

FROM THE EDITORS

THE *AMJ* MANAGEMENT RESEARCH CANVAS: A TOOL FOR CONDUCTING AND REPORTING EMPIRICAL RESEARCH

Academy of Management Journal (AMJ) is a “big tent” journal for empirical management research that addresses a range of topics using a variety of methodological approaches and different types of data. However, despite tremendous variation in the kinds of research published in AMJ, all successful research projects share some common elements. These “core elements” of empirical management research include an interesting *puzzle* motivating the research, a well-defined academic *audience* and positioning in *prior research*, a clear *research question* driving the study, a well-articulated set of *theoretical constructs and relationships* connecting them (in the form of hypotheses to be tested through quantitative analyses or, in qualitative research, of a theoretical account of empirical observations), an appropriate choice of an empirical *research setting*, a rigorous *research design*, rich and robust *empirical findings*, a novel and important *contribution* to our discipline, and well-specified *boundary conditions and limitations*.

Although these elements are generally well-known, they are not always explicitly considered during the research design and manuscript preparation process. As a result, many research projects fail to address these elements in sufficient depth, resulting in submissions that do not reach the bar for publication in AMJ or other high-quality management journals. These shortcomings have been apparent to us as editors not only during the manuscript review process but also during the many paper development workshops we organized around the world for aspiring AMJ authors. Unfortunately, most of the problems that we point out during these events and in our editorial letters could have been avoided if the authors had reflected more systematically on the core elements of empirical research as they designed, conducted, and reported their work.

The struggles we have observed suggest an opportunity for learning and improvement. Perhaps one reason why so many research projects lack a coherent and internally consistent set of core elements is that little information is available to help authors map them out. Although excellent

guidance is available for many of these elements in isolation, few tools exist to help authors consider them as a whole.

The intent of this From the Editors (FTE) is therefore to support scholars, especially less experienced ones, by offering our observations, examples, and recommendations on how empirical research projects in the field of management and organizations can be conceived, structured, and developed for publication. We synthesize our guidance into a “canvas” for management and organizational research. The canvas highlights the nine core elements of a research project, discusses how they relate to one another, and—for each element—identifies a set of important questions that authors might ask themselves as they design and conduct their study and prepare the manuscript. The present FTE and the *AMJ Management Research Canvas* therefore may be seen as complementary to earlier AMJ editorials in which our colleagues have offered their advice for scholarly research work (e.g., Colquitt & George, 2011).¹

THE INTENDED BENEFITS OF A RESEARCH CANVAS

A canvas-based approach has proven to be useful in various activities, such as in new firm creation and innovation management (e.g., Gruber & Tal, 2017; Osterwalder & Pigneur, 2010) and, more broadly, in domains where innovative activities need to be conceptualized and mapped out—just like in new research projects. Our goal, therefore, is to provide management scholars with a template for considering the core elements of empirical research in a systematic way. We hope that the research canvas will help researchers move from an initial research idea to a well-defined research proposal and, over time, to a fully developed research project. Given the encompassing and systematic nature of the canvas,

¹ For specific guidance on research methods articles, we refer readers to Gruber and Bliese (2024).

completing it can also facilitate preregistration, if appropriate and required. At the same time, when preparing a manuscript for publication, the research canvas can be used as a “checklist” of all the elements that need to be present. As we emphasize below, some elements, such as the research question, the theoretical constructs, the data, methods, and findings, are always explicit. Others, such as the intended audience, might remain implicit; even so, these nine elements play a role in shaping the project and need to be well-defined in the development of the research. Together, the elements serve as the foundation for a compelling framing, organization, and exposition of the resulting manuscript.

The research canvas we develop here can be used to think through and articulate any type of research project—“micro,” “macro,” qualitative, or quantitative—by an individual researcher, an author team, or between the focal researcher and other scholars, such as PhD supervisors. However, we note that different ontological and epistemological assumptions (and related methodological preferences) will influence how different scholarly communities approach the elements included in the canvas and, indeed, what elements are considered relatively more important when assessing the project as a whole. For instance, considering the research setting in great detail is critical for qualitative research, but a more high-level assessment might suffice for controlled experiments. Our aim is therefore not to impose a universal template for doing research or writing papers, but to highlight a set of questions, based on our editorial experience, that any prospective researcher might benefit from asking about their study and, later, addressing in the manuscript they submit. While unconvincing answers to these questions generally result in the termination of the editorial process, well-articulated and compelling answers are common across published research in AMJ and other high-quality management journals.

