


THEORIES OF PERFORMANCE: A REVIEW AND INTEGRATION

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Performance is a critical construct across micro and macro management subfields (e.g., organizational behavior, entrepreneurship, strategic management). However, there is little consensus on how performance should be conceptualized. There are parallel and siloed research streams addressing firm- and individual-level performance, and a never-ending search for seemingly novel theories without satisfactory progress toward integrating them. To address these challenges, we systematically integrated performance-related theories. We reviewed 15,535 journal articles published in 44 journals from 1946 to 2022 and uncovered 239 unique performance-related theories that we integrated through six meta-theoretical constructs: firm-level (1) capabilities, (2) structures, and (3) transactions; and individual-level (4) knowledge, skills, abilities, and other characteristics, (5) roles, and (6) relationships. Moreover, we discovered that these meta-theoretical constructs are isomorphic s levels, which resulted in the CORE model of performance applicable at both levels of analysis: **performance** (P) = **capacity** (C) + **opportunity** (O) + **relevant exchanges** (RE). We describe how the CORE performance model will enable researchers to *stop* working in theoretical silos, aiming for illusory theoretical contributions and thinking dichotomously about performance as processes or outcomes, and to *start* considering “the big picture” of performance, exploring the performance system, and considering how performance processes affect performance outcomes (and vice versa).

Performance is one of the most critical constructs in management research, spanning levels of analysis and subfields. For example, organizational behavior researchers study individual and team performance (e.g., Bradley & Aguinis, 2023; Carpini, Parker & Griffin, 2017; DeShon, Kozlowski, Schmidt, Milner & Wiechmann, 2004), entrepreneurship researchers

study entrepreneurial and new venture performance (e.g., Stam & Elfring, 2008; Zahra & Covin, 1995), and strategic management researchers study firm performance (e.g., Gupta, Crilly & Greckhamer, 2020; Mackey, 2008). Moreover, across management subfields, performance is a critical outcome in the causal chain—the dependent variable many studies aim to predict.

We thank *Academy of Management Annals* editor Elizabeth George, associate editor  Susan Simkins, and two anonymous reviewers for highly constructive feedback. We also thank **the Project and Management Faculty of Color’s Research Collaboration** Initiative, which served as the impetus for initiating this project. Finally, we are also grateful to Larry Clay, Jr. for sharing comments and insights during the early phases of the project. Correspondence concerning this article should be addressed to Jason D. Marshall, Heider College of Business, 602 N 20th Street, Omaha, NE 68102. Email: jasonmarshall@creighton.edu.

Accepted by Susan Simkins

(Aguinis, 2023; Viswesvaran & Ones, 2000). It is, therefore, not surprising that scholars use different terminology to describe performance across management subfields and levels of analysis (Molloy, Ployhart & Wright, 2011), which may be contributing to the micro–macro divide (Aguinis, Boyd, Pierce & Short, 2011; Hitt, Beamish, Jackson & Mathieu, 2007).

The problem we aim to solve with our integrative review is not simply that there are too many theories of performance, which has been labeled “*theorrhea*” (Antonakis, 2017). Rather, the extant literature has been too focused on developing new theories without making satisfactory progress toward how they can be integrated. Hence, as Cronin, Stouten, and van Knippenberg (2021) noted, the real problem is that there are too many theories, and the theories are disorganized, disconnected, contradictory, and redundant.

REVIEW GOALS AND CONTRIBUTIONS

Whereas individual theories describe the causal relationships between constructs, meta-theory captures the connections among constructs across theories, orienting scholars toward understanding the “settled science” on a given topic (Cronin et al., 2021: 334). Accordingly, the overarching goal of our review is to integrate the literature to advance from theories of performance toward a meta-theory of performance. Additionally, we have three specific goals resulting in value-added contributions. To achieve our goals, we engaged in an integrative review process to systematically integrate theories, ultimately enabling us to develop and define a meta-theory of performance that describes performance more abstractly and at a higher level than specific theories (cf. Pierce & Aguinis, 2013).

Our first specific goal is to *stop* the proliferation of redundant performance theories, which has resulted from a seemingly never-ending search for theoretical novelty (Hambrick, 2007). To address this issue, we developed a model of meta-theoretical performance constructs through our integrative review process. The antidote to theory proliferation is parsimony, which favors simpler (but not simplistic) theories (Aguinis & Cronin, 2022). Thus, as we advance from individual theories to a meta-theoretical model, our review’s parsimonious results enable us to *stop* the pursuit of seemingly novel individual theories.

Our second specific goal is to *start* new theoretical and empirical inquiry streams. Focusing on meta-theoretical constructs rather than disparate individual theories opens the door to raising new research questions. More specifically, we identify six meta-theoretical constructs of performance: firm-level

(1) capabilities, (2) structures, and (3) transactions; and individual-level (4) knowledge, skills, abilities, and other characteristics (KSAOs), (5) roles, and (6) relationships. Based on intersections among these six meta-theoretical constructs, we identify promising streams of research and provide sample research questions to spur new streams of theoretical and empirical inquiry.

Our third specific goal, a logical extension of our second goal, is to *start* new interdisciplinary and multilevel collaboration pathways. As each meta-theoretical construct is just a piece of the performance puzzle, our review offers new insights into how **many** strategy (firm-level) and organizational behavior (individual-level) performance constructs are isomorphic. Specifically, rather than conceptualizing performance as a process or an outcome, we contend that performance is a system composed of interconnected meta-theoretical constructs—what we call the “CORE” model of performance:

Capacity (“C” : firm-level capabilities and individual-level KSAOs) + *Opportunity* (“O” : firm-level structures and individual-level roles) + *Relevant Exchanges* (“RE” : firm-level transactions and individual-level relationships) = *Performance* (“P”).

Thus, by integrating currently disconnected research silos and levels of analysis and moving away from dichotomous process-versus-outcome thinking, we hope our review will start future multilevel research to gain a more comprehensive and integrative theoretical perspective on performance.

THEORETICAL BACKGROUND

Despite the primary importance of the performance construct in management, and potentially because of it, it remains a chimera, as different subfields have remarkably different views of what performance is (or is not). For example, in organizational behavior research, organizational citizenship behaviors are considered “performance that supports the social and psychological environment in which task performance takes place” (Organ, 1990). In strategy research, several quantitative variables represent performance (e.g., return on investment, sales, cash flow; Chakravarthy, 1986). Furthermore, the abundance of existing theories contributes to the lack of consensus and confusion about performance. Seemingly novel theories are developed to explain nuanced aspects of performance on an ongoing basis and, although

Q:1

Q:2

several reviews have been published, the specificity of these reviews has further reinforced the nuance, rather than clarifying the construct. Table 1 provides a summary of prior individual- and firm-level reviews. Although each review in Table 1 provided well-organized summaries of the performance literature to date, each focused on specific levels of analysis and specific theories by addressing narrow aspects of the performance construct and its relation to other constructs. Our review extends and differs from previous work in three ways, as it (1) spans multiple levels of analysis, (2) spans multiple research domains, and (3) focuses on the relationships among the constructs across theories (i.e., meta-theoretical constructs).

REVIEW METHODOLOGY

We engaged in an integrative review process that combined computer-aided techniques and human coding to create meta-theoretical performance constructs, which subsume theory-level constructs. To create meta-theoretical constructs, we followed four steps: (1) identified and collected sample articles; (2) conducted computer-aided analysis; (3) developed and applied human coding criteria; and (4) reviewed, named, and refined meta-theoretical constructs. Table 2 summarizes the specific actions taken within these four steps and explains some of our process's key decisions and outcomes.

To generate a comprehensive and representative literature sample, we identified the top 10 journals, based on SCImago Journal Rank (SJR) metrics

(Guerrero-Bote & Moya-Anegón, 2012), in the following six management-related SCImago research categories: (1) applied psychology, (2) business and international management, (3) management of technology and innovation, (4) organizational behavior and human resource management, (5) public administration, and (6) strategy and management. As some of these journals (e.g., *Academy of Management Annals*, *Academy of Management Review*, *Organization Science*) belong to multiple research categories, our final journal list included 44 journals, as shown in Table 3. Table 3 shows that, although not all-inclusive, our review is quite comprehensive in its coverage of journals that regularly publish performance research.

We used the *Web of Science* platform to search for articles in the journal list that included the word "performance," using the topic search feature (title, abstract, author-supplied keywords) and *Words Plus*. We used *KeyWords Plus* to ensure we captured all relevant literature in which performance was discussed, including the literature in which the word "performance" is not used to describe performance per se. Based on our search results, our sample included 15,535 journal articles from 1946 to 2022. Through our review process, we discovered that an overwhelming majority of the sample focused on individual-level or firm-level research, with a very small percentage of articles focused on other levels of analysis (e.g., team). Therefore, we focused the scope of our review on the individual and firm levels of analysis.

