbell, 2015). Accordingly, meaningful multilevel research on imprinting generates the most impact when it explicitly acknowledges (and, ideally, shows) that the contextual and intrapersonal processes underlying learned behavior operate in tandem and have an ongoing, mutual influence on each other.

Finally, the challenges associated with misapplication are also present in studies on CEO and board functioning. When Dalton and Dalton (2011) called for more multilevel research in this area, many scholars started to examine the relations between individual-level CEO/director characteristics, board-level compositional structures, and firm-level outcomes through a psychological lens. Although this has largely been a positive development, micro-level theory suggests that the relational dynamics within a boardroom (or within any group for that matter) may not always be attributable to the demographic features or cognitions of individual board members, nor to how these characteristics are distributed within the board. For instance, psychological theory on social influence processes and collective diversity outcomes in teams would predict that board dynamics are more directly a function of the relational quality and degree of information elaboration among the main actors in this social context (i.e., direct social exchanges between the CEO, top management members, and directors; Magee & Galinsky, 2008; van Knippenberg, de Dreu, & Homan, 2004; Veltrop, Bezemer, Pugliese, & Nicholson, 2021). That is not to say that demographic or cognitive features cannot impact board functioning; however, their influence may operate through several alternative mechanisms. It is important that work in this domain continues to be intentional about theoretically and empirically establishing the cognitive and/or relational mechanisms in play (Neely, Lovelace, Cowen, & Hiller, 2020). Otherwise, misattributions can easily be made about what explains observed associations between demographics and firm-level outcomes.

In short, Coleman's boat nicely illustrates that the thoughts, feelings, and behaviors of individuals can be essential in predicting macro-level firm processes or outcomes. As editors, however, we sometimes see that this theorizing can be oversimplified or applied in ways that lead to misinterpretation in cross-boundary research. In writing this editorial, we hope to help authors guard against such missteps.

Nuanced Contextualization of Micro Theories

We also observe challenges for micro-oriented scholars engaged in cross-level research. Most micro theory is built on the notion that context plays a major role in shaping individuals' thoughts, feelings, and behavior. Yet, a recurrent issue we have observed is that some cross-boundary manuscripts submitted to AMJ overlook the more nuanced influence that different contextual factors can have on psychological processes (Arrow 1, Figure 1). Such papers might examine, for instance, how one proximal context factor affects micro processes, and examine this effect with an abstract simulation or experimental methods that seem far removed from their more complex organizational reality. Consequently, the studies' findings often strike reviewers and readers as too detached to be meaningful in real-world management settings.

Fortunately, there exist many strong examples of how to integrate macro influences into micro theory in a more nuanced way. Johns (2006), for example,

highlighted that, in addition to taking the most salient environmental cues into account, micro scholars might also consider situational factors that create opportunities or constrain people's behavior. Individuals' actions may also be determined by a combination of different contexts. Research on responses to change illustrates how context can reinforce positive behavior. Many management scholars draw on the classic psychological change model from Kurt Lewin (1951) to propose that people will move forward with a new behavior once they come to understand why change is needed and beneficial. Lewin's model has predictive power and is practically relevant because it highlights how policy-makers and managers can positively influence people's responses through their change narratives. Nonetheless, the model cannot be applied universally, as there is still significant response variation to change among members of the same group (Oreg, Vakola, & Armenakis, 2011). It is, therefore, important to understand under what conditions a change narrative from higher management will help make employees receptive to their new reality. For instance, a qualitative study by Sonenshein (2010) illustrated that enabling factors, like generating simultaneous communication processes between managers and employees, can increase successful strategic change implementation. In this way, employees can personally embellish, and thereby give greater meaning to, the particular change discourse in their organization. In addition, there is growing evidence that contextual factors can also constrain desired employee outcomes. Micro–macro studies on the effectiveness of diversity interventions, for example, show that positive firm initiatives can have unintended negative outcomes due to lower-level contextual constraints (Leslie, 2019). This happens when diversity interventions at the organizational level further compromise the position of disadvantaged employees at the department or team level, because their supervisors do not consider these programs necessary or valuable (e.g., Kaiser, Major, Jurcevic, Dover, Brady, & Shapiro, 2013; see also Konrad & Linnehan, 1995).