THE AMJ MANAGEMENT RESEARCH CANVAS

To help scholars plan their research projects and develop their manuscripts, we summarize the nine core elements of the research canvas in Figure 1. The canvas is arranged as a puzzle because each element must “fit” with related elements for the resulting research study, proposal, or manuscript to be cohesive. We offer this canvas in a “ready-to-copy” way,

so that scholars can use a (poster-size) printout to map their own project.²

The nucleus of the canvas is the puzzle—the theoretical or phenomenological conundrum that the research addresses. Surrounding the puzzle are eight pieces representing the other core elements of the research process and resulting output: the audience and prior research, the research question, the theoretical constructs and the relationships between them, the research setting, the research design and analysis, the empirical findings, the contributions, and the boundary conditions and limitations. The grouping of these pieces into four distinct areas (and the corresponding shading in the canvas presented in Figure 1) highlights four broad “parts” of a research project: the audience and prior research, together with the statement of the research question, define the *framing* of the study; the theoretical constructs and the relationships between them represent the *theoretical framework* that is either driving the research (in quantitative studies) or emerging from it (in qualitative ones); the research setting, and the research design and analysis, constitute the *empirical methodology* of the study and establish its trustworthiness; the empirical findings, contributions, and boundary conditions and limitations together define the content and scope of the research *conclusions*.

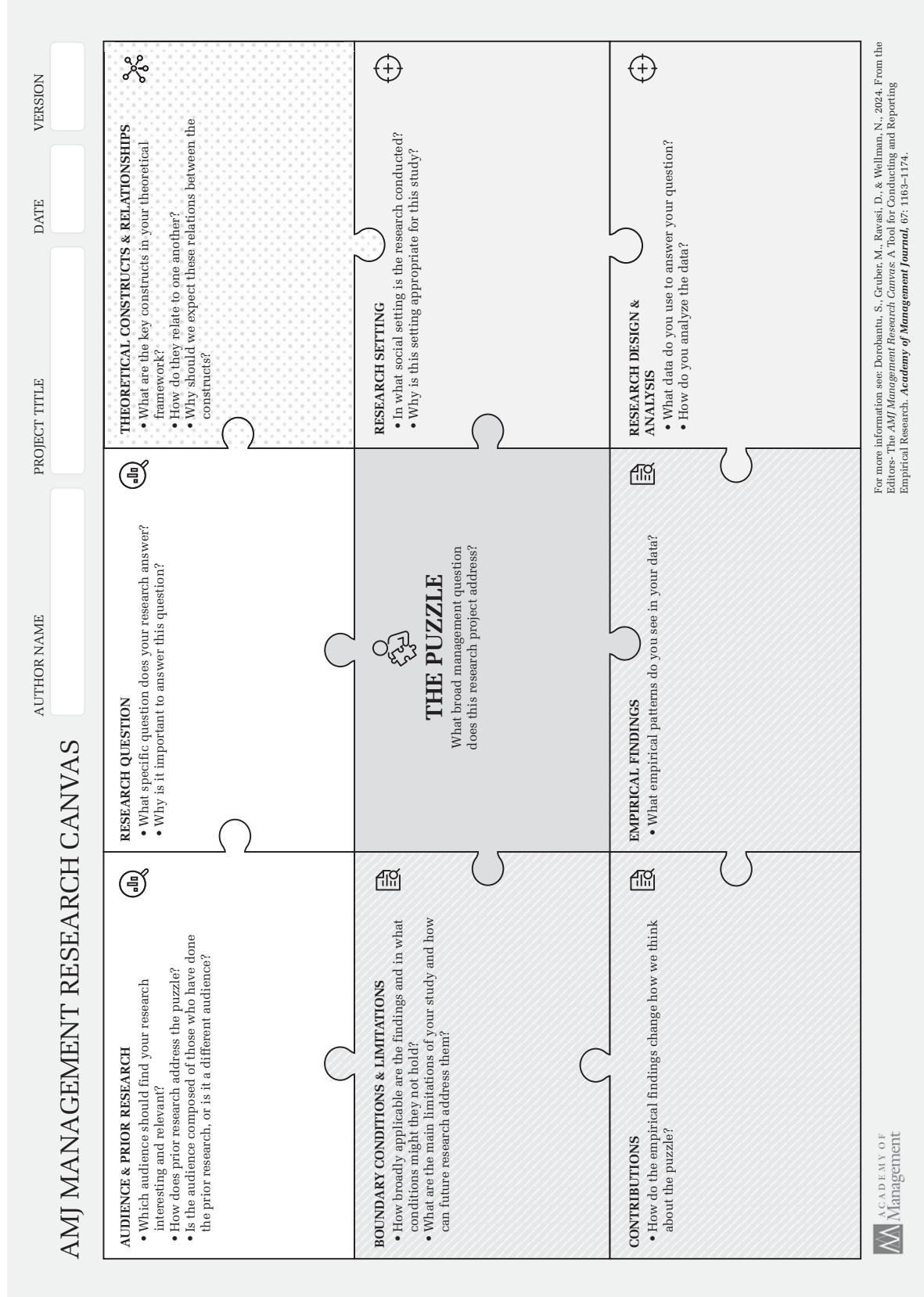
Although in this editorial note we discuss the nine elements of the canvas in sequential order, the process of thinking through a research project does not always proceed in a linear fashion. Iterating between these elements is beneficial and encouraged: fill this out on sticky notes or in pencil, not in pen, and do not hesitate to go back to revise, revise, revise! In both projects starting with clearly defined hypotheses to be tested with quantitative data and those reporting qualitative studies, it is not uncommon to revise the framing—that is, the relevant literature and primary audience—as further rounds of analysis change initial understandings of how and why empirical observations are interesting and for whom.