Given that our sample consisted of nearly 16,000 articles and 20,000 keywords, manual coding would

TABLE 1
Examples of Prior Reviews of the Individual and Firm Performance Literatures

Source	Level of analysis	Main focus
Viswesvaran and Ones (2000)	Individual	Contemporary models of individual performance
Sonnentag and Frese (2002)	Individual	Individual performance from an individual-differences, situational, and performance regulation perspective
Campbell and Wiernik (2015)	Individual	Alternative specifications for the definition and latent structure of individual performance
Carpini et al. (2017)	Individual	A bibliometric review of the individual work performance literature
Molina-Azorín, Tarí, Claver-Cortés, and López-Gamero (2009)	Firm	Effects of quality management and environmental management on firm performance
Crook, Todd, Combs, Woehr, and Ketchen (2011)	Firm	A meta-analysis of the relationship between human capital and firm performance
Goyal, Rahman, and Kazmi (2013)	Firm	Corporate sustainability and firm performance
DeNisi and Smith (2014)	Firm	The relationship among performance appraisal, performance management, and firm-level performance
Maula, Heimeriks, and Keil (2023)	Firm	The relationship between organizational experience and firm performance

TABLE 2
Summary of Methodological Procedures

Step	Actions taken
1 Identified and collected sample articles	<ul style="list-style-type: none"> Chose the top 10 journals, based on SCImago Journal Rank metrics, in the following six management-related SCImago categories: applied psychology, business and international management, management of technology innovation, organizational behavior and human resource management, public administration, and strategy and management Searched for “performance” using <i>KeyWords Plus</i> Collected bibliometric information, including abstracts, for 15,535 articles from <i>Web of Science</i>
2 Conducted computer-aided analysis	<ul style="list-style-type: none"> Performed keyword cluster analysis using the <i>bibliometrix</i> package (Aria & Cuccurullo, 2017) in R to organize the literature based on keyword co-occurrence. We tested multiple clustering algorithms with varied numbers of clusters and determined that a 4-cluster multiple correspondence analysis (MCA) best captured the data To move from keywords to theories, we used the <i>quanteda</i> package (Benoit et al., 2018) in R to do a KWIC search for the word “theory” in the article abstracts of papers that belonged to a single keyword cluster ($N = 5,190$)
3 Developed and applied human coding criteria	<ul style="list-style-type: none"> Identified level of analysis and intra- versus inter-agent as key differentiating features among performance theories Developed a dichotomous coding criterion for level of analysis (individual or firm) Developed a three-level coding criterion for intra-agent, inter-agent, or both Independently coded each theory based on the criteria Discussed any coding discrepancies until consensus was reached
4 Reviewed, named, and refined meta-theoretical constructs	<ul style="list-style-type: none"> Identified frequently occurring theories and the shared meaning among theories in each meta-theoretical construct Named six meta-theoretical constructs: capabilities, structures, transactions, KSAOs, roles, and relationships Reviewed and moved theories as needed. Each theory was coded separately to organize the theories into meta-theoretical constructs. Once the theories were grouped and we had named the meta-theoretical constructs, we reassessed each theory to determine whether it still belonged in the meta-theoretical construct or fit better (based on shared meaning) in a different meta-theoretical construct

Notes: KSAOs = knowledge, skills, abilities, and other characteristics. KWIC = keyword-in-context.

have been nearly impossible. Thus, we used computer-aided techniques (keyword cluster analysis and keyword-in-context [KWIC]) to organize the sample and inform our human coding criteria. Keyword cluster analysis creates co-occurrence networks based on the frequency with which keywords co-appear in an article’s keyword list. As shown in Figure 1, we discovered that the keyword clusters are primarily grouped according to level of analysis. Specifically, the purple cluster contains keywords relating to firm-level strategy and innovation research, the green cluster seems to represent another aspect of firm-level research (i.e., corporate governance), the blue cluster appears to constitute individual-level psychological processes (e.g., emotional labor, affect, impression management), and the red cluster is multilevel in nature as it includes individual-level processes (e.g., cognition, power) and firm-level phenomena (e.g., absorptive capacity, acquisitions, IPO). Based on the keyword cluster analysis, we uncovered that research on

performance is indeed siloed and conducted at different levels of analysis separately.

To move from keywords to theories, we performed a KWIC search for the word “theory” in the article abstracts. Rather than search the entire sample ($N = 15,535$), we focused our KWIC search on articles that only belonged to one keyword cluster ($N = 5,190$), as we were interested in understanding possible differentiating factors among the keyword clusters. Our KWIC search identified 248 unique theories. Nine of the theories were removed from the sample, however, as three referred to generic levels of analysis (i.e., mesolevel, microlevel, and multilevel theory), three were team-level theories that fall outside the scope of our review (i.e., dynamic team diversity theory, team climate theory, and shared leadership theory), two were research methods (i.e., grounded theory and item response theory), and paradox theory is too amorphous to include in our review. Thus, our final sample included 239 unique performance-related theories, shown in Appendix A (Table A1).

TABLE 3

Journals Included in Review of Performance Theories

1	<i>Academy of Management Annals</i>
2	<i>Academy of Management Journal</i>
3	<i>Academy of Management Review</i>
4	<i>Administrative Science Quarterly</i>
5	<i>Annual Review of Organizational Psychology and Organizational Behavior</i>
6	<i>Educational Administration Quarterly</i>
7	<i>Information and Organization</i>
8	<i>International Journal of Management Reviews</i>
9	<i>International Review of Sport and Exercise Psychology</i>
10	<i>Journal of Applied Psychology</i>
11	<i>Journal of Business and Psychology</i>
12	<i>Journal of Business Venturing</i>
13	<i>Journal of Consumer Psychology</i>
14	<i>Journal of Consumer Research</i>
15	<i>Journal of European Public Policy</i>
16	<i>Journal of Financial Economics</i>
17	<i>Journal of International Business Studies</i>
18	<i>Journal of Management</i>
19	<i>Journal of Management Studies</i>
20	<i>Journal of Marketing</i>
21	<i>Journal of Marketing Research</i>
22	<i>Journal of Occupational Health Psychology</i>
23	<i>Journal of Organizational Behavior</i>
24	<i>Journal of Policy Analysis and Management</i>
25	<i>Journal of Public Administration Research and Theory</i>
26	<i>Journal of Public Relations Research</i>
27	<i>Journal of Service Research</i>
28	<i>Management Science</i>
29	<i>Manufacturing and Service Operations Management</i>
30	<i>Marketing Science</i>
31	<i>Organization Science</i>
32	<i>Organization Studies</i>
33	<i>Organizational Research Methods</i>
34	<i>Personnel Psychology</i>
35	<i>Policy and Society</i>
36	<i>Policy Studies Journal</i>
37	<i>Psychotherapy and Psychosomatics</i>
38	<i>Public Administration Review</i>
39	<i>Public Management Review</i>
40	<i>Research in Organizational Behavior</i>
41	<i>Review of Corporate Finance Studies</i>
42	<i>Strategic Entrepreneurship Journal</i>
43	<i>Strategic Management Journal</i>
44	<i>The Leadership Quarterly</i>

Once we derived our list of theories, we developed coding criteria to organize the theories into meta-theoretical constructs, which subsume constructs across theories. As the keyword cluster analysis revealed a clear divide between individual- and firm-level research, we used individual versus firm level as our first coding criterion for identifying the meta-theoretical constructs across theories. In addition to level of analysis, the other coding dimension that emerged from our integrative review process concerned whether the theory was primarily focused

on intra-agent or inter-agent processes (or both). Thus, we coded each theory along two dimensions: level of performance (i.e., firm and individual levels) and whether the activity occurred within (intra) or between (inter) agents' micro-macro and intra-inter agent dimensions.

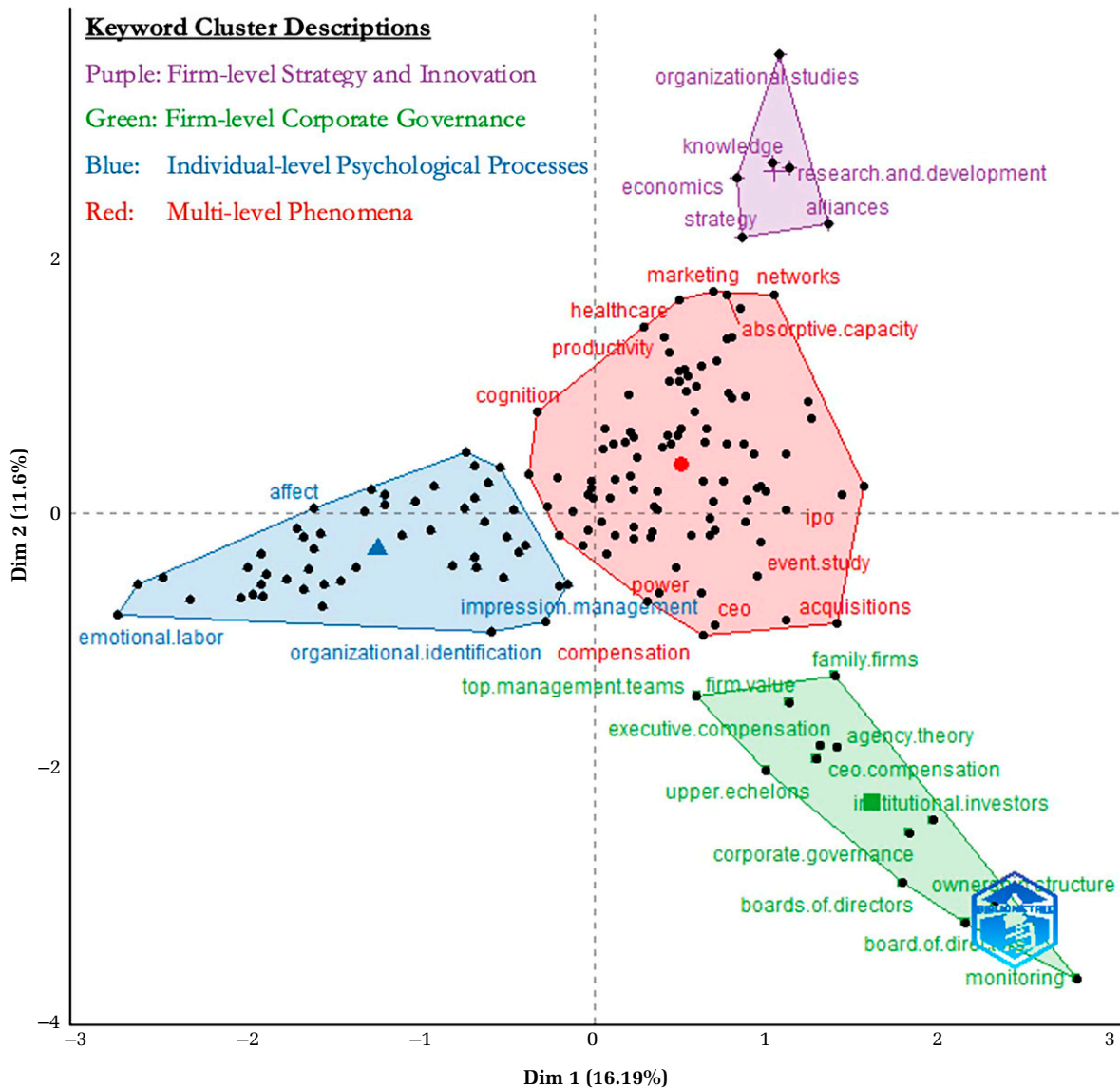
Finally, after applying our coding criteria, we engaged in a process to name the meta-theoretical constructs. The naming process is akin to naming a factor in exploratory factor analysis, wherein the factor is often named based on an item with the largest factor loading. In our case, there were two meta-theoretical constructs in which a common word (role and structure, respectively) was disproportionately represented. In the meta-theoretical construct that included several role theories, there were also theories related to job characteristics and fit (e.g., job characteristics theory, job demand-resources theory, job embeddedness theory, occupational socialization theory, person-organization fit, and attraction-selection-attrition theory). Based on the definitions of these theories, it was clear that this meta-theoretical construct focused primarily on the *roles* of individuals in organizations. Similarly, in the meta-theoretical construct in which several structure theories were included, network, organization, and system theories also broadly refer to the importance of structures and we therefore used *structures* to name this meta-theoretical construct. The remaining meta-theoretical constructs were named using similar logic.

