FROM THE EDITORS

PUBLISHING IN *AMJ*—PART 4: GROUNDING HYPOTHESES

Editor's Note:

This editorial continues a seven-part series, "Publishing in AMJ*," in which the editors give suggestions and advice for improving the quality of submissions to the* Journal. *The series offers "bumper to bumper" coverage, with installments ranging from topic choice to crafting a Discussion section. The series will continue in February with "Part 5: Crafting the Methods and Results Sections." - J.A.C.*

A theory section is a critical part of any paper but is particularly important for an *AMJ* submission. The primary purpose of a theory section is to ground hypotheses; this involves (1) positioning those hypotheses in relation to related research (2), developing a clear, logical argument explaining why the core variables or processes are related in the proposed fashion, and (3) creating a sense of coherence in the relationships among the variables and processes in the proposed model. All are important elements of the theoretical foundation for one's hypotheses. We discuss each separately and then address several potential pitfalls in explanatory logic.

Engaging Prior Research

A key element of creating a strong theory section involves entering into a constructive dialogue with other researchers who have examined the theory or theories that have guided research on a topic. *AMJ* reviewers look to the theory section to find a clear, theoretically driven narrative—not a literature review. Producing such a narrative effectively involves maintaining a delicate balance between engaging previous research and carefully developing one's own novel insights.

On the one hand, citing any remotely relevant paper runs a very real risk of what is sometimes called "argument by citation." When many of the sentences of a theory section start with citations (e.g., "Smith (2002) found . . ."), it is important to take a step back and verify that one is building a compelling argument based on explanatory logic. It is important to cite relevant prior works in building an argument, but the theory section should not be built around these prior works in such a way that the logical reasoning is pushed to the background. Reviewers are virtually certain to raise concerns about papers that have a couple of pages of literature review/discussion followed by a hypothesis

that doesn't flow logically from the text immediately preceding it. Often the issue in this case is that the author became so engaged in telling the reader what others have done that the paper does not contain a strong case for the current hypothesis. Merely citing prior studies does not constitute a logical argument; instead, citations should be used to illustrate various elements of the logic of one's own argument (Sutton & Staw, 1995).

Alternatively, it is important to avoid the other extreme, focusing exclusively on the argument and ignoring prior related conversation. Failing to cite several highly relevant papers will lead readers to question the value of the contribution, especially when they believe one or more of the neglected articles is closely related to what the current work addresses. Part of explaining how your work fits into the literature on a topic is to clearly articulate how the paper builds upon that literature, which requires explaining what has already been done and why what the paper proposes is a logical and important contribution that goes beyond prior work.

The key to covering prior work effectively is to look beyond just citing specific empirical results and focus instead on the underlying theoretical issues that are being addressed. Entering the conversation in previous research means engaging the underlying theoretical narrative that is the foundation for past empirical research—but not the empirical results themselves. Similarly, the contribution rests not solely on the results, but also on how they lead to new insights about organizational phenomena. Those insights will be meaningful to the extent that the ideas used to motivate them are clearly linked to the development of the underlying theoretical narrative informing the hypotheses.

One way to achieve the required balance between linking to prior work and developing clear reasoning is to start with the arguments themselves, as they serve as the organizing structure for ideas. An

exercise likely to help is first writing the "Theory and Hypotheses" section of a manuscript without a single citation to previous research. To be sure, the ideas of others are the foundation of this exercise. But crafting the explanatory logic in this pure form enables one to see whether it is clear, consistent, and persuasive on its own. Further, this exercise will require incorporating the ongoing theoretical narrative into one's own explanatory logic, and doing so will make the relationship of the proposed ideas to the larger conversation become evident. When this point is satisfactorily reached, one can go back and incorporate prior work, giving credit to those to whom it is due and explaining how the new work complements or challenges their work.

Among the challenges of starting a theory section by framing one's ideas relative to others' is losing the focus on making a clear argument—the most critical element in an effective theory section. By the time readers arrive at an effectively grounded hypothesis, the theory section should have led them to the point that (1) the hypothesis is not a surprise (i.e., the paper clearly led up to this specific prediction) and (2) the readers understand clearly *why* the constructs are associated. They might not completely agree, but they clearly understand the underlying relationship that is the focus of the hypothesis.

