

TRENDS IN THEORY BUILDING AND THEORY TESTING: A FIVE-DECADE STUDY OF THE *ACADEMY OF MANAGEMENT JOURNAL*

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We introduce a taxonomy that reflects the theoretical contribution of empirical articles along two dimensions: theory building and theory testing. We used that taxonomy to track trends in the theoretical contributions offered by articles over the past five decades. Results based on data from a sample of 74 issues of the *Academy of Management Journal* reveal upward trends in theory building and testing over time. In addition, the levels of theory building and testing within articles are significant predictors of citation rates. In particular, articles rated moderate to high on both dimensions enjoyed the highest levels of citations.

It is difficult to overstate the importance of theory to the scientific endeavor. Theory allows scientists to understand and predict outcomes of interest, even if only probabilistically (Cook & Campbell, 1979; Kerlinger & Lee, 2000). Theory also allows scientists to describe and explain a process or sequence of events (DiMaggio, 1995; Mohr, 1982). Bacharach (1989) suggested that theory prevents scholars from being dazzled by the complexity of the empirical world by providing a linguistic tool for organizing it (see also Dubin, 1976; Hall & Lindzey, 1957). In Brief and Dukerich's (1991) terms, theory acts as an educational device that can raise consciousness about a specific set of concepts. Finally, Kerlinger and Lee (2000: 11) went so far as to describe theory as the basic aim of science.

Many scholars define theory in terms of relationships between independent and dependent variables. For example, Campbell defined theory as "a collection of assertions, both verbal and symbolic, that identifies what variables are important and for what reasons, specifies how they are interrelated and why, and identifies the conditions under which they should be related or not related" (1990: 65). From this perspective, a theory is evaluated primarily by its ability to explain variance in a criterion of interest (Bacharach, 1989). Other scholars have defined theory in terms of narratives and accounts. For example, DiMaggio defined theory as

"an account of a social process, with emphasis on empirical tests of the plausibility of the narrative as well as careful attention to the scope conditions of the account" (1995: 391). From this perspective, a theory is evaluated primarily by the richness of its account, the degree to which it provides a close fit to empirical data, and the degree to which it results in novel insights (Eisenhardt, 1989b).

Although the discussion above reveals multiple definitions of "theory," even less agreement exists regarding the meaning of a "theoretical contribution." Many of the top journals in the management field demand that empirical articles make a contribution to management theory (Rynes, 2005; Sutton & Staw, 1995; Zedeck, 2003). However, many of the best-regarded theories in management originated in (and were initially tested in) books, book chapters, or theory outlets such as the *Academy of Management Review*. Although a variety of factors could explain that trend, one likely reason is that empirical articles lack the space needed to fully describe the elements of a theory (Barley, 2006). Given that limitation, what exactly does it mean for an empirical article to make a theoretical contribution?

The purpose of our study was threefold. First, we created a taxonomy that can be used to capture many of the facets of an empirical article's theoretical contribution. That taxonomy includes two dimensions: the extent to which an article builds new theory and the extent to which an article tests existing theory. Second, we used that taxonomy to examine trends in theoretical contributions over time, to see if the contributions offered by contemporary management articles differ from the contributions offered by management articles from decades past. Third, we examined whether an

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article's position on our taxonomy is predictive of the article's impact on the literature, as judged using citation rates.

The *Academy of Management Journal* was an ideal venue for examining such issues, for four primary reasons. First, the five-decade life span of the journal (from 1958 to 2007) provides an extended time frame for examining trends in theory testing and theory building. Second, *AMJ* is a "big tent" journal that publishes articles relevant to all divisions of the Academy of Management, and it publishes approximately equal numbers of micro and macro articles (Biehl, Kim, & Wade, 2006; Schminke & Mitchell, 2003; Wiseman & Skilton, 1999). Third, *AMJ* is one of the most influential journals in management, per recent studies of journal citations (Podsakoff, MacKenzie, Bachrach, & Podsakoff, 2005). Fourth, *AMJ* has emphasized issues of theoretical contribution throughout its existence, with its editors frequently using the "Information for Contributors" and "From the Editors" sections to describe their expectations for theory (e.g., Beyer, 1985; Eden, 2004; Tsui, 1999).

THE THEORETICAL CONTRIBUTION OF EMPIRICAL ARTICLES

One way that empirical articles can make theoretical contributions is to test theory. The authors of empirical articles that follow the hypothetico-deductive model use theory to formulate hypotheses before testing those hypotheses with observations (Hempel, 1966; Popper, 1965). Platt (1964: 46) described the importance of theory testing in quoting the noted biologist W. A. H. Rushton, who wrote, "A theory which cannot be mortally endangered cannot be alive." Indeed, one could argue that theory testing is particularly important in management because some of the most intuitive theories introduced in the literature wind up being unsupported by empirical research. Building on an earlier review (Miner, 1984), Miner (2003) rated the estimated scientific validity of 73 theories found in the management literature. A set of organizational behavior and strategic management scholars rated the perceived importance of the theories to the management literature, with the author rating the estimated scientific validity of each theory. Of the 73 theories identified in the review, only 25 were rated as high in scientific validity. Such results illustrate the importance of theory testing, as such testing can temper enthusiasm for appealing but invalid models.