The Nucleus of the Research Canvas: The Puzzle

At the heart of any empirical research project lies the broader theoretical or phenomenological puzzle that the project addresses. The puzzle specifies the domain of management theory to which the project seeks to contribute. Just as a traveler’s first step is to

² The *AMJ Management Research Canvas* can be used freely, yet we ask users to keep the source formatting and reference to the source when using it in other contexts.

FIGURE 1
The AMJ Management Research Canvas



define where they are going—the destination they will reach when they have completed the journey—a research project should start with the puzzle to provide a sense of direction to one's search, remaining open to the possibility that the destination may be different than what was originally envisioned. A research puzzle is, in our view, a broad question that preoccupies a large community of management scholars—for instance: “What explains performance variation within an industry?” “How does sustainability affect firm performance?” or “How do leaders motivate team members?” The goal of a research project is to provide insightful and novel explanations for its focal puzzle, thereby advancing the frontier of knowledge in our discipline. As a result, the puzzle is the driving force behind a research project. It anchors every other element of the canvas: the framing, the theoretical framework, the research setting and design, and the content and scope of conclusions.

Defining a puzzle may be one of the more challenging steps in the conceptualization of a research project. For a general management journal like AMJ, a puzzle should be interesting and relevant to a broad community of management scholars³ and defined in ways that allow for new and important insights to surface through the development of the research project. We suggest that a few simple questions might guide and aid in this effort, such as: What am I seeking to explain with this work? When my project is complete, what unresolved management problem can I claim to have provided an answer to? In Table 1, we provide a list of questions that can further support this critical reflection and aid in the development of each of the nine core elements we present here.

Framing of the Research Project: *The Audience and Prior Research, and the Research Question*

A key task in the conceptualization and description of a research project is to move from a broader theoretical puzzle to a narrower research question, and to explain to a broader set of readers why that research question is worth pursuing. Two considerations are paramount in this effort: understanding *the audience* who will read, evaluate and use the

research, and summarizing the *prior research* that is relevant to the puzzle.

The audience and prior research. Implied in the design of every research project is the audience for that research (Grant & Pollock, 2011). Like in all research fields, management scholars tend to specialize and develop expertise in fairly focused research areas, corresponding to one or more of the several “conversations” (Huff, 1999) taking place in academia around particular topics in the broader management field. At the outset of any empirical research project, it is important for authors to consider to which of these conversations they seek to contribute. Most manuscripts do not specify the audience explicitly, but it is always implied in the framing. While, over time, a particular project might attract interest in other (usually adjacent) areas, such extensions are unlikely to occur unless the core audience finds it sufficiently persuasive and impactful to deserve publication (Dencker, Gruber, Miller, Rouse & von Krogh, 2023).

To understand who their core *audience* is and what they may find interesting and relevant, researchers might consider questions such as (see Table 1): What literature (or literatures) addresses the puzzle? What seminal works define those literatures, and what are the most recent publications in this area? In what journals is this research published, and in what conferences is it presented? What theories, data, and methods have been used? To demystify the concept of “the audience,” we encourage all authors to identify the set of 10 to 20 scholars who are shaping the conversation on the research puzzle, through recent publications, edited books or special issues, conference tracks, or specialized workshops. These are the scholars who are most likely to notice the paper at a conference, offer feedback on it directly or through a blind review process, read the research when published, and build upon it in their own work. Observing how the conversation has evolved can deepen researchers' understanding of what (parts of a) broader puzzle their audience is currently more interested in, and how they think about possible solutions and appropriate ways to explore them.

Effective framing of a research project (and, ultimately, of the manuscript that presents it to the audience) clarifies both the common ground—the audience's and the authors' shared assumptions and understanding of the puzzle—and the points of departure (Dencker et al., 2023). When both become clear in the framing of a manuscript, the audience can easily say “We speak the same language and agree on many things, and we can see why and how your new work can offer a different perspective or explanation.”

³ While AMJ and other general management journals seek to publish manuscripts that are of interest to a broad and diverse community of management scholars, field journals cater to more specialized academic audiences. As such, the framing of the paper and some of the core elements (e.g., the literature review) need to be calibrated accordingly.