SIX META-THEORETICAL CONSTRUCTS OF PERFORMANCE

A meta-theory is an umbrella theory that subsumes other more narrowly focused theories and helps integrate disjointed, disconnected, redundant, and sometimes paradoxical theories because it explains phenomena more abstractly by subsuming individual theories (Zhao, 1991). Notably, a meta-theory comprises meta-theoretical constructs, which are systematically derived based on individual theories that group together based on established criteria and qualitative interpretation. Meta-theoretical constructs capture each construct's overarching meaning at an abstract interpretation level. For example, as mentioned earlier, our performance literature review found several role theories (gender role congruity theory, role accumulation theory, role congruity theory, role enactment theory, role theory, social role theory, and structural role theory). As we engaged in our integrative review process, we could

FIGURE 1

A Keyword Co-Occurrence Network Representation of the Performance Literature



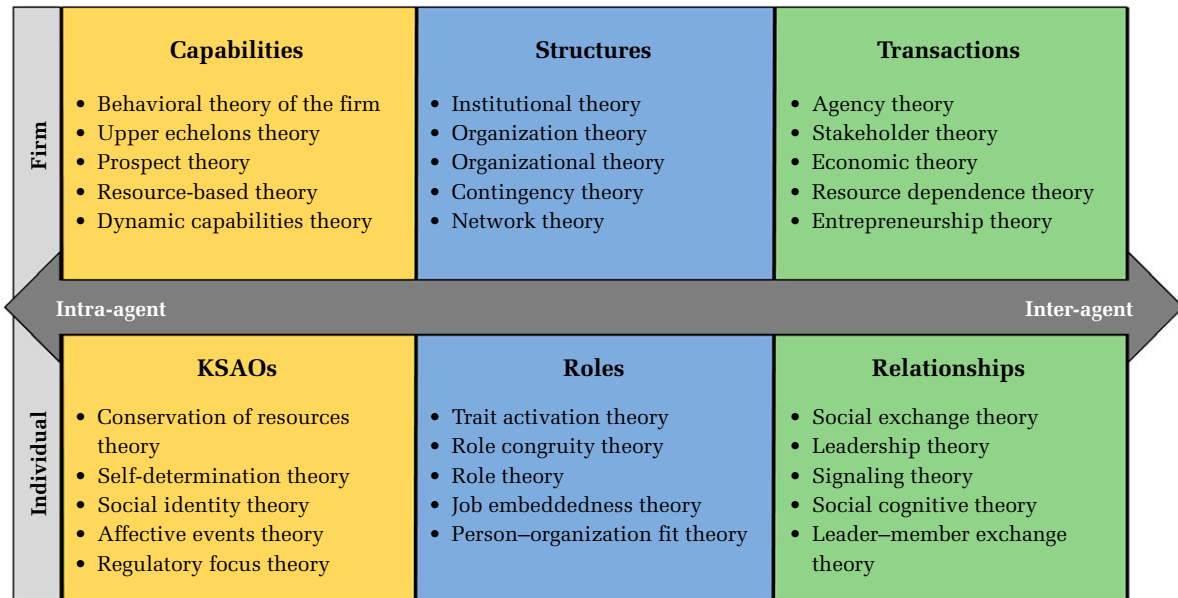
Notes: Developed using the MCA algorithm of the *bibliometrix* package in R. “Dim 1” and “Dim 2” represent the two-dimensional similarity space such that those items appearing close together are more similar than those that appear farther apart. The percentages represent the amount of variance explained by each of the dimensions.

position all but one of these role theories within the *roles* meta-theoretical construct, as the notion of roles subsumes and explains each of the individual role theories. The one exception, structural role theory (Oeser & Harary, 1962), was more specific to firm-level phenomena and was, therefore, a better fit in the *structures* meta-theoretical construct. Figure 2 displays the named meta-theoretical constructs and the five most frequently observed theories for each of them.

As we engaged in the integrative review process to distill meta-theoretical constructs, it became clear that performance is not entirely a process nor an outcome; instead, performance is a “system,” defined as an interdependent group of items that forms a unified whole (Merriam-Webster, n.d.a). More precisely, we conceptualize performance as a multicomponent dynamic system (Mitchell, 2009). Performance is multicomponent because it includes firm-level capabilities, structures, transactions, and

Proof Only

FIGURE 2
Six Meta-Theoretical Constructs of Performance



Notes: KSAOs = knowledge, skills, abilities, and other characteristics. The five most frequently occurring theories are listed for each meta-theoretical construct. A complete list of theories and their associated constructs is provided in Appendix A.

individual-level KSAOs, roles, and relationships. Performance is dynamic because, as organizations continuously change (Brown & Eisenhardt, 1997), the meta-theoretical constructs (i.e., capabilities, structures, transactions, KSAOs, roles, and relationships) might change continuously. This section elaborates on the six meta-theoretical constructs revealed through our integrative review process.

Firm-Level Performance

“Firm performance” refers to how firms create economic value (Brandenburger & Stuart, 1996); however, the processes involved require access to resources that are sometimes outside of a firm’s boundaries (Helfat & Peteraf, 2003), which typical performance measures sometimes fail to incorporate. As a result, some scholars have called for the development of a new definition of performance (Barney, 2020). Our integrative review process crystallized a new understanding of firm performance, and complements other reviews by conceptualizing firm performance as a system of meta-theoretical constructs rather than a process or an outcome. Next, we describe the three firm-level meta-theoretical constructs: (1) capabilities, (2) structures, and (3) transactions.

Capabilities. Firm-level capabilities are internal resources a firm can leverage in pursuit of firm-level

performance (Helfat, 2000). Collectively, these theories speak to intra-agent phenomena in terms of capabilities (whether realized or not) given certain resources within the firm. The literature has linked capabilities to competitive advantage in firm-level research and explored the empirical links between capabilities and firm performance (Helfat, 2000).

Several prominent theories of firm capabilities emerged from our analysis. Notably, the behavioral theory of the firm (Gavetti, Greve, Levinthal & Ocasio, 2012), dynamic capabilities theory (Teece, Pisano & Shuen, 1997), and upper echelons theory (Hambrick & Mason, 1984) all play a role in shaping a firm’s capabilities. The behavioral theory of the firm underscores how human behavior and cognitive biases can affect an organization’s strategic choices, potentially enhancing or limiting its capabilities. Dynamic capabilities theory emphasizes the importance of adaptability, enabling firms to reconfigure their resources and capabilities to stay competitive in a changing environment, thus enhancing their capabilities. Upper echelons theory highlights how top executives’ backgrounds and cognitive traits influence strategic decision-making, ultimately impacting a firm’s capabilities by shaping its strategic choices and directions.

Structures. Firm-level structures are defined as “a formal configuration of roles and procedures” or “the patterned regularities and processes of interaction”

(Ranson, Hinings & Greenwood, 1980: 2). Organizational processes, procedures, and routines are embedded in organizational structures (Teece, 2000).

Several firm-level structural theories, including institutional theory (DiMaggio & Powell, 1983), organization theory (Taylor, 1911; Weber, Henderson & Parsons, 1947), and contingency theory (Burns & Stalker, 1961; Lawrence & Lorsch, 1967; Woodward, 1965) emerged from our integrative review. Institutional theory explores how external pressures and norms shape an organization's structures, behaviors, and decision-making. Organization theory offers insights into internal organizational dynamics and delves into structure, behavior, and design. Contingency theory emphasizes the importance of aligning organizational practices with contextual factors and recognizes that organizational structures should vary depending on circumstances.