Finally, a paper by Shimizu (2007) demonstrated how a combination of contextual cues can affect individual behavior. To enhance our understanding of organizational risk-taking, this study combined insights from three well-known but distinct views on the topic (prospect theory, behavioral theory of the firm, and threat–rigidity perspective; e.g., Cyert & March, 1963, Staw, Sandelands, & Dutton, 1981; Thaler & Johnson, 1990). These approaches seem to predict opposing effects for risk-taking behavior because they either view human decision-making from a micro or macro perspective, and they operate at different levels of analysis. However, the study reconciles these views—not by showing that consistency can be found among the paradigms, but, rather, by showing that a combination of individual and organizational factors influences the unique mechanisms underlying each view. This means that risk-taking is a complex phenomenon that cannot easily be narrowed down to one cause. It thus requires nuanced theorizing that recognizes multiple contextual influences.

In sum, we encourage authors to be thoughtful about whether the psychological mechanisms observed in basic research apply across a broad range of management contexts, and to speak to these issues in their work. This is not to say that scholars need to develop all-encompassing research designs—it is, of course, impossible to conduct a study that includes all levels and variables of interest. In refining a particular research question, one inevitably neglects part of the phenomenological picture. However, greater consideration of how macro-level contextual characteristics may reinforce or constrain micro processes may be fruitful in explaining inconsistent prior findings and providing organizational practice with more relevant and effective guidance. Finally, doing so has the potential to cross-fertilize the micro literature by introducing new contingency factors to these processes. Other opportunities for cross-fertilization also arise from greater engagement with theorizing about aggregation, an issue we turn to next.

Aggregation Mechanisms

Aggregation mechanisms concern the micro-to-macro transition illustrated by Arrow 4 in Coleman's boat (Figure 1). Despite the prevalence of microfoundations research, aggregation is rarely studied theoretically. This appears to be an important omission. Aggregation is at the heart of microfoundations research. The principle of reducibility requires a clear aggregation logic that models and shows how micro-level behaviors and interactions produce the macro-level outcome of interest. Explicating the aggregation logic is also important in light of the high likelihood of equifinality—that is, the possibility that many alternative mechanisms may produce the same outcome. Hence, from the (macro-level) outcome alone, researchers can seldom identify the specific aggregation mechanism that generated the collective result. This is problematic because, although some individuals might exert more influence than others, macro-level actions and outcomes rarely reflect

the preferences and actions of any single person. Macro-level actions are inherently social and, thus, are influenced by interactions between individuals and situational factors. This raises the question of how micro-level dynamics "sum up" to produce macro-level effects (Bliese, 2000; Morgeson & Hofmann, 1999). Extant research does not always clarify how or why the theoretical mechanisms established in micro research will automatically—or necessarily—translate to the macro level.

Aggregation issues are not unique to management research; they are pervasive in social sciences in general and have been broadly referred to as the "micro-to-macro problem" (e.g., Coleman, 1990). In sociology, several scholars touched extensively upon this issue (e.g., Coleman, 1990; Hedström & Ylikoski, 2010; Ylikoski, 2021). Furthermore, as Freeman (1999) pointed out, even when individuals within an organization are rational, organizations can act in non-rational ways and vice versa, because the aggregation of individual-level behavior is non-additive and complex. Accordingly, he argued that theories of organizations that rely on individual-level assumptions and mechanisms should incorporate an aggregation process in their logic to avoid being theoretically incomplete.