Building the Argument, or the Logic of Explanatory Logic

The sections of a manuscript that lead up to each hypothesis are among the more challenging to write, for good reasons. The objective in these sections is to persuade readers that the claims made in the hypotheses are plausible. Those readers (reviewers) were selected because of their subject matter expertise and, as reviewers, their role is to maintain an attitude of healthy skepticism regarding the claims (hypotheses) made in a paper and the logic that supports them.

Substantiating hypotheses. In simple form, a hypothesis is a claim that Y, a dependent variable, is systematically related to X, an independent variable. Logic forges the connection between the two and can be framed in several ways. The first is to link a hypothesis to a similar logical relationship that is a central tenet of an established theory or conceptual framework. For example, a hypothesis might depend on the idea that team members engage in cooperative behavior to enhance their standing. To substantiate this claim, an author might appeal to the group engagement model of Tyler and Blader (2000). As Sutton and Staw (1995) pointed out, *merely referencing* the group engage-

ment model is not sufficient. The author must offer enough verbal explication for the reader that he/she understands why Y should be predicted by X *without having to read* Tyler and Blader (2000). The success of this approach depends primarily upon the correspondence between the claim(s) made in the paper and the established theory; if other elements in the logic are inconsistent with the group engagement model, then the premise will fail.

A related logical technique is to offer *empirical* evidence supporting claims similar to what the hypothesis states. Here, the implicit argument is that if it has been shown to occur in similar circumstances, then it should also apply in the present circumstances. Empirical evidence is persuasive, however, only when accompanied by a logical rationale.

A third approach is to focus on *how* the hypothesized relationship occurs by crafting a narrative that describes the role of intervening states and/or processes. For example, Seibert, Kraimer, and Liden (2001) developed a model integrating two perspectives on the career benefits of social capital. The roles of relevant theoretically relevant mediators (access to information, access to resources, and career sponsorship) were carefully explained, creating a compelling narrative of how social capital brings career benefits. When giving an account of how a hypothesized relationship "works," note the importance of operationalizing the primary intervening states and processes; without empirical tests, the role of mediators cannot be substantiated, and reviewers may see it as speculative.

A related consideration in framing hypotheses is context. Hypotheses may be intended to apply generally, or they may be limited to specific contexts, such as industries or national cultures. The boundary conditions need to be identified so that the relevance of the proposed relationships is explicit.

Utilizing multiple theories. The challenge of explaining the mechanisms underlying the hypotheses is particularly important when multiple theories are used. Different theories can be a source of novel insights into a variety of issues and may be from the same area (e.g., the resource-based view of the firm and transaction cost economics) or from different underlying disciplines (e.g., social psychology and economics). In either case, the challenge of combining insights from multiple theories is to explain clearly why addressing this research question requires using these theories and how exactly the theories will be joined in a way that creates a unique contribution to the research topic. The need for each additional theory should be clearly explained so as to avoid the impression that

theories are being combined ad hoc to justify disparate hypotheses.

There are several possible approaches to combining theories, each with potential advantages and disadvantages. Pitting one theory against another through competing hypotheses and letting the data decide the winner is a widely used approach that must be used with care, as it can leave the reader puzzled as to why one plausible theory should trump another equally plausible theory—especially given the likelihood that both theories enjoy considerable empirical support in the literature (Cooper & Richardson, 1986; Platt, 1964). An alternative approach is one that explains when and why one theory should take precedence over the other, and an especially effective way of doing that is to explain the conditions under which the predictions of each theory are likely to be most applicable and test these predictions empirically. Vanneste and Puranam's (2010) examination of when a learning effect will have more influence on contract design and distinguishing the learning effect from the effect of trust is an example of this approach.

In many other cases, authors are interested in combining theories to give a more complete account of an organizational phenomenon. Combining implies that the relationship is additive and leads to hypotheses that link different independent variables to dependent variable(s). The risk in this approach is the temptation to specify models combining independent variables simply because, in past research, each has been shown to affect the dependent variable. A conceptual framework that brings the two theoretical perspectives together and articulates their relevant differences is essential. Agarwal, Echambadi, Franco, and Sarkar (2004) made this type of theoretical combination effectively in their analysis of the creation and performance of spin-outs in the disk drive industry. Relatedly, a paper can explain how different theories are most applicable for related research questions that combine to address a particular phenomenon; for example, one theory may explain when a practice will gain traction but another may explain which firms will be the most likely to adopt that practice (e.g., Sherer & Lee, 2002).