Transactions. Although several firm-specific definitions exist, especially regarding transaction cost economics, we used a more generic definition of "transaction": "an exchange or transfer of goods, services, or funds" (Merriam-Webster, n.d.b). Firm-level transactions allow firms to conduct broader strategic actions (Kim & Bettis, 2014), given the lower transaction costs in structuring, bundling, and leveraging resources (Sirmon, Hitt & Ireland, 2007).

Our integrative review uncovered many prominent theories and schools of thought that refer to firm transactions, including agency theory (Eisenhardt, 1989; Ross, 1973), economic theory (Keynes, 1937; Smith, [1776] 1986), resource dependence theory (Pfeffer & Salancik, 1978), and stakeholder theory (Freeman, 1984). Agency theory explores how the relationships and contracts between principals and agents affect organizational behavior and performance, shedding light on transactional dynamics and potential conflicts. Economic theory provides a foundation for understanding how rational decision-making processes influence capabilities, structures, and transactions, helping to analyze the economic aspects of organizational performance. Resource dependence theory focuses on how organizations rely on external resources and stakeholders, revealing the role of transactions in acquiring and managing resources for building capabilities and adapting structures to enhance performance.

Individual-Level Performance

Our review showed that "individual performance" is a system that includes KSAOs, roles, and

relationships. Individual job performance, as defined by Motowidlo (2003: 39), is "the total expected value to the organization of the discrete behavioral episodes that an individual carries out over a standard period of time," and allows for variations attributable to traits measured in recruitment and selection programs, participation in training and development, exposure to motivation interventions and practices, and situational constraints and opportunities. Motowidlo, Borman, and Schmit (1997) originally conceptualized the job performance construct as a set of behaviors that eventually grew to include expected behavior value (Motowidlo, 2003). Next, we describe the three individual-level meta-theoretical constructs: (1) KSAOs, (2) roles, and (3) relationships.

KSAOs. KSAOs constitute worker attributes (Brannick, Cadle & Levine, 2012). Through our integrative review process, we identified several prominent theories that refer to individual-level KSAOs, including conservation of resources theory (Hobfoll, 1989), self-determination theory (Ryan & Deci, 2000), and social identity theory (Ashforth & Mael, 1989). Conservation of resources theory highlights the importance of safeguarding and accumulating valuable resources (i.e., human resources), directly impacting an organization's capacity and, subsequently, performance. Self-determination theory emphasizes intrinsic motivation and autonomy shedding light on the role of motivation in realizing capabilities and opportunities and highlighting that motivation is part of the KSAOs meta-theoretical construct. Social identity theory explores how individuals' group affiliations influence their behavior, contributing insights into group dynamics and social identities' impact on performance.

Roles. Individual-level roles involve individuals in a social system interacting through established processes to make group-level decisions and actions (Biddle, 2013). Biddle (1986, 2013) described how individuals interact in a social system via functionalism, social-interactionism, and structuralism.

Our integrative review process highlighted several theories directly related to roles, including trait activation theory (Tett, Toich & Ozkum, 2021), role congruity theory (Eagly & Karau, 2002), and role theory (Biddle, 1986). Trait activation theory explains how specific traits become relevant and influence performance outcomes in particular situations. Furthermore, trait activation theory helps explain how certain traits are activated and contribute to performance, such as leadership traits in managerial roles. Role congruity theory focuses on aligning role expectations with gender stereotypes and explains how

gender-based stereotypes and expectations impact role assignments and **performance outcomes**. Role theory concerns how assigned roles influence individual behavior and performance. It explores how role clarity, conflict, and ambiguity affect individual performance.

Relationships. Work relationships are critical to organizations (Heaphy, Byron, Ballinger, Gittell, Leana & Sluss, 2018). As Ferris, Liden, Munyon, Summers, Basik, and Buckley (2009: 1397) stated, “work relationships are fundamental to behavior in organizations, where employees must interact formally or informally in the process of getting work accomplished.”

Our integrative review process revealed several theories directly related to relationships, including social exchange theory (Blau, 1964), leadership theory (Bass & Bass, 2009; Burns, 1978), and signaling theory (Connelly, Certo, Ireland & Reutzel, 2011). Social exchange theory examines how interpersonal relationships and transactions influence performance through resource exchange and reciprocity. At a fundamental level, dyadic relationships are formed through a social exchange process. Social exchange bridges fields such as anthropology, social psychology, and sociology (Cropanzano & Mitchell, 2005), and while myriad views of social exchange have developed, social exchange involves a series of interactions that generate obligations (Emerson, 1976). Leadership theory explores how leaders’ actions and decisions impact resource allocation and interpersonal transactions, affecting individual performance. Signaling theory explains how individuals communicate signals and information, whether deliberate or not, and these signals shape individual perceptions, decisions, and actions. Collectively, the theories in the relationships meta-theoretical construct explain how individuals interact with each other while performing their work responsibilities.

ISOMORPHISM OF META-THEORETICAL CONSTRUCTS ACROSS LEVELS OF ANALYSIS: THE CORE PERFORMANCE MODEL

Our conceptualization of the meta-theoretical performance constructs, as shown in Figure 2, considered two dimensions: (1) level of performance (i.e., firm and individual levels) and (2) whether the activity occurred within (intra) or between (inter) agents. As derived from our multidisciplinary literature review, integrating theories into this parsimonious framework captured a seemingly dual-level system

of performance comprising two distinct levels: firm and individual.

Another critical insight from our review is that the firm- and individual-level meta-theoretical constructs closely mirror each other. Firm-level capabilities are similar to individual-level KSAOs, firm-level structures are similar to individual-level roles, and firm-level transactions are similar to individual-level relationships. Thus, when taken to a higher level of abstraction, each meta-theoretical construct of firm- and individual-level performance can be subsumed within a higher level, corresponding to the three components of the CORE performance model we describe next: (1) capacity, (2) opportunity, and (3) relevant exchanges.

Capacity: Firm-Level Capabilities and Individual-Level KSAOs

Firm-level capabilities and individual-level KSAOs can both be described as *capacity* in terms of *how much* or *how well* firms or individuals can perform. Brannick et al. (2012) defined KSAOs as worker attributes wherein “knowledge” refers to factual, conceptual, and procedural material (or declarative and procedural knowledge), “skills” are actions taken in sequences and coded in knowledge, “abilities” are capacities or propensities that can be applied to different sorts of knowledge and skills, and “other characteristics” are personal dispositions conventionally thought of as personality or more specialized qualities related to a job. Firm capabilities refer to “invisible assets” (Itami, 1987) or a firm’s method of developing, carrying, and exchanging information through human capital (Amit & Schoemaker, 1993). Molloy and Barney (2015: 310) stated, “Another way to think of human capital is as an individual’s knowledge, skills, abilities, and other characteristics useful for work.” Capacity is both an initial system state and a potential future state (Baser & Morgan, 2008), as determined by current firm-level capabilities and individual-level KSAOs, which probabilistically determine the maximum performance potential for firms and individuals. In other words, given the current capabilities and KSAOs, capacity is the maximum performance output we can expect, assuming perfect conditions for performance.

Opportunity: Firm-Level Structures and Individual-Level Roles

Firm-level structures and individual-level roles provide the *opportunity* for performance to occur

~~within an organization.~~ We refer to “opportunity” as a social situation wherein knowledge sharing can occur between individuals based on agentic functions. Ilgen and Hollenbeck (1991) explained that roles exist in people’s minds, implying some social aspect in which at least one of those persons holds and acts out behaviors of that role. Jensen and Meckling (1992) argued that organizational structure is a mechanism wherein knowledge (specific or general) is passed between agents to make proper decisions. These two definitions act in concert at different levels of analysis to create an environment in which there is an opportunity for individuals to perform their roles within the organizational structure.

Relevant Exchanges: Firm-Level Transactions and Individual-Level Relationships

Firm-level transactions and individual-level relationships describe the *relevant exchanges* between two entities that interact with each other for some performance-related purpose. We define “relevant exchanges” as exchanges between agents to conduct business. On the micro level, in defining the employer–employee relationship, Teple (1949: 153) stated, “Everyone works for someone else in one way or another ... the question of who works for whom poses a problem of considerable significance.” This was later echoed in management theory with vertical dyad linkage (Dansereau, Cashman & Graen, 1973) and subsequently with leader–member exchange (LMX) (Graen, Novak & Sommerkamp, 1982). The purpose for the existence of firms has been explained by transaction cost economics (Coase, 1937) and has been described in terms of both competition (Barney, 1991) and cooperation (Ford, 1980; Thorelli, 1986). Clearly, the relevant exchange component applies to both definitions, whether between firms, individuals, firms and relevant stakeholders, firms and employees, or any other combination of relevant agents.