Hence, although bridging micro- and macro-level research by drawing from individual-level mechanisms to explain macro-level actions and outcomes has the potential to offer new theoretical insights, it also imposes additional theoretical and methodological requirements. Among the most frequently encountered is the need to both theorize—and empirically document—the aggregation mechanisms of interest. Unfortunately, many studies that could draw attention to interesting macro-level phenomena and how they follow from the aggregation of micro-level dynamics do not fully explore these connections. For instance, Pasca and Poggio (2021) documented that many individuals acknowledge that some of their lifestyle choices have harmful environmental effects. Yet, these same individuals "justify" their behavior by rationalizing that the lifestyle choices of others are even more damaging. Intuitively, one could posit that such individual reasoning might explain society's limited efforts to address climate change. However, a study like Pasca and Poggio (2021) does not explore the bottom-up aggregation from individual biases to collective outcomes. This is one kind of theoretical development we encourage in this editorial essay.

One area of research that has long tried to tackle these issues is team-level research articulated at the so-called "meso" level (D'Innocenzo, Luciano, Mathieu, Maynard, & Chen, 2016; House et al., 1995; Kozlowski & Klein, 2000; Marrone, Tesluk, & Carson, 2007; Schubert & Tavassoli, 2020). In research focusing on firm-level outcomes, Hale, Ployhart, and Shepherd (2016) drew from theories of collective turnover and group adaptability to distinguish the short-term and long-term performance effects ensuing from the unforeseen departure of employees and managers. Developing the aggregation logic underpinning their theoretical model, the authors postulated that "a change event (like turnover) will disrupt collective states and processes" and that these would be "heavily shaped by member interdependence" (Hale et al., 2016: 908). Building on this logic, they hypothesized (and tested) that unit interdependence would moderate the effects of employee turnover on sales performance disruption and recovery. This work illustrates the kind of theoretical and methodological efforts that are useful to advance understanding of the bottom-up transformational mechanisms that link micro-level dynamics with macro-level phenomena in Coleman's (1990) framework. As Hale et al. (2016: 923) observed, "such integration is important because collective turnover is inherently a multilevel and dynamic process, which is exactly the kind of process studied within the groups and teams literature."

We believe it is these kinds of theoretical extensions that are needed to successfully borrow insights from micro-level or meso-level research to explain macro-level phenomena. Without a well-developed aggregation mechanism, works that attempt to draw from the micro or meso literatures to explain macro phenomena risk missing a critical theoretical element. Therefore, we would encourage authors to put thought into this aspect of theory development and make aggregation an integral part of their theorizing. Indeed, there is a wide variety of different ways in which aggregation could occur. Teasing out such mechanisms could offer opportunities for macro researchers to enhance their theoretical contribution by *extending* micro theories rather than simply *applying* them at the macro level. Likewise, by engaging with aggregation theorizing, micro researchers have an opportunity to leverage their work to also offer insight into important collective or organizational outcomes of interest to a broad community of scholars and practitioners.

CONCLUSION

Research that spans macro and micro levels holds great promise for developing research insights that

can advance both management scholarship and practice. AMJ has a review process and a readership profile that can allow such work to have considerable impact and, as associate editors, we are excited to see submissions that take this approach. Ultimately, fully capitalizing on the promise of boundary-spanning work is likely to require new approaches to doctoral education and research collaborations. Training that exposes students to theory in both the macro and micro domains, and builds skills in cross-level theorizing, will position newly minted scholars to identify fruitful opportunities for cross-boundary work and to execute studies that reach scholars with diverse interests. Such outcomes can also be achieved by forming coauthor teams that are made up of both macro and micro researchers tackling a complex management challenge. In developing such work, we encourage authors to actively engage with the theoretical nuances inherent in cross-boundary research, and, indeed, to use them as a basis for building a robust theoretical contribution and stronger practical impact.

Amanda P. Cowen
University of Virginia

Floor Rink
University of Groningen

Ilya R. P. Cuypers
Singapore Management University

Denis A. Grégoire
HEC Montréal

Ingo Weller
LMU Munich

REFERENCES

Abell, P., Felin, T., & Foss, N. 2008. Building micro-foundations for the routines, capabilities, and performance links. ***Managerial and Decision Economics***, 29: 489–502.