TABLE 1
The AMJ Management Research Canvas Worksheet

 The Puzzle
<p>What broad management question does this research project address?</p> <ul style="list-style-type: none"> • What are you trying to explain or understand better? • Why is this puzzle important (from a phenomenological or theoretical perspective)?
 The Audience and Prior Research
<p>Which audience should find your research interesting and relevant?</p> <ul style="list-style-type: none"> • Who would be interested in the answers you provide? Who are the key voices in that literature? Think about the 10–20 scholars who define the core of your audience. • What has this scholarly community been interested in and been discussing recently? • What assumptions do they build on and what theoretical perspectives do they employ? <p><i>Note:</i> The audience is implied in how prior research is discussed and the terminology that is used; it is not an explicit section in a paper.</p> <p>How does prior research address the puzzle?</p> <ul style="list-style-type: none"> • What prior studies have explored the puzzle? What are the most relevant studies among them? • Is there scholarly consensus pertaining to the phenomenon? If so, what is it? • What assumptions do prior studies make about the phenomenon? Are they accurate? • What existing theories have been used to explain the puzzle identified? What discipline do these perspectives originate in? • What do (we think) we know and do not know, based on prior research? • Are findings in prior research consistent? If not, what is the reason for these inconsistencies? • What is missing in prior research? What are its limitations? <p><i>Note:</i> Relevant prior research may not necessarily coincide with the primary audience of a project.</p>
 The Research Question
<p>What specific question does your research answer?</p> <ul style="list-style-type: none"> • How can you succinctly state the research question to focus on one aspect of the broader puzzle? • What variables or constructs are implied in the research question, if any? • Does your research question identify what you are trying to explain (e.g., a dependent variable, a process, or its outcome)? Does it also suggest what might explain it (e.g., key independent variables)? <p>Why is it important to answer this research question?</p> <ul style="list-style-type: none"> • How does answering your research question advance prior research and our understanding of the puzzle? • How would reasonably informed and knowledgeable people intuitively answer your question? Why isn't this answer sufficient or convincing?
 Theoretical Constructs and Relationships
<p>WHAT are the key constructs in your theoretical framework?</p> <ul style="list-style-type: none"> • What are the core elements (entities, properties, conditions, actions, etc.) of your explanatory conceptual framework? • Have these constructs been conceptualized before? If so, what definition, from prior studies, do you adopt? If not, how do you define them? <p>HOW do the key constructs relate to each other (hypotheses, propositions, patterns, etc.)?</p> <ul style="list-style-type: none"> • What is the relationship between key constructs (positive or negative, linear or of a different functional form, sequential, recursive, etc.)? • How does change in one construct relate to changes in others? <p>WHY should we expect these relationships between constructs (mechanisms)?</p> <ul style="list-style-type: none"> • How do you explain these interrelations? What theoretical mechanisms underlie the relationship presented in hypotheses or propositions, drive the unfolding of a process, and so on? • What more general theories can you draw upon to explain observed patterns? • What theoretical lens orients and underpins the development of your theoretical framework?
 Research Setting
<p>In what social setting is the research conducted?</p> <ul style="list-style-type: none"> • What empirical setting (individuals, group(s), occupation(s), organization(s), industry, etc.) do you use to examine your question? • How do you get access to this setting? • What are the most important things to know about this setting? <p>Why is this setting appropriate for your study—that is, to examine your research question?</p> <ul style="list-style-type: none"> • What elements of your theorizing does the setting illuminate? • What process or criteria inform your choice of this setting? Can you think of more appropriate settings? If so, what prevents you from using them instead? • Why is this setting important?

TABLE 1
(Continued)

⊕	Research Design and Analysis
	<p>What data do you use to answer your question?</p> <ul style="list-style-type: none"> • What data do (or will) you use, and where do you collect it from? • How do you process your data (storing, cleaning, coding, etc.)? • For quantitative research: How do you measure the construct you are trying to explain (dependent variable[s]) and the explanatory constructs (independent variables)? Why are these good measures? • What other factors (control variables) should be accounted for and measured? <p>How do you analyze the data?</p> <ul style="list-style-type: none"> • What is your selected mode of inference (inductive, deductive, abductive, etc.)? Is it consistent with your research question and theoretical framework? • If your research question implies causation, how do you establish causation? • If your research question requires you to capture a process, how do you establish how the process progresses and what moves the process forward? • What is your level of analysis? If appropriate, what are your counterfactuals? • For quantitative research: What estimation model do you use to analyze the data? Why is this the right estimation model? • For quantitative research: What do you do with the data you have (text, observations, etc.) to surface patterns and regularities or generate theoretical insights? • How do you interpret the absence of patterns or effects? • How do you evaluate the robustness and trustworthiness of your conclusions?
📄	Empirical Findings
	<p>What empirical patterns do you see in your data?</p> <ul style="list-style-type: none"> • What correlations, associations, co-occurrences, sequences, similarities, differences, thematic consistencies, or other regularities do you observe empirically? • What are the consistencies across or within studies, cases, or settings (for multi-setting research)? How do you explain inconsistencies? • For quantitative research: How do you interpret the results in terms of statistical and practical significance?
📄	Contributions
	<p>How do the empirical findings change how we think about the puzzle?</p> <ul style="list-style-type: none"> • How do the findings help illuminate your research question or the puzzle? • How does the study change (extend or challenge) our theoretical understanding? What is novel or surprising? What is expected? • What other scholarly communities and research streams are interested in your conclusions? How do your observations connect to the puzzles they are interested in? • How can your study inform future research? If we accept your conclusions, how do they change the way we study the puzzle—the questions we ask or the methods we use? • What are the practical contributions of your study? How does your study inform practice (alone, or together with practical insights from other studies)? Why should decision-makers (managers, employees, stakeholders, policymakers, etc.) care?
📄	Boundary Conditions and Limitations
	<p>How broadly applicable are the findings and in what conditions might they not hold?</p> <ul style="list-style-type: none"> • In what contexts do your insights hold or not hold? • Can you point to prior studies showing similar patterns in other settings? If prior studies show different patterns, how do you explain the differences? <p>What are the main limitations of your study and how can future research address them?</p> <ul style="list-style-type: none"> • Is it possible that your observations were influenced by particular features of your research setting (e.g., the demographic characteristics of the subjects in an experiment, the organization, or industry considered)? Might your observations and conclusions be affected by this? • How could your research be improved upon? What are its methodological shortcomings? • What other factors might be relevant to understanding your research question that are not included in your study? • How can future research extend your study by addressing its boundary conditions and limitations?