An Isomorphic Model of Performance

As described above, the meta-theoretical constructs of the performance system are isomorphic across levels, such that firm- and individual-level performances share fundamental features. Thus, our review helps resolve a major source of confusion in the performance literature: there is isomorphism between firm and individual performance, but the two literatures have used distinct language to describe similar phenomena in their respective

domains. To help reduce this confusion, we offer the following parsimonious equation to represent the isomorphic performance system:¹

$$\begin{aligned} \text{Performance (P)} &= \text{Capacity (C)} + \text{Opportunity (O)} \\ &+ \text{Relevant Exchanges (RE)}; \\ \text{or } \text{P} &= \text{C} + \text{O} + \text{RE} \end{aligned}$$

NEW INSIGHTS AND FUTURE RESEARCH DIRECTIONS DERIVED FROM THE CORE PERFORMANCE MODEL

Through our review process, we integrated 239 theories of performance through six meta-theoretical constructs to create the CORE model of performance. Considering performance in terms of these meta-theoretical constructs results in new insights and recommendations on what researchers should stop and start doing about performance. Obviously, some intersections among some of the constructs that comprise the meta-theoretical constructs have been studied, resulting in empirical research that has generated important insights and is summarized in Table 4. However, the following section details what management researchers should stop and start doing as a direct consequence of the CORE model. As a preview, Figure 3 shows the CORE model, and Table 5 includes specific questions, some of which we refer to in the following material. Finally, to close this section, we also provide a more detailed discussion regarding some of the many future directions derived from the CORE model, as shown in Table 5. Specifically, we discuss the intersection of four of the six meta-theoretical constructs that span micro and macro theories: *structures, roles, relationships, and transactions*.

What Management Researchers Should Stop Doing

Stop studying performance in research silos. We uncovered a clear micro–macro divide while developing the CORE model. First, our keyword cluster analysis captured the micro–macro divide as the four keyword clusters shown in Figure 1 were separated mainly based on the level of analysis being

¹ Carpini et al. (2017) used the labels “capacity” and “opportunity to perform,” but defined them differently given their exclusive focus on the individual level of analysis (i.e., capacity in terms of individual knowledge, skills, and abilities, and opportunity to perform includes the work environment for individuals).



TABLE 4

Examples of Empirically Investigated Intersections among Performance Meta-Theoretical Constructs

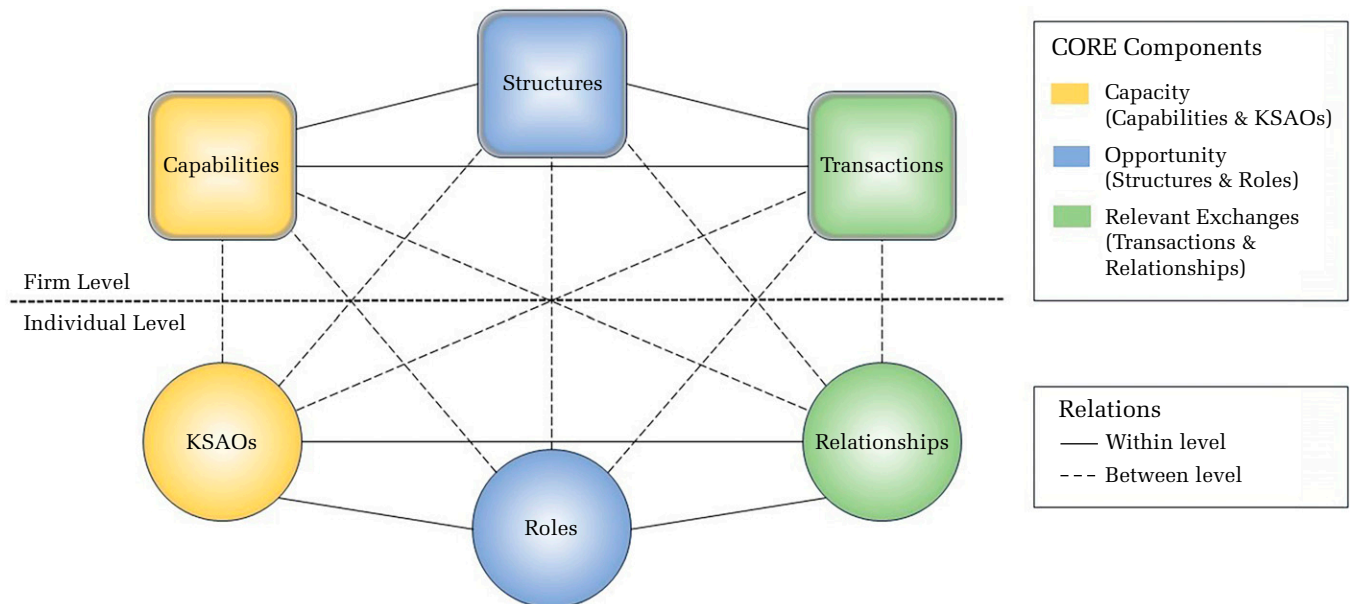
Intersections	Illustrative Sources
<i>Individual level</i>	
KSAOs and roles	Morgeson, Delaney-Klinger, and Hemingway (2005)
KSAOs and relationships	Asendorpf and Wilpers (1998)
Relationships and roles	Harris, Wheeler, and Kacmar (2011); Martinez, Kane, Ferris, and Brooks (2012)
<i>Firm level</i>	
Structures and capabilities	Zaheer and Bell (2005)
Structures and transactions	Chang and Choi (1988)
<i>Cross level</i>	
Transactions and KSAOs	Ullrich, Wieseke, and van Dick (2005)
Relationships and capabilities	Kemper, Schilke, and Brettel (2013)
Transactions, KSAOs, capabilities, and structures	Paruchuri and Eisenman (2012)

Note: KSAOs = knowledge, skills, abilities, and other characteristics.

studied (i.e., individual or firm). For example, there were literature silos in firm-level corporate governance, firm-level strategy and innovation, and individual-level psychological processes. Second, after working through our integrative review process, we unveiled that the macro (firm-level) and micro (individual-level) theories of performance are separate but closely mirror each other, as firm-level and individual-level performance scholars study similar foundational aspects of performance.

Specifically, firm-level research focuses on *capabilities* and individual-level research focuses on *KSAOs* (i.e., capacity), firm-level research on *structures* and individual-level research on *roles* (i.e., opportunity), and firm-level research on *transactions* and individual-level research on *relationships* (i.e., relevant exchanges). At a fundamental level, both firm-level and individual-level performance research attempt to explain how performance happens, how to improve performance, and how to

FIGURE 3
The CORE Model of Performance: $Performance (P) = Capacity (C) + Opportunity (O) + Relevant Exchanges (RE)$



Note: “Capacity” represents firm-level capabilities and individual-level KSAOs, “opportunity” represents firm-level structures and individual-level roles, and “relevant exchanges” represents firm-level transactions and individual-level relationships.

TABLE 5

Using the CORE Performance Model to Guide Future Research: Intersections among Meta-Theoretical Constructs

Meta-theoretical construct intersections	Illustrative research questions
KSAOs and structures	<ul style="list-style-type: none"> • How do individual KSAOs affect an organization's ability to use different organizational structures (e.g., flat structure, hierarchical structure, divisional structure, functional structure, matrix structure)? For example, would engineers thrive in a flat organization compared to a hierarchical one? • To what extent do organizational structures affect a firm's ability to recruit, retain, and develop human capital? For example, do highly skilled employees prefer to work in a flat organization with more autonomy?
Capabilities and roles	<ul style="list-style-type: none"> • Do the firm's leadership and talent development capabilities align with the availability of roles that leverage the newly developed talent? For example, if an organization has an emerging leader program, do all program graduates have a leadership role to advance into? Furthermore, how does this affect job satisfaction among graduates? • To what extent do individuals in specialized roles affect organizational capabilities? For example, does the presence of employees in roles focused on process improvement and operational efficiency enhance the firm's capabilities to deliver quality outputs and streamline operations?
Structures and relationships	<ul style="list-style-type: none"> • To what extent does organizational structure enhance or inhibit the formation of workplace relationships? For example, does a hierarchical organizational structure make it easier to form strong leader–follower relationships than a flat organizational structure? • How do informal networks (i.e., relationships among employees) affect the flow of information through organizational structures? For example, does information spread more quickly through an informal network in a flat organization than a hierarchical one?
Roles and transactions	<ul style="list-style-type: none"> • Does person–job fit affect firm-level value capture? For example, is there a congruent effect such that, when the employees' skills match the roles' requirements, there is firm-level value capture? • Does a lack of a particular individual role in an organization hinder firm transactions more than others? For example, does missing a chief technology officer hurt an organization more than missing a chief marketing officer when it comes to firm transactions?
Transactions and relationships	<ul style="list-style-type: none"> • How do firm transactions affect relationships among employees? For example, how do mergers and acquisitions between firms impact the relationships and dynamics among employees from distinct organizational cultures and backgrounds? • What can we learn from firm transactions to improve interpersonal relationships? For example, could a transaction cost theory perspective be used to gain insights into interpersonal relationships?
KSAOs, relationships, and capabilities	<ul style="list-style-type: none"> • To what extent do employee relationships facilitate or inhibit the emergence of human capital resources as firm-level capabilities? For example, how do mentorship programs facilitate the realization of human capital as a firm-level resource? • How do strong interpersonal relationships and effective employee teamwork contribute to the firm's ability to collaborate, share knowledge, and innovate? For example, how do self-directed work teams contribute to the collective innovation in an organization?
KSAOs, structures, and transactions	<ul style="list-style-type: none"> • How might the presence of employees with cross-functional skills influence the creation of matrix structures, allowing for seamless collaboration across different functions? For example, does the presence of a cross-functional training program within an organization result in greater value capture? • How does organizational structure affect employees' sense of agency? For example, to what extent does organizational structure affect the agency of employees in a knowledge-intensive industry?
Transactions, structures, and capabilities	<ul style="list-style-type: none"> • How do organizational structures affect the realization of firm capabilities after mergers and acquisitions? For example, how does organizational structure facilitate or inhibit the transfer of firm capabilities between firms during a merger and acquisition? • How might strategic alliances with startups or smaller firms lead to more agile and flexible organizational structures that support rapid innovation and entrepreneurial activities? For example, does the larger firm realize an increase in firm capabilities via the flexible organizational structure of the strategic ally startup?