A third approach is to seek more integration between two theories. This involves articulating how the two perspectives are complementary—that is, how the assumptions of one theory implicitly require those of the other to be fully realized, and vice versa. This kind of integration requires a thorough understanding of the logic underpinning each theory, and how the two are related has to be articulated before hypotheses are framed. The potential for making a significant contribution depends on whether the integration offers new questions and new insights to each theory and its respective literature. For example, Silverman (1999) integrated elements of transaction cost economics and the resource-based view of the firm in a study of corporate diversification.

We wish to emphasize that using multiple theories can be a very effective way to create strong theory. The challenges of explanatory coherence, however, are greater when the theories utilized are from different base disciplines. Although *AMJ* encourages multidisciplinary research, the majority of published management papers focus on a single core discipline (Agarwal & Hoetker, 2007). Work integrating ideas from different areas has significant potential to contribute to theory, but the actual integration of the ideas must be carefully done.

Coherence. One of the biggest problems in the development of an effective theory section is explaining why one has chosen a specific set of explanatory variables over others. Without a strong discussion of coherence, readers and reviewers will wonder what holds a theoretical narrative together (Dubin, 1976; Whetten, 1989). The key is to address the question of why these variables (and only those variables) were selected. An effective theory section must explain how these variables fit together in a way that creates a strong and coherent theoretical contribution and doesn't leave the reader wondering why other variables weren't included. The proposed hypotheses should be linked a way that creates an overall contribution to the topic. Graebner (2009) did a nice job of weaving together literature from trust and agency theory in a qualitative examination of acquisitions of entrepreneurial firms.

A strong conceptual framework does not require a figure with boxes and arrows to explain how the hypotheses fit together—although a figure can help readers visualize the framework. What matters is that a clear, overarching research question drives the hypotheses, and one explains clearly, by drawing on the underlying theoretical and empirical work on the research topic, how these explanatory variables come together.

What we have said above regarding entering the conversation with previous research leads to the conclusion that persuasive logic is best served by a combination of all three approaches: building on established theory, offering relevant empirical evidence, and explaining *how* variation in X leads to variation in Y. But explanatory logic serves as the foundation; without it, appeals to existing theory fail to ring true, and offering only empirical evidence leaves the reader wondering "why?" Further, building on established theory can lead to an ex-

planation of *how*, because mediators often flow out of theorizing.

Pitfalls

Having described the core elements of grounding hypotheses, we felt it would be useful to review some of the recurring pitfalls that reviewers identify when evaluating the hypothesis development in a submission. Common pitfalls in grounding hypotheses include lack of specificity, fragmented theorizing, and stating the obvious.

Lack of specificity. Lack of specificity occurs when one's explanatory logic draws from a theory that speaks to a much broader or more general domain. For example, trait activation theory (Tett & Guterman, 2000) offers an explanation of how the attitudes and behaviors associated with personality traits are "activated" in the context of an individual's social environment. It thus offers an important bridge to researchers who seek to explain attitudes and behaviors in organizations by means of personality traits. However, it is general in its application and, though perhaps necessary to explanation of why a particular ensemble of environmental factors will activate attitudinal and behavioral manifestations of a specific trait, it is not a sufficient explanation. Social exchange theory (Blau, 1964) offers another example; it can ground one's logic at a general level (e.g., favors beget reciprocation), but does not clearly ground more specific operationalizations of that relationship (e.g., civility predicts job performance). The particulars and specifics need to be explained—and this guidance applies to all instances in which the domain of the theory one draws on to buttress claims is broader or more general than that of the hypotheses themselves.