Ashforth, B. E., & Mael, F. 1989. Social identity theory and the organization. ***Academy of Management Review***, 14: 20–39.

Ashforth, B. E., Schinoff, B. S., & Brickson, S. L. 2020. "My company is friendly," "Mine's a rebel": Anthropomorphism and shifting organizational identity from "what" to "who." ***Academy of Management Review***, 45: 29–57.

Bliese, P. D. 2000. Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K. J. Klein & S. W. J. Kozlowski (Eds.), ***Multilevel theory, research, and methods in organizations***: 349–381. San Francisco, CA: Jossey-Bass.

Bliese, P. D., Schepker, D. J., Essman, S. M., & Ployhart, R. E. 2020. Bridging methodological divides between macro- and microresearch: Endogeneity and methods for panel data. ***Journal of Management***, 46: 70–99.

Coleman, J. S. 1990. ***Foundations of social theory***. Cambridge, MA: Harvard University Press.

Cornelissen, J. P., Haslam, S. A., & Werner, M. D. 2016. Bridging and integrating theories on organizational identity: A social interactionist model of organizational identity formation and change. In M. G. Pratt, M. Schultz, B. E. Ashforth, & D. Ravasi (Eds.), ***The Oxford handbook of organizational identity***: 200–215. Oxford, U.K.: Oxford University Press.

Cyert, R. M., & March, J. G. 1963. ***A behavioral theory of the firm***. Englewood Cliffs, NJ: Prentice Hall.

Dalton, D. R., & Dalton, C. M. 2011. Integration of micro and macro studies in governance research: CEO duality, board composition, and financial performance. ***Journal of Management***, 37: 404–411.

Deinzer, R., Steyer, R., Eid, M., Notz, P., Schwenkmezger, P., Ostendorf, F., & Neubauer, A. 1995. Situational effects in trait assessment: The FPI, NEOFFI and EPI questionnaires. ***European Journal of Personality***, 9: 1–23.

D'Innocenzo, L., Luciano, M. M., Mathieu, J. E., Maynard, M. T., & Chen, G. 2016. Empowered to perform: A multilevel investigation of the influence of empowerment on performance in hospital units. ***Academy of Management Journal***, 59: 1290–1307.

Eldor, L. 2021. Leading by doing: Does leading by example impact productivity and service quality? ***Academy of Management Journal***, 64: 458–481.

Ellemers, N., de Gilder, T. C., & Haslam, S. 2004. Motivating individuals and groups at work: A social identity perspective on leadership and group performance. ***Academy of Management Review***, 29: 459–478.

Felin, T., Foss, N. J., & Ployhart, R. E. 2015. The microfoundations movement in strategy and organization theory. ***Academy of Management Annals***, 9: 575–632.

Flammer, C. 2013. Corporate social responsibility and shareholder reaction: The environmental awareness of investors. ***Academy of Management Journal***, 56: 758–781.

Freeman, J. 1999. Efficiency and rationality in organizations. ***Administrative Science Quarterly***, 44: 163–175.

George, G., Howard-Grenville, J., Joshi, A., & Tihanyi, L. 2016. Understanding and tackling societal grand

challenges through management research. ***Academy of Management Journal***, 59: 1880–1895.

Giarratana, M. S., Mariani, M., & Weller, I. 2018. Rewards for patents and inventor behaviors in industrial research and development. ***Academy of Management Journal***, 61: 264–292.

Grijalva, E., Harms, P. D., Newman, D. A., Gaddis, B. H., & Fraley, R. C. 2015. Narcissism and leadership: A meta-analytic review of linear and nonlinear relationships. ***Personnel Psychology***, 68: 1–47.

Hale, D., Jr., Ployhart, R. E., & Shepherd, W. 2016. A two-phase longitudinal model of a turnover event: Disruption, recovery rates, and moderators of collective performance. ***Academy of Management Journal***, 59: 906–929.