Proof Only

TABLE 5
(Continued)

Meta-theoretical construct intersections	Illustrative research questions
KSAOs, capabilities, structures, and transactions	<ul style="list-style-type: none"> • How does the interplay of KSAOs and firm capabilities, structures, and transactions collectively influence competitive advantage? For example, are certain firm-specific structures that are inimitable and facilitate the realization of individual KSAOs as firm resources to maximize firm value capture? • To what extent does the intersection among individual KSAOs and firm capabilities, structures and transactions affect organizational resilience? For example, how does the alignment of firm capabilities, structures, and transactions with the competencies of key individuals impact an organization's overall adaptability and resilience in the face of disruptive technological change?
Structures, roles, relationships, and transactions	<ul style="list-style-type: none"> • How do the interdependencies among firm structures, individual roles, and relationships affect firm transactions? For example, do hierarchical structures create organizational bottlenecks such that successful transactions are contingent on individuals in key roles having a relationship with outside stakeholders? • To what extent does organizational structure influence the frequency and depth of interdepartmental communication? For example, how does a matrix organizational structure impact the success of collaborative transactions with internal and external stakeholders in the context of strategic alliances within the technology sector?

Note: KSAOs = knowledge, skills, abilities, and other characteristics.

sustain performance over time. Thus, our review revealed that the micro–macro divide in the performance literature is not based on foundational differences between the two groups. Instead, the divide is more superficially attributed to the language used to describe performance-related theories and constructs at the different levels of analysis.

Working together across levels of analysis would be good not only for the field but also for individual scholars. Firm-level and individual-level scholars are often trained to use different methodologies in their research. Working together would expose researchers to new methodologies to expand their skills and research capabilities. For example, micro-oriented research has been plagued with the problem of endogeneity (Antonakis, Bendahan, Jacquart & Lalive, 2014). Macro-oriented researchers, on the other hand, are often well versed in methods to address the problem of endogeneity (e.g., two-stage least squares, Durbin–Wu–Hausman test). Naturally, working on performance with a macro-oriented scholar could benefit micro-oriented scholars. Conversely, macro-oriented researchers often work with firm-level panel and archival data and may not be as familiar with surveys, interviews, or experimental design, which are commonplace for micro-oriented researchers. Thus, macro-oriented researchers may benefit from working on performance with micro-oriented researchers to expand their methodological toolkit.

Stop aiming for illusory theoretical contributions to the performance literature. Aiming for seemingly novel (i.e., illusory) theoretical contributions creates theory disorganization, disconnection, contradiction, and redundancy. The CORE model features a parsimonious system to guide researchers in making value-added contributions because it narrows the theoretical landscape to just six meta-theoretical constructs and just three components. When so many theories and so many of their constructs conceptually overlap, it is difficult to understand performance. As the purpose of theory is to explain what is going on with a particular phenomenon (Aguinis & Cronin, 2022), aiming for illusory theoretical contributions inadvertently creates a research paradox such that new theories and constructs may result in a reduced understanding of the phenomenon.

We found evidence of several theories in which there was substantial theoretical overlap. For instance, several goal theories, including goal orientation theory (Kaplan & Maehr, 2007), goal shielding theory (Shah, Friedman & Kruglanski, 2002), and goal-setting theory (Locke & Latham, 2002) describe some aspects of how and why an individual sets, pursues, and attains goals. When considered together, these goal-setting theories revolve around expanding performance capacity in some way, which is the “C” in the CORE model. In addition, among the many leadership theories in our review,

there is substantial theoretical overlap across LMX theory (Graen et al., 1982), transformational leadership theory (Bass & Riggio, 2006), servant leadership theory (Eva, Robin, Sendjaya, Dierendonck & Liden, 2019), and network leadership theory (Carter, DeChurch, Braun & Contractor, 2015). This is not surprising, as Shaffer, DeGeest, and Li (2016) found empirical overlap among LMX, transformational leadership, and servant leadership in their empirical review. Shaffer et al. (2016: 102) recommended that, rather than treat each of these theories as unique, it would be better to “reconsider current leadership theories and taxonomies in favor of a greater level of parsimony.” Accordingly, when viewed from a higher level of abstraction, a more parsimonious explanation for each of these theories is that leadership is centered on relevant exchanges, one of the three components of the CORE performance model.

Stop thinking dichotomously about performance as a process or an outcome. Our review to develop CORE uncovered that performance is a multicomponent dynamic system (i.e., capacity, opportunity, and relevant exchanges). As a system, performance is both a process and an outcome. The intersections within and between these components can be thought of as the performance process and the measured results of those components at a particular point in time are the performance outcomes. Each measurement is, therefore, only a snapshot of the performance system. In other words, when the performance outcome has been captured, the components may have already begun to change. Several time-related factors determine how much the performance components may change (Aguinis & Bakker, 2021). For example, the time between measures may play a role in the change in performance outcomes. The time between performance outcomes and feedback may also affect performance components and future outcomes. As past interactions among system components may affect future interactions among system components, feedback within the system is a necessary and important factor to consider when studying performance as a multicomponent dynamic system (Ladyman, Lambert & Wiesner, 2013).

Additionally, performance can paradoxically be both a process and an outcome simultaneously. To understand this paradox, the CORE model suggests that researchers should stop thinking about process versus outcome and begin thinking of the entire performance system instead. As Ottino (2003: 293) noted, “Complex systems cannot be understood by studying parts in isolation. The very essence of the

system lies in the interaction between parts and the overall behavior that emerges from the interactions.” Thus, we need to understand the relations among the meta-theoretical constructs. In the next section, we offer specific suggestions ~~for researchers~~ to examine these intersections.

What Researchers Should Start Doing

Start with the big picture. The parsimonious CORE performance model only has three components, which serve as a “mind map” for future research: *capacity*, *opportunity*, and *relevant exchanges*. Before conducting a study involving performance, we suggest that researchers ask, “Does my research question primarily pertain to capacity, opportunity, or relevant exchanges?” For example, imagine a researcher interested in understanding how playing video games affects individual creative performance. Rather than diving into theories of creativity, it would be helpful to pinpoint which CORE component is the focus of the research. In this case, creative performance would be related to the capacity component (i.e., creative capacity). Next, it would be helpful to think about which factors may increase or decrease an individual’s opportunity to perform. Additionally, it would be important to consider how certain relevant exchanges (e.g., peer-to-peer relationships, LMXs) might affect creative performance. Then, a study could assess creative performance while accounting for the whole performance system.

Start exploring the performance system. We integrated the vast array of performance theories into the six meta-theoretical constructs, the building blocks of the CORE model. With the noise removed, it is easier ~~for researchers~~ to shift ~~their~~ focus to understanding the system rather than working exclusively within a siloed research domain. Breaking free from these silos can generate important insights about performance. For instance, Paruchuri and Eisenman (2012) examined the intersections among firm-level capabilities, structures, and transactions, and individual-level KSAOs and found evidence that mergers and acquisitions (i.e., transactions) affect individual inventors’ knowledge use (i.e., KSAOs), which affects firm-level knowledge generation (i.e., capabilities). Furthermore, Paruchuri and Eisenman (2012) found that inventors’ knowledge was used more often post-merger when inventors held a central position in the intra-firm network but less often when inventors spanned structural holes in the intra-firm network (i.e.,

structures). In another study, Zaheer and Bell (2005: 820) found “unambiguous support” that firm capabilities are enhanced by access to structural holes (i.e., structures). Kemper et al. (2013) found that social capital (i.e., relationships) affects marketing and R&D capabilities, ultimately affecting firm performance outcomes.

As illustrated in these examples, examining the intersections among system components can create valuable insights into performance. However, these empirical examples merely highlight a fraction of the possible intersections among meta-theoretical constructs that can be explored in the performance system. To visualize the possibilities, and complement these specific research directions and questions, Figure 3 displays within- and between-level intersections among the six meta-theoretical constructs. To promote future research in this direction, in Table 5, we include promising research questions that can be used to develop more important insights about the performance system.

Table 5 is not intended to be an exhaustive list but rather an illustrative example of research questions that can be asked in light of the CORE model of performance. Importantly, several proposed research directions refer to intersections involving two or more meta-theoretical constructs. For example, consider intersections among KSAOs, relationships, and capabilities. One question that future research can address is: “To what extent do employee relationships facilitate or inhibit the emergence of human capital resources as firm-level capabilities?” For example, how do mentorship programs facilitate the realization of human capital as a firm-level resource? As a second example, another question that derives from the CORE model involves intersections among transactions, structures, and capabilities: “How do organizational structures affect the realization of firm capabilities after mergers and acquisitions?” For example, how does organizational structure facilitate or inhibit the transfer of firm capabilities between firms during a merger and acquisition?

Start to explore how performance processes affect performance outcomes (and vice versa). Performance processes are naturally dynamic as they unfold over time. In the CORE performance model, processes occur within and between the meta-theoretical constructs. Performance outcomes are necessarily static, requiring a process pause to capture the performance data at a particular time. In the CORE performance model, a performance outcome would be a measured result, at a particular point in

time, of some performance process that occurred within or between CORE components. Researchers who primarily define performance in terms of outcomes could benefit from using the CORE model to expand their thinking. Imagine the CORE model in a three-dimensional space. The CORE model rotates through space and time as performance occurs. Those who study performance outcomes may typically zoom in on a particular CORE system component at a particular time and assume the model has been fixed in that position. Those who use time-lagged research designs to study performance outcomes likely acknowledge that performance occurred over time but may not seek to understand the other components of the CORE system. Thinking from a complex dynamic system perspective forces an outcome-oriented researcher to account for the processes that led to the outcome. It also encourages them to think about how the outcomes affect the processes that unfold after the outcome has been captured. In other words, a measured outcome does not necessarily guarantee that the performance process has ended. Likely, the performance process continues beyond the measured outcome.