Fragmented theorizing. Fragmented theorizing is implied when authors have a model with multiple hypothesized relationships in which each link is supported by logic drawn from a different theory. This approach may be motivated by the mistaken belief that the more theories, the better. Unfortunately, the impression this can create in the minds of reviewers is that the authors are engaging in post hoc theorizing, casting about in the literature for a theory that seems to fit a given hypothesis or, worse still, one that matches the variables on which they have already gathered data. Our observation is not meant to suggest that authors should not use multiple theories to support their hypotheses. Rather, it suggests that support drawn from multiple theories needs to be integrated into a coherent and cohesive explanatory narrative. (See the section on coherence above.)

Stating the obvious. Though it seems counterintuitive, supporting one's hypotheses so thoroughly that they seem obvious and therefore uninteresting is not uncommon. If a hypothesis states the obvious or makes a claim that is common knowledge, then, although true, it also is likely to be trivial (Davis, 1971). When a reviewer says, "I can't imagine how or when the null hypothesis could ever be the case," she or he is making precisely this point.

One way to remedy this problem is to flirt with the null hypothesis—that is, reflect on the plausibility of the opposite argument or the absence of a relationship. Then, frame the alternative hypotheses as alternatives to what can be seen as plausible, or even as received wisdom. This entails thoughtfully considering theoretical perspectives that would lend credence to the null. If it proves difficult to frame the null hypotheses as plausible, then your alternatives may in fact be obvious and trivial.

Conclusions

Hypotheses are the heart of a paper, and grounding hypotheses is one of the most important tasks in crafting effective theory. A strong theory section has to effectively engage prior literature, both theoretical and empirical, but must go beyond it to build a strong logical argument. A great deal of thought goes into every paper, and the theory section is key to explaining how one is going to add value to the research topic and why these specific hypotheses make sense individually and fit together to form a coherent conceptual framework.

Raymond T. Sparrowe
Washington University

Kyle J. Mayer
University of Southern California

REFERENCES

Agarwal, R., Echambadi, R., Franco, A., & Sarkar, MB. 2004. Knowledge transfer through inheritance: Spin-out generation, development, and survival. ***Academy of Management Journal,*** 47: 501–522.

Agarwal, R., & Hoetker, G. 2007. A Faustian bargain? The growth of management and its relationship with related disciplines. ***Academy of Management Journal,*** 50: 1304–1322.

Blau, P. M. 1964. ***Exchange and power in social life.*** New York: Wiley.

Cooper, W., & Richardson, A. 1986. Unfair comparisons. ***Journal of Applied Psychology,*** 71: 179–184.

Davis, M. S. 1971. That's interesting! Toward a phenomenology of sociology and a sociology of phe-

nomenology. ***Philosophy of the Social Sciences,*** 1: 309−344.

Dubin, R. 1976. Theory building in applied areas. In M. Dunnette (Ed.), ***Handbook of industrial and organizational psychology:*** 17–39. Chicago: Rand McNally.

Graebner, M. E. 2009. Caveat venditor: Trust asymmetries in acquisitions of entrepreneurial firms. ***Academy of Management Journal,*** 52: 435−472.

Platt, J.. 1964. Strong inference. ***Science,*** 146: 347–353.

Seibert, S. E., Kraimer, M. L., & Liden, R. C. 2001. A social capital theory of career success. ***Academy of Management Journal,*** 44: 219−237.

Sherer, P., & Lee, K. 2002. Institution change in large law firms: A resource dependency and institutional perspective. ***Academy of Management Journal,*** 45: 102–119.

Silverman, B. S. 1999. Technological resources and the direction of corporate diversification: Toward an integration of the resource-based view and transaction cost economics. ***Management Science,*** 48: 1109−1124.

Sutton, R. I., & Staw, B. M. 1995. What theory is not. ***Administrative Science Quarterly,*** 40: 371–384.

Tett, R. P., & Guterman, H. A. 2000. Situation trait relevance, trait expression, and cross-situational consistency: Testing a principle of trait activation. ***Journal of Research in Personality,*** 34: 397–423.

Tyler, T. L., & Blader, S. L. 2000. ***Cooperation in groups: Procedural justice, social identity, and behavioral engagement.*** Philadelphia: Psychology Press.

Vanneste, B. S., & Puranam, P. 2010. Repeated interactions and contractual detail: Identifying the learning effect. ***Organization Science,*** 21: 186−201.

Whetten, D. A. 1989. What constitutes a theoretical contribution? ***Academy of Management Review,*** 14: 490−495.