Hedström, P., & Ylikoski, P. 2010. Causal mechanisms in the social sciences. ***Annual Review of Sociology***, 36: 49–67.

Hill, A. D., Johnson, S. G., Greco, L. M., O'Boyle, E. H., & Walter, S. L. 2021. Endogeneity: A review and agenda for the methodology–practice divide affecting micro and macro research. ***Journal of Management***, 47: 105–143.

Hitt, M. A., Beamish, P. W., Jackson, S. E., & Mathieu, J. E. 2007. Building theoretical and empirical bridges across levels: Multilevel research in management. ***Academy of Management Journal***, 50: 1385–1399.

House, R., Rousseau, D. M., & Thomas-Hunt, M. 1995. The meso paradigm: A framework for the integration of micro and macro organizational behavior. ***Research in Organizational Behavior***, 17: 71–114.

Johns, G. 2006. The essential impact of context on organizational behavior. ***Academy of Management Review***, 31: 386–408.

Johns, G. 2018. Advances in the treatment of context in organizational research. ***Annual Review of Organizational Psychology and Organizational Behavior***, 5: 21–46.

Kaiser, C. R., Major, B., Jurcevic, I., Dover, T. L., Brady, L. M., & Shapiro, J. R. 2013. Presumed fair: Effects of organizational diversity structures. ***Journal of Personality and Social Psychology***, 3: 504–519.

Kish-Gephart, J. J., & Campbell, J. T. 2015. You don't forget your roots: The influence of CEO social class background on strategic risk taking. ***Academy of Management Journal***, 58: 1614–1636.

Konrad, A. M., & Linnehan, F. 1995. Formalized HRM structures: Coordinating equal employment opportunity or concealing organizational practices? ***Academy of Management Journal***, 38: 787–820.

Kozlowski, S. W. J., & Klein, K. J. 2000. A multilevel approach to theory and research in organizations: Contextual, temporal, and emergent processes. In K. J. Klein & S. W. J. Kozlowski (Eds.), ***Multilevel theory, research, and methods in organizations***: 3–90. San Francisco, CA: Jossey-Bass.

Leslie, L. M. 2019. Diversity initiative effectiveness: A typology theory of unintended consequences. ***Academy of Management Review***, 44: 538–563.

Lewin, K. 1951. ***Field theory in social science***. New York, NY: Harper & Row.

Magee, J. C., & Galinsky, A. D. 2008. Social hierarchy: The self-reinforcing nature of power and status. ***Academy of Management Annals***, 2: 351–398.

Marquis, C., & Tilcsik, A. 2013. Imprinting: Toward a multilevel theory. ***Academy of Management Annals***, 7: 193–243.

Marrone, J. A., Tesluk, P. E., & Carson, J. B. 2007. A multilevel investigation of antecedents and consequences of team member boundary-spanning behavior. ***Academy of Management Journal***, 50: 1423–1439.

McEvily, B., Jaffee, J., & Tortoriello, M. 2012. Not all bridging ties are equal: Network imprinting and firm growth in the Nashville legal industry, 1933–1978. ***Organization Science***, 23: 547–563.

McNamara, G. M., Haleblian, J., & Dykes, B. J. 2008. The performance implications of participating in an acquisition wave: Early mover advantages, bandwagon effects, and the moderating influence of industry characteristics and acquirer tactics. ***Academy of Management Journal***, 51: 113–130.

Miron-Spektor, E., Ingram, A., Keller, J., Smith, W. K., & Lewis, M. W. 2018. Microfoundations of organizational paradox: The problem is how we think about the problem. ***Academy of Management Journal***, 61: 26–45.

Molloy, J. C., Ployhart, R. E., & Wright, P. M. 2011. The myth of "the" micro–macro divide: Bridging system-level and disciplinary divides. ***Journal of Management***, 37: 581–609.