Researchers who study performance processes understand that performance occurs over time (i.e., is dynamic). The CORE model helps consider the multilevel and multicomponent performance aspects to understand better how performance processes and outcomes occur. Studying the entire CORE performance system could help these researchers examine how firm-level processes affect individual performance (and vice versa). Furthermore, it might be helpful for performance process researchers to consider how measured performance outcomes affect performance processes within and between levels of analysis. For example, how do quarterly reports affect firm and individual performance? How long does it take for a performance outcome to affect a performance process? Do performance outcomes affect performance processes more quickly at the individual or firm level of analysis? These questions would promote the inclusion of both the process and outcome perspectives and multilevel research.

Demonstration of Using the CORE Model to Guide Future Research

To offer a more detailed demonstration of the value-added contributions of the CORE model for guiding future research, consider the following two questions addressing intersections among structures, roles,

relationships, and transactions from the many included in Table 5: (1) “How do the interdependencies among firm structures, individual roles, and relationships affect firm transactions?” For example, do hierarchical structures create organizational bottlenecks such that successful transactions are contingent on individuals in key roles having a relationship with outside stakeholders?; and (2) “To what extent does organizational structure influence the frequency and depth of interdepartmental communication?” For example, how does a matrix organizational structure impact the success of collaborative transactions with internal and external stakeholders in the context of strategic alliances within the technology sector? Let us consider how empirical research aimed at answering these questions involves what we should stop and start doing in relation to each element outlined in the previous section.

First, addressing these questions helps us *move away from studying performance in silos*. Specifically, within the CORE model, there is a clear connection between transactions and relationships at both micro and macro levels. Therefore, researchers should consider both levels of analysis rather than focusing solely on one. This means broadening theoretical perspectives beyond, for instance, agency theory (Eisenhardt, 1989) at the macro level and dyadic leadership theories (e.g., LMX; Graen et al., 1982) at the micro level. Collaborative efforts among researchers from different fields or individual researchers expanding their theoretical repertoire could lead to richer, multilevel insights.

Second, addressing these questions will aid researchers in *avoiding making theoretical contributions that are merely illusory*. As discussed earlier, researchers working in isolation within their domains may create theoretical advancements with little relevance beyond their specific field. By using the CORE conceptualization, researchers who attempt to answer the illustrative research questions above can make theoretical contributions that hold implications for the entire performance system, rather than contributions that are isolated and unused outside a micro or macro domain exclusively. In this way, the theoretical contribution would be meaningful, rather than illusory.

Third, addressing these questions helps *move away from thinking dichotomously about performance as a process or outcome*. Specifically, the second illustrative question considers both the ongoing process of interdepartmental communication and the quality of that communication as aspects of performance. While both could be seen as end results,

the CORE model recognizes them not as mutually exclusive or competing against each other but as complementary issues. Thus, researchers who leverage the CORE model to move away from thinking dichotomously about performance as a process or outcome would incorporate methodological techniques to capture communication over time so as to observe the performance process as well as the performance outcomes.

Fourth, addressing these questions compels researchers to *start with the big picture*. Even before examining specific theories, the CORE “mind map” assists researchers in orienting them to their position within the performance system. It provides a comprehensive guide of relevant meta-theoretical constructs, offering a starting point and possible avenues for relevant exploration. In our two research questions, firm transactions are highlighted as a primary dependent variable, aligning with the transactions CORE meta-theoretical construct. On the surface, firm transactions may not seem relevant to micro-oriented researchers; however, the isomorphic nature of the CORE model highlights the similarities between firm-level transactions and individual-level relationships, both of which describe relevant exchanges. Thus, the CORE model enables micro-oriented scholars who study relationships (e.g., leadership researchers) to consider the parallels between the relevant exchanges they observe in their research and those that occur between firm-level entities. This would be particularly beneficial for examining the intersections with the roles meta-theoretical construct, which also resides at the individual-level of analysis.

Fifth, addressing these inquiries prompts researchers to begin *exploring the performance system*. In our example, while researchers might initially consider agency, stakeholder, or economic theory when focusing on firm-level transactions, CORE adds value by directing attention to structures, roles, and relationships. In essence, researchers should assess how additional theories (e.g., institutional theory, trait activation theory, social exchange theory) could manifest within the research question in the context of the CORE model.

Finally, by answering these questions, researchers can *start exploring how performance processes affect performance outcomes (and vice versa)*. In our running example, researchers can first use the CORE model to understand the different elements involved in the performance system. For the first question, that would include an understanding of an organization’s structural configuration, how individual roles

are defined, and the dynamics of relationships among employees. At the same time, researchers would need to pinpoint the particular outcomes associated with the relevant firm transactions. These outcomes may include measures like success rates, efficiency metrics, and financial profitability. For the second question, researchers can explore how different organizational structures impact the frequency and depth of interdepartmental communication by examining various structural designs, such as hierarchical, flat, or matrix structures, and their inherent communication channels and mechanisms. Additionally, researchers can explore how performance outcomes, such as productivity, efficiency, and employee satisfaction, may feed back into communication processes and influence organizational structure.

CONCLUSIONS

Performance is a central construct in management research. Many reviews have been written on the topic, and numerous models have been developed to explain performance (e.g., Van Iddekinge, Aguinis, Mackey & DeOrtentiis, 2018, regarding individual performance). However, unlike the CORE performance model, none of these prior reviews or models has fully captured performance's multilevel and interdisciplinary nature. Although our process led us to focus our review exclusively on the individual and firm levels of analysis, we believe the CORE model is also applicable at other levels of analysis. For example, at the team level, team capacity comprises team members' KSAOs (Li & van Knippenberg, 2021) and team cognition (Mohammed, Rico & Alipour, 2021). Regarding opportunity, individuals on teams often serve in different roles, such as team leader, or there may be shared leadership whereby the leadership role is shared among team members (Zhu, Liao, Yam & Johnson, 2018). Additionally, there are several different types of teams, with varying team structures (Hollenbeck, Beersma & Schouten, 2012), and teams often develop shared mental models (Mathieu, Heffner, Goodwin, Salas & Cannon-Bowers, 2000) and team climates (Anderson & West, 1998). Finally, several relevant exchanges occur at the team level, such as team-member exchange (Banks, Batchelor, Seers, O'Boyle, Pollack & Gower, 2014) and LMX differentiation (Yu, Matta & Cornfield, 2018). Thus, although it was not the focus of our review, it appears the CORE model can be applied to improve our understanding of team performance.

In closing, we set out to achieve ~~three~~ ambitious goals regarding one of the most central constructs in the management field. Our integrative review uncovered six meta-theoretical constructs across 239 theories: firm-level capabilities, structures, and transactions; and individual-level KSAOs, roles, and relationships. Additionally, we determined that these six meta-theoretical constructs could be represented as three isomorphic components of performance, based on the mirror-like nature of the firm- and individual-level constructs. Specifically, the CORE model of performance applicable at both levels of analysis is: *performance* (P) = *capacity* (C: firm-level capabilities and individual-level KSAOs) + *opportunity* (O: firm-level structures and individual-level roles) + *relevant exchanges* (RE: firm-level transactions and individual-level relationships). With this parsimonious understanding, the CORE model of performance enables researchers to stop working in research silos, stop pursuing seemingly novel theoretical contributions, and stop thinking dichotomously about performance as a process or an outcome. It also enables researchers to consider "the big picture" of performance, explore the performance system, and consider how performance processes affect performance outcomes (and vice versa).

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Change Appendix A title to: "Performance Theories and Meta-Theoretical Clusters"

APPENDIX A
THEORIES IDENTIFIED IN THE REVIEW AND THEIR ASSOCIATED META-THEORETICAL CONSTRUCTS

TABLE A1
Theories Identified in the Review and Their Associated Meta-Theoretical Constructs

No.	Theory	Meta-theoretical construct
1	Adaptive leadership theory	Relationships
2	Affective events theory	KSAOs
3	Agency theory	Transactions
4	Agenda-setting theory	KSAOs
5	Agglomeration theory	Transactions
6	Ambivalent sexism theory	Roles
7	Approach–avoidance theory	KSAOs
8	Attachment theory	KSAOs
9	Attraction–selection–attrition theory	Roles
10	Attribution theory	KSAOs
11	Balance theory	KSAOs
12	Behavioral agency theory	KSAOs
13	Behavioral theory	Roles
14	Behavioral theory of lost leadership	KSAOs
15	Behavioral theory of the firm	Capabilities
16	Belongingness theory	KSAOs
17	Boundary theory	KSAOs
18	Boundary transitions theory	Roles
19	Bricolage theory	Capabilities
20	Business strategy theory	Structures
21	Cluster theory	Transactions
22	Cognitive theory	KSAOs
23	Commitment theory	KSAOs
24	Complementarity theory	Roles
25	Complexity theory	Structures
26	Congruence theory	Roles
27	Conservation of resources theory	KSAOs
28	Construal level theory	KSAOs
29	Constructive-developmental theory	KSAOs
30	Contemporary practice theory	Transactions
31	Context-emergent turnover theory	Transactions
32	Contingency theory	Structures
33	Contingent self-esteem theory	KSAOs
34	Contract theory	Transactions
35	Control theory	Structures
36	Creativity theory	KSAOs
37	Crossover theory	Roles
38	Decision field theory	KSAOs
39	Decision-making theory	KSAOs
40	Decision theory	KSAOs
41	Deonance theory	Roles
42	Dimensional publicness theory	Structures
43	Disruptive-innovation theory	Structures
44	Dynamic capabilities theory	Capabilities
45	Dynamic institutional theory	Structures