Note: The *AMJ Management Research Canvas Worksheet* offers a list of questions to guide the conceptualization, implementation, and revision of research projects. Some of the questions will be addressed during the research design phase, while others matter more when writing the manuscript.

Without identifying the audience and understanding how they think about the puzzle, framing happens “in the dark” and is less likely to be effective in showing to readers how the new research adds value.

To convince the audience that their project is valuable—that is, that it can offer new answers to the puzzle—researchers need to position their work relative to *prior research* in the same space (Grant & Pollock, 2011; Locke & Golden-Biddle, 1997). Some of this research was likely conducted by members of the core audience, while other relevant prior research may come from scholars who are not part of the audience for the new study. When new research builds extensively on insights from other areas (or other disciplines), the overlap between scholars who authored relevant prior research and the audience for the new project can be minimal.

Thinking about the new project in the context of prior research is typically a two-step process: (1) a deep dive into prior studies to understand their foundations and map their frontiers, followed by (2) positioning the new research relative to this existing work. The first part can be time-intensive, but largely straightforward; again, a few questions can provide guidance (see Table 1). The second step focuses on situating the new study in the relevant research landscape. How does the new research build on and how does it depart from prior studies? Does it use a new perspective or different foundation (e.g., a new theoretical angle or better data) to address the puzzle? Does it provide a previously overlooked set of arguments? Does it employ the same theories and methods but reach a different conclusion? Does it tackle the puzzle using a new set of data and methods? The answers to such questions (see also Table 1) position the new research in the literature by highlighting the elements (e.g., theoretical foundations, methodology) it shares with prior work, as well as its novelty (Dencker et al., 2023).

The research question. The big and broad theoretical or phenomenological puzzles that drive management research cannot be fully answered in one research paper. Instead, multiple papers are typically required to address the same puzzle and to offer partial (complementary or, at times, contradicting) theoretical answers for it. Each one of these papers is organized around a specific, well-defined research question, which speaks directly to the puzzle, but it is more precisely defined. In narrowing the puzzle to a more specific question, it is important to identify a tension or contradiction in prior research that the intended audience will find important and intriguing. Instead of simply pointing to a gap in prior research, a compelling research question should have the potential to create or change scholarly consensus in the

relevant audience and prior research (Hollenbeck, 2008). The completed research will offer readers a convincing answer to the research question, but only a partial elucidation of the puzzle.

To illustrate how a broader puzzle might be distilled into a narrower research question, consider a puzzle that has preoccupied management researchers in recent years: How does sustainability affect firm performance? This is a big puzzle; a broad and important question for management researchers with clear managerial implications for firms, their managers, and employees. Answering it starts with an understanding that sustainability has an environmental, a social, and a governance dimension, which may affect firm outcomes differently; that each of these dimensions can be assessed along multiple indicators (including, e.g., a firm’s human rights due diligence practices); and that a firm’s practices in each of these areas can have different effects on the outcomes of interest, including employee engagement, the cooperation of external stakeholders, and financial performance. A research question focused on how a particular aspect of sustainability—for example, “How does human rights due diligence affect firm performance?”—addresses “the big puzzle” but provides only a part of the answer. Together, the insights generated by multiple studies combine to answer the broader puzzle.

One other cautionary note: as editors, we frequently encounter studies that claim to address an entirely new research question, one that has never been considered by prior work. Such claims are often red flags that prompt editors to wonder what is missing. Have the authors reviewed past work thoroughly enough? Are they missing connections to related, though perhaps not immediately obvious, areas of research? In our view, even phenomena that are perceived as “new” are typically manifestations of a broader phenomenon (i.e., ask yourself: What is this a case of?), and knowing how this has been explained in past work is relevant to understanding the “new” thing.⁴ The task is not trivial,

⁴For instance, the development and adoption of artificial intelligence (AI) or generative AI technologies is a phenomenon that can be easily connected to that of other technologies (e.g., digitization). Thus, the starting point for research on AI could, for example, be the broader research on technology development and adoption. If you are interested in the adoption of AI in organizations, then you should ask yourself: why isn’t what we already know more generally about technology adoption in organization sufficient to explain the challenges we encounter when adopting AI? How is AI fundamentally different from prior technologies so that (some) findings from prior work are not applicable?

but nevertheless critical: authors need to recognize and understand prior work in sufficient detail to allow for the clear and precise positioning of the new research question relative to it. Accomplishing this with the audience in mind constitutes the framing of a research project and manuscript.