Morgeson, F. P., & Hofmann, D. A. 1999. The structure and function of collective constructs: Implications for multilevel research and theory development. ***Academy of Management Review***, 24: 249–265.

Nagel, S., & Malmendier, U. 2011. Depression babies: Do macroeconomic experiences affect risk taking? ***Quarterly Journal of Economics***, 126: 373–416.

Neely, B. H., Jr., Lovelace, J. B., Cowen, A. P., & Hiller, N. J. 2020. Metacritiques of upper echelons theory: Verdicts and recommendations for future research. ***Journal of Management***, 46: 1029–1062.

Oreg, S., Vakola, M., & Armenakis, A. A. 2011. Change recipients' reactions to organizational change: A sixty-year review of quantitative studies. ***Journal of Applied Behavioral Science***, 47: 461–524.

Paruchuri, S., Perry-Smith, J. E., Chattopadhyay, P., & Shaw, J. D. 2018. New ways of seeing: Pitfalls and opportunities in multilevel research. ***Academy of Management Journal***, 61: 797–801.

Pasca, L., & Poggio, L. 2021. Biased perception of the environmental impact of everyday behaviors. ***Journal of Social Psychology***. doi: 10.1080/00224545.2021.2000354

Reinecke, J., & Ansari, S. 2021. Microfoundations of framing: The interactional production of collective action frames in the Occupy movement. ***Academy of Management Journal***, 64: 378–408.

Schubert, T., & Tavassoli, S. 2020. Product innovation and educational diversity in top and middle management teams. ***Academy of Management Journal***, 63: 272–294.

Shepherd, D. A., & Sutcliffe, K. M. 2015. The use of anthropomorphizing as a tool for generating organizational theories. ***Academy of Management Annals***, 9: 97–142.

Shimizu, K. 2007. Prospect theory, behavioral theory, and the threat-rigidity thesis: Combinative effects on organizational decisions to divest formerly acquired units. ***Academy of Management Journal***, 50: 1495–1514.

Sonenshein, S. 2010. We're changing? Or are we? Untangling the role of progressive, regressive and stability narratives during strategic change implementation. ***Academy of Management Journal***, 53: 477–512.

Sonenshein, S., DeCelles, K. A., & Dutton, J. E. 2014. It's not easy being green: The role of self-evaluations in explaining support of environmental issues. ***Academy of Management Journal***, 57: 7–37.

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.

Stinchcombe, A. L. 1965. Social structure and organizations. In J. G. March (Ed.), ***Handbook of organizations***: 142–193. Chicago, IL: Rand McNally & Co.

Tajfel, H., & Turner, J. C. 1979. An integrative theory of intergroup conflict. In W. G. Austin & O. S. Worchel (Eds.), ***The social psychology of intergroup relations***: 33–37. Monterey, CA: Brooks/Cole.

Thaler, R. H., & Johnson, E. J. 1990. Gambling with the house money and trying to break even: The effects of prior outcomes on risky choice. ***Management Science***, 36: 643–660.

Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. 1987. ***Rediscovering the social group: A self-categorization theory***. Oxford, U.K.: Blackwell.

van Knippenberg, D., de Dreu, C. K. W., & Homan, A. C. 2004. Work group diversity and group performance: An integrative model and research agenda. ***Journal of Applied Psychology***, 89: 1008–1022.

Veltrop, D., Bezemer, P.-J., Pugliese, A., & Nicholson, G. 2021. Too unsafe to monitor? How board–CEO cognitive conflict and chair leadership shape outside director monitoring. ***Academy of Management Journal***, 64: 207–234.

Wang, D., Du, F., & Marquis, C. 2019. Defending Mao's dream: How politicians' ideological imprinting affects firms' political appointment in China. ***Academy of Management Journal***, 62: 1111–1136.

Ylikoski, P. 2021. Understanding the Coleman boat. In G. Manzo (Ed.), ***Research handbook on analytical sociology***: 49–63. Northampton, MA: Edward Elgar Publishing.