Q:5

TABLE A1
(Continued)

No.	Theory	Meta-theoretical construct
46	Dynamic trade-off theory	Structures
47	Dynamical systems theory	Structures
48	Ecological leadership theory	Relationships
49	Ecology theory	Structures
50	Economic theory	Transactions
51	Effectuation theory	KSAOs
52	Ego depletion theory	KSAOs
53	Embeddedness theory	Transactions
54	Emotional labor theory	KSAOs
55	Endogenous growth theory	Capabilities
56	Entrepreneurship theory	Transactions
57	Equity theory	Relationships
58	Event system theory	Transactions
59	Evolutionary process theory	Structures
60	Evolutionary search theory	Structures
61	Evolutionary theory	Roles
62	Exchange theory	Relationships
63	Expectancy theory	KSAOs
64	Expectancy violations theory	Relationships
65	Fairness theory	KSAOs
66	Field theory	Transactions
67	Finance theory	Transactions
68	First-mover advantage theory	Transactions
69	Frame-of-reference theory	KSAOs
70	Functional leadership theory	Roles
71	Game theory	Transactions
72	Gender role congruity theory	Roles
73	General systems theory	Structures
74	Generalized exchange theory	Relationships
75	Generalized expected utility theory	KSAOs
76	Goal dynamics theory	Relationships
77	Goal orientation theory	KSAOs
78	Goal shielding theory	KSAOs
79	Goal transformation theory	KSAOs
80	Goal-regulation theory	KSAOs
81	Goal-setting theory	KSAOs
82	Governance substitution theory	Structures
83	Human capital theory	KSAOs
84	Humor theory	KSAOs
85	Identity control theory	Roles
86	Identity theory	Roles
87	Idiosyncratic deals theory	Transactions
88	Implicit leadership theory	KSAOs
89	Implicit theory of morality	KSAOs
90	Imprinting theory	Relationships
91	Improvisation theory	KSAOs
92	Information asymmetry theory	Transactions
93	Information processing theory	KSAOs
94	Institutional theory	Structures
95	Instrumental stakeholder theory	Transactions
96	Intentional change theory	KSAOs
97	Intergroup attribution theory	Roles
98	Internalization theory	Transactions
99	Internationalization theory	Transactions
100	Inventory theory	Capabilities
101	Job characteristics theory	Roles
102	Job demand–resources theory	Roles

TABLE A1
(Continued)

No.	Theory	Meta-theoretical construct
103	Job embeddedness theory	Roles
104	Knowledge spillover theory	Structures
105	Leader–member exchange theory	Relationships
106	Leadership task theory	Relationships
107	Leadership theory	Relationships
108	Management control theory	Structures
109	Managerial discretion theory	Capabilities
110	Market timing theory	Structures
111	Marketing control theory	Transactions
112	Marketing theory	Transactions
113	Media synchronicity theory	Transactions
114	Middle-status conformity theory	Transactions
115	Moral disengagement theory	KSAOs
116	Moral exclusion theory	KSAOs
117	Motivated action theory	KSAOs
118	Motivated reasoning theory	KSAOs
119	Motivation theory	KSAOs
120	Multiple attribute utility theory	Transactions
121	Multiteam system theory	Structures
122	Neo-institutional theory	Transactions
123	Network activation theory	Relationships
124	Network leadership theory	Relationships
125	Network theory	Structures
126	Occupational socialization theory	Roles
127	Organization theory	Structures
128	Organizational ambidexterity theory	Capabilities
129	Organizational contingency theory	Structures
130	Organizational control theory	Structures
131	Organizational design theory	Structures
132	Organizational imprinting theory	Structures
133	Organizational justice theory	KSAOs
134	Organizational learning theory	Structures
135	Organizational support theory	KSAOs
136	Organizational theory	Structures
137	Parallel-constraint–satisfaction theory	KSAOs
138	Person–environment fit theory	Roles
139	Person–organization fit theory	Roles
140	Personality theory	KSAOs
141	Policy diffusion theory	Transactions
142	Political theory	Relationships
143	Post-traumatic growth theory	KSAOs
144	Principal–agent theory	Transactions
145	Proactivity theory	KSAOs
146	Procedural rationality theory	KSAOs
147	Prospect theory	Capabilities
148	Psychological ownership theory	KSAOs
149	Punctuated equilibrium theory	Relationships
150	Rational choice theory	KSAOs
151	Real options theory	Structures
152	Regulatory focus theory	KSAOs
153	Relational leadership theory	Relationships
154	Relational sociometer theory	Relationships
155	Relational theory	Relationships
156	Resource allocation theory	Capabilities
157	Resource dependence theory	Transactions
158	Resource exchange theory	Relationships
159	Resource-based theory	Capabilities

TABLE A1
(Continued)

No.	Theory	Meta-theoretical construct
160	Resourcefulness theory	KSAOs
161	Role accumulation theory	Roles
162	Role congruity theory	Roles
163	Role enactment theory	Roles
164	Role theory	Roles
165	Selection system theory	Transactions
166	Self-categorization theory	KSAOs
167	Self-control theory	KSAOs
168	Self-determination theory	KSAOs
169	Self-efficacy theory	KSAOs
170	Self-enhancement theory	KSAOs
171	Self-monitoring theory	KSAOs
172	Self-regulation theory	KSAOs
173	Self-regulatory focus theory	KSAOs
174	Sequential investment theory	Transactions
175	Servant leadership theory	Relationships
176	Shared reality theory	Relationships
177	Signaling theory	Relationships
178	Situational crisis communication theory	Transactions
179	Situational strength theory	Roles
180	Slack resources theory	Transactions
181	Social capital theory	Relationships
182	Social cognitive theory	Relationships
183	Social comparison theory	Relationships
184	Social dominance theory	Relationships
185	Social exchange theory	Relationships
186	Social identity theory	KSAOs
187	Social impact theory	Relationships
188	Social information processing theory	Relationships
189	Social information theory	KSAOs
190	Social interdependence theory	Relationships
191	Social judgment theory	KSAOs
192	Social learning theory	Relationships
193	Social motivation theory	KSAOs
194	Social movement theory	Relationships
195	Social network theory	Relationships
196	Social role theory	Roles
197	Social theory	Structures
198	Socialization theory	KSAOs
199	Socio-analytic theory	Relationships
200	Socioemotional selectivity theory	KSAOs
201	Stakeholder salience theory	Transactions
202	Stakeholder theory	Transactions
203	Stewardship theory	Capabilities
204	Stochastic approximation theory	Transactions
205	Strategic decision-making theory	Capabilities
206	Strategic factor market theory	Transactions
207	Strategic group theory	Structures
208	Strategic HRM theory	Structures
209	Strategic management theory	Structures
210	Strategy theory	Structures
211	Stress theory	KSAOs
212	Structural contingency theory	Structures
213	Structural holes theory	Structures
214	Structural inertia theory	Structures
215	Structural role theory	Structures
216	Structure theory	Structures

TABLE A1
(Continued)

No.	Theory	Meta-theoretical construct
217	Theory of dynamic behavior	KSAOs
218	Theory of expert leadership	Roles
219	Theory of habit	KSAOs
220	Theory of organizational equilibrium	Transactions
221	Theory of organizational structural power	Structures
222	Theory of self-perception	KSAOs
223	Theory of structuration	Structures
224	Theory of subjective rationality	Capabilities
225	Theory of the firm	Structures
226	Thermal demands–resources theory	Transactions
227	Threat-rigidity theory	Structures
228	Tokenism theory	Roles
229	Tournament theory	Transactions
230	Training engagement theory	KSAOs
231	Trait activation theory	Roles
232	Trait theory	KSAOs
233	Transaction costs theory	Transactions
234	Transactional stress theory	Roles
235	Transactional theory	Transactions
236	Transformational leadership theory	Relationships
237	Uncertainty management theory	KSAOs
238	Upper echelons theory	Capabilities
239	Utility theory	Transactions

PLEASE ANSWER ALL QUERIES

1

Q:1_Please note that “cf.” is used to provide contrasting or opposing information. Should it be retained in “(cf. Pierce & Aguinis, 2013)” or should “cf.” here be amended to, for example, “see” or “see also”?

Q:2_Please add a page(s) source in the reference citation “(Organ, 1997) for the quoted text “performance that supports the social and psychological environment in which task performance takes place.”

Q:3_The abbreviation SJR has been used only once in the text where it has been introduced after the fully spelled out term. Please confirm if the abbreviation may be deleted.

Q:4_In the text:

For example, are certain firm-specific structures that are inimitable and facilitate the realization of individual KSAOs as firm resources to maximize firm value capture?
is there a word missing (e.g., “there,” between “are” and “certain”), or is the sense here as intended? Please advise. Thank you.

Q:5_Please note that this draft title for Table A1 is currently the same as Appendix A’s substantive title. You may wish to amend one or the other? Thank you.

Q:6_Please spell out the abbreviation “HRM” unless you are certain that readers will be familiar with it.