Formulating a good research question gets easier with experience, but even experienced researchers brainstorm with or run their ideas by others. One helpful exercise is the “Six smart people test”: share the idea behind the research question with six peers or colleagues whose opinion you value and see what they say. Do they get excited by the research question you present to them? Are they intrigued by it and find it worth addressing? Or does their reaction suggest that they find it trivial and they already know the answer? If it is the latter, this particular question may not provide fertile ground for your research project.⁵

Theoretical Framework: *Theoretical Constructs and Relationships*

A key activity within any research project is to define and advance understanding of theoretical constructs relevant to the research question, as well as the relationships between them. Depending on the research tradition one follows, the specific steps taken to develop theory will vary (Cornelissen, Höllerer & Seidl, 2021). Yet, regardless of whether the ultimate theorizing takes the shape of a variance model, a process model, or a typology (or a combination of these forms)—we believe it is useful, building on Whetten (1989), to think of answering a research question as involving three key steps: (1) defining theoretical constructs—*what* needs to be explained and *what* explains it (although this definition tends to occur at very different stages in the process for quantitative and qualitative studies); (2) specifying the relationships between these theoretical constructs—*how* the theoretical constructs are related to each other; and (3) explaining what drives these relationships—*why* the theoretical constructs are related in the way the authors suggest.

Theoretical constructs (the “what”). A theoretical construct is an abstract idea or concept used to explain a phenomenon or behavior within a theoretical framework. A research project begins to address its research question by specifying one or more

relevant constructs that are the focus of the study—for instance, an individual’s behavior, the behavior’s consequences, a set of practices in an organization, the impact of those practices, a firm’s strategy, or the firm’s performance.

In quantitative research, scholars refer to the focal outcome as the “dependent variable,” and to other constructs—such as individual characteristics and behaviors, organizational practices, strategies, and characteristics—that might explain the dependent variable as “key independent variables.” The constructs that represent the dependent and key independent variables play a “lead role” in the research project and thus need to be clearly defined for the reader. Their conceptualization (i.e., their verbal definition and differentiation from related theoretical constructs) should leave very little room for interpretation. When a particular construct has been featured extensively in existing work, the task of conceptualizing it can follow organically from the discussion of prior research. When a new theoretical construct is introduced, and is therefore unfamiliar to the audience, the task of conceptualizing it is less straightforward. Researchers need to define it precisely, differentiate from similar or related constructs, and justify the necessity of adding an additional theoretical construct to the scholarly vocabulary of management constructs. Each of these steps—definition, differentiation, and justification—is essential to ensuring that a newly introduced theoretical construct will be understood by the audience; completing these steps, however, does not guarantee that the new construct will also be accepted and adopted.

In qualitative research, theoretical insights emerging from a study are more frequently presented as a process model, typology, or other forms (Cornelissen, 2017). Even in these cases, however, one needs to identify clearly the relevant constructs—for instance, the various steps of a process, or the analytical categories that separate one type from another—and to distinguish what constructs or properties (like dependent variables in quantitative research) researchers are trying to explain (e.g., the outcome or progression of a process, the configuration of certain practices) and what constructs, properties, and conditions contribute to explaining them. Some degree of ambiguity is not uncommon and, to some extent, is even important for theory development (Weick, 1995) and for the emergence of novel areas of research (Hirsch & Levin, 1999). This, however, should not be taken as a license for neglecting construct clarity and terminological consistency (Bansal & Corley, 2012). Most qualitative studies submitted to AMJ employ a mix of novel and

⁵ We thank Ian C. MacMillan for offering this example during his PhD workshops.

established constructs; being consistent in the usage of the latter (“Am I using this term consistently with prior research?”), and clear about the novelty of the former (“Am I certain that I am not using a new label for a well-known construct?”) is as essential in qualitative research as it is in quantitative studies.

Hypotheses, propositions, and other interrelations (the “how”). Equally critical in the development of a theoretical framework is the clarification of the relationships between the theoretical constructs of interest. In quantitative research, such clarification requires answering questions such as: Do we assume a causal relationship between these constructs, with the occurrence of one leading to the occurrence of the other? Is this relationship positive or negative? Is it linear or does it follow a more complex functional form? In deductive research, hypotheses are developed prior to analyzing data to emphasize the expected relationship(s) between theoretical constructs. In qualitative research, these interrelations may take a similar propositional form and follow, inductively or abductively, from the analyses of empirical observations, but may also manifest in other forms, such as the configuration of traits and features that define typologies (Cornelissen, 2017), or the sequences, cycles, or recursive relations that define the unfolding of a process (Cloutier & Langley, 2020).

Theoretical explanations or mechanisms (the “why”). Lastly, researchers need to explain to the audience why they expect the theoretical constructs to be related in a particular way (Sparrowe & Mayer, 2011). Some research traditions (e.g., Hedstrom & Swedberg, 1998) have found it useful to think, here, in terms of the *underlying* theoretical mechanisms that connect the key constructs. How can we explain *theoretically* the patterns and interrelations we hypothesize (in deductive research) or observe (in inductive research), so that we can be reassured that our observations are not a historical contingency or an empirical accident? Why is it reasonable to believe that these mechanisms are at work in the circumstances under consideration? Answering these questions often requires leaning into additional literatures, which have focused on these mechanisms directly. Occasionally, researchers will build into their own research project a direct examination of the mechanisms. If implemented adequately, this effort enhances the overall value and validity of the research project. At the same time, however, it can also raise questions about the mechanisms underlying the mechanisms, and the mechanisms underlying those mechanisms, and so on, with “turtles all the way down!”

Empirical Methods: Research Setting and Research Design and Analysis

Conceptualizing an empirical research project requires the selection and justification of a *research setting* and a multitude of decisions about data collection, coding, analysis, and interpretation—decisions collectively referred to as *research design and analysis*.

Research setting. Each research project is situated in a “setting.” While some settings (e.g., behavioral labs) are common and therefore familiar, others (e.g., a unique organization, a novel occupation, an emerging industry) are less frequently encountered and therefore require detailed descriptions. Regardless of the type of setting, researchers need to understand and explain to their audience why the setting is appropriate for answering the research question, why readers should trust the insights obtained from studying this setting, and whether (and why) these insights can generalize beyond the research setting itself (see Table 1).

Convincing the audience that a research setting is appropriate for answering a specific research question requires attention to the extent to which the empirical observations obtained in that setting fit with (or match) the theoretical constructs employed in the development of the theoretical arguments (Bliese, Certo, Smith, Wang & Gruber, 2024). A good “fit” between theory and empirics involves the selection of an empirical setting that allows researchers to investigate their research question directly, relying on reasonable assumptions about how a theoretical construct is observed in the real world.

The trustworthiness of the research setting is another critical attribute of empirical management research. Before convincing others that their data are trustworthy, researchers must be confident that their data have been collected in transparent, reliable, and nonbiased ways. At the same time, researchers need to understand whether a particular research setting is representative of the broader phenomenon examined. Can we reasonably believe that the set of observations obtained in the research setting examined are representative of equivalent observations in alternative research settings? Answering this question requires a deep understanding of the idiosyncrasies of the research setting, as well as of the broader context in which it exists. While researchers may not be able to account for all contextual factors, awareness of these factors goes a long way in thinking through strengths and weaknesses of the setting and questions of generalizability and transferability to

other empirical settings (i.e., other types of groups, organizations, industries, countries).

Research design and analysis. The term “research design” is used broadly to refer to the mode of inference used in a particular study, the level of analysis, the data collected, and the empirical methods used (Bono & McNamara, 2011; Singleton & Straits, 1999). All these have to be clearly defined for a research project (see Table 1), starting with the empirical approach employed. What is the mode of inference: inductive, deductive, abductive, other? What method or methods are being used, and why are they appropriate?

Qualitative and quantitative research typically follow different paths in the collection and analysis of data; some principles, however, are common to both traditions. In both cases, researchers need to clarify the level of analysis for collecting observations and, in quantitative research, the construction of the counterfactual. The level of analysis can vary both in terms of the unit (an individual, a team, an organization, an industry, a country, etc.) and in terms of time, with the same unit being observed over multiple time periods (daily, yearly, etc.). The counterfactual, which has to be conceptualized at the same level of analysis, must also be clearly explained. What are the observations compared to? How is the absence of an effect observed? Too often, researchers stop short of clarifying how they account for the counterfactual in their research, leaving editors and reviewers guessing and confused.

Next, researchers need to describe the data they use: how they were obtained (or, in the case of a research proposal, how will they be obtained), how they were (or will be) collected and coded, and, when reporting quantitative data, how they vary—what is most common and what is less so (e.g., descriptive statistics). With a clear idea of the data types, sources, and collection, researchers can then proceed to explaining the analysis (see Table 1). The empirical techniques vary considerably depending on whether the research is qualitative or quantitative. However, here, too, it is imperative for researchers to provide sufficient details about what techniques were (or will be) used, how these were (or will be) applied, and why these are the most appropriate techniques for their research project (Bansal & Corley, 2012; Zhang & Shaw, 2012). Explaining clearly “how you know what you claim you know” is particularly important for qualitative studies, where the absence of standardized analytical methods (Graebner, Martin & Roundy, 2012) places an additional burden on researchers to explain in detail what particular data sources they

used, how they used them, and what provides empirical support for their theoretical accounts.

Conclusions: Empirical Findings, Contributions, and Boundary Conditions and Limitations

The goal of every empirical methodology is to surface new, interesting, and important findings that clearly and directly answer the research question and provide a partial but nonetheless significant resolution to the puzzle. In specifying the paper’s contributions, it is critical to differentiate between the *empirical findings* and the theoretical as well as practical *contributions* that can be derived from them and that help address the puzzle. In addition, one needs to specify the limits of one’s insights—that is, the *boundary conditions and limitations*.

Empirical findings. The findings of an empirical project are obtained only after all the work dedicated to the research design and empirical analysis is complete. Together with the theoretical and practical contributions that can only be known after the research was conducted, it is, therefore, a piece of the canvas that will remain “blank” in a research proposal. Once empirical observations become available, researchers can present them to their audience by explaining how they were obtained from the analysis and how they should be interpreted (see Table 1). Although their form may vary across research methods, they often manifest as empirical patterns, such as correlations, associations, co-occurrences, similarities or differences, sequences, progressions, or other interpretive, discursive, or behavioral regularities.

In quantitative research, empirical findings provide evidence that supports (or fails to support) theoretically derived hypotheses. Thus, their interpretation is framed in light of the theoretical framework provided. By contrast, in qualitative research, empirical findings are the foundation for theorizing, and their interpretation constitutes an emerging theoretical account. Depending on the research question and approach, authors may need to take additional steps following the description of the findings such as providing supplementary analyses using alternative data, data sources, measures, or empirical techniques, or offer alternative interpretations for their findings.

Contributions. The end goal of a management research project is to discover a novel insight—something we did not know before—to advance scholarly knowledge and to improve practice in the management domain. In highlighting the contributions of their work, researchers need to ask how their study alters existing scholarship addressing the

puzzle. At AMJ we expect findings from published work to “change the way we think” about the subject of the study.

A useful way to think about one’s contribution, then, is to reflect on whether and how our findings challenge current assumptions in our core audience (Davis, 1971; Locke & Golden-Biddle, 1997), and how these assumptions are changed or significantly enriched, based on these findings. What do the new empirical findings reveal, and why are they important and, perhaps, surprising? How do they enrich, modify, and possibly redirect the conversation? It is easier to answer these questions if we recognize the distinction between our findings (i.e., the empirical patterns we observed) and our contribution (i.e., how these patterns advance our theoretical understanding of the puzzle in a nontrivial, non-incremental, and nonobvious way).

When reflecting on scholarly contributions, it is also important to remember the broader audience or readership of the journal. In the case of AMJ, a general management journal, its readership encompasses scholars in all areas of management. The journal is therefore interested in theoretical contributions that advance the management field more broadly. We thus encourage authors to reflect on whether and how their findings also speak to other scholarly communities than their core audience, thus contributing to advance multiple theoretical conversations and inform multiple research programs.

AMJ also asks its authors to specify how their research findings improve practice in the management domain. How should managers change, based on your findings, the way they lead people, make decisions, or manage change, for instance? How should organizations revise their policies or redesign their structures? Or, where applicable, how does the study inform policymakers and regulators? What should these individuals do differently in the future? We recognize that not all studies may have equally clear implications for practice, and that the practical insight generated by a single paper may not always be sufficient in offering a useful practical implication—in these cases, authors are encouraged to examine how their insight in combination with other existing insights may offer practical guidance.

Boundary conditions and limitations. The flip-side of a manuscript’s contributions is its boundary conditions and limitations (Busse, Kach & Wagner, 2017). They are a recognition of what the research can and cannot accomplish (Geletkanycz & Tepper, 2012), as the insights of management research are

not generalizable or transferable to every situation, industry, or context. The discussion of the boundary conditions of a research project is an acknowledgment of how broadly the insights generated apply, and where additional research might be needed before more general conclusions can be drawn. In both macro-level and qualitative research, reflecting on the particular characteristics of the setting of the study—the particular industry, organization, and so on—and how they might have affected our findings may help establish the relative transferability of insights to settings that possess similar characteristics, and speculate on how findings might change in different contexts.

Similarly, every study has limitations. Sometimes, the data are incomplete; other times, an empirical measure is limited in fully capturing a theoretical construct; or, the research setting, while appropriate, might have idiosyncrasies that justify extending or replicating the research elsewhere. Being transparent about the limitations of a research project enhances its credibility and creates opportunities to stimulate new research on the topic. The limitation of one research project can be the starting point of another. Addressing one project’s limitations through other studies leads to additional insights addressing the same puzzle and, over time, to the cumulation of knowledge in a research domain.

CONCLUDING THOUGHTS

We have developed and designed the *AMJ Management Research Canvas* so that management scholars can use it at different stages of the empirical research process: to conceptualize an empirical research project, to develop the draft of a manuscript, to revise and polish it in preparation for submission, and to continue to revise it in response to feedback. We do not intend it to be a rigid template, only a tool that provides guidance on how to develop (and, later, present) the nine core elements of an empirical research project. The sequence in which these core elements are developed and presented varies depending on the type of research envisioned and conducted. It is for this reason that we used the “puzzle” metaphor in our visual and its description: in putting together a picture puzzle, the pieces may be assembled in different orders, but they are all required in order to form the complete picture. Similarly, the core elements highlighted in the canvas are all necessary in the conceptualization and development of empirical research in the management field.

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