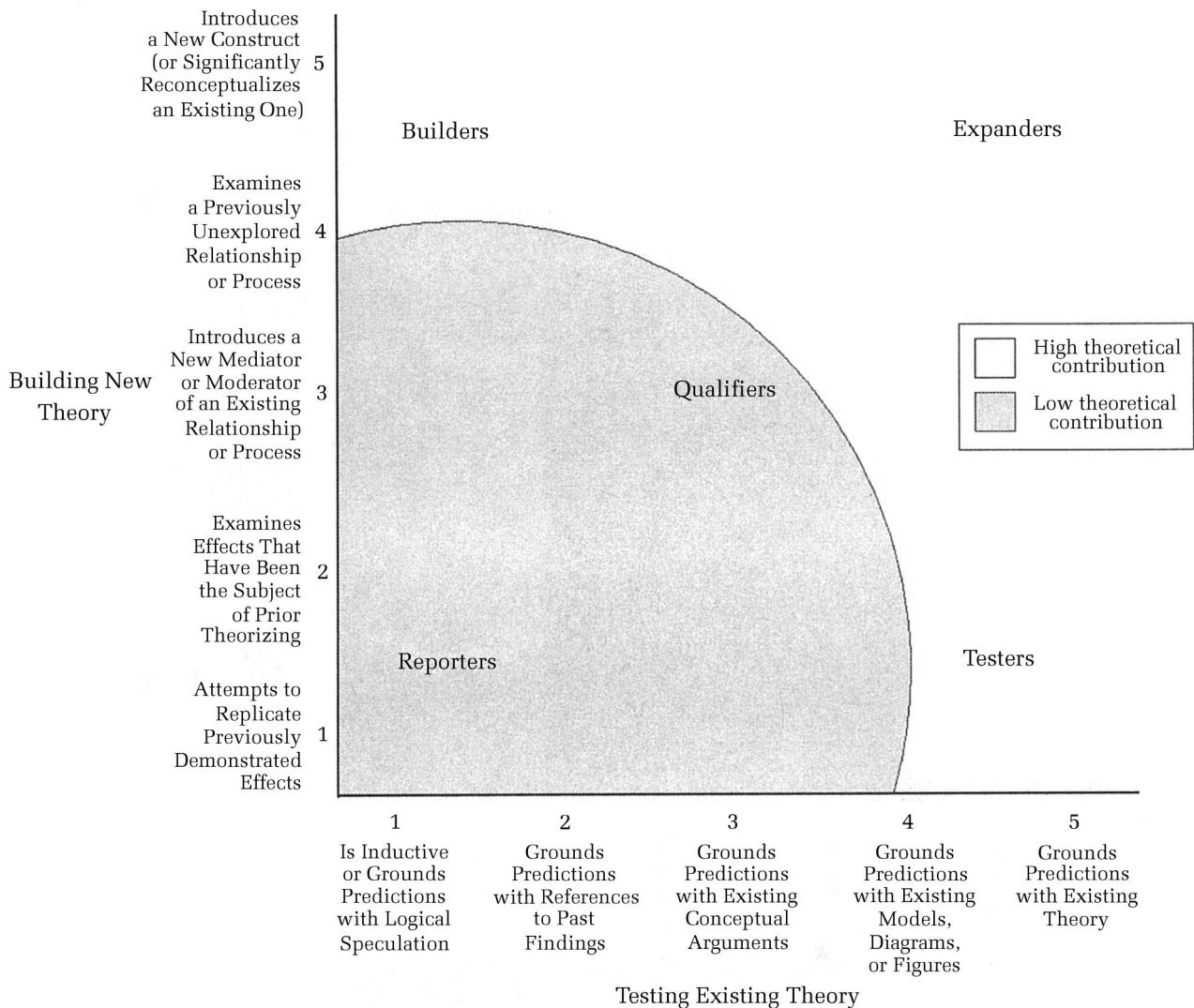
Another way that empirical articles make a theoretical contribution is by building theory. Empirical articles that follow the inductive model begin

with observations that the authors use to generate theory through inductive reasoning (Chalmers, 1999). Inductive studies can come in a number of forms. For example, theory building from cases involves using empirical evidence from one or more cases to create theoretical constructs and propositions (Eisenhardt, 1989b; Eisenhardt & Graebner, 2007). Grounded theory involves an iterative process of collecting and analyzing data in order to build a theory about how actors interpret their daily realities (Glaser & Strauss, 1967; Locke, 2002; Suddaby, 2006). Ethnography involves gaining first-hand experience with a research setting in order to build a theory that describes the views of those under study (Atkinson, Coffey, Delamont, Lofland, & Lofland, 2002). Regardless of the specific methods used, inductive empirical articles typically conclude with a set of propositions that summarize the resulting theory.

Of course, hypothetico-deductive empirical articles can also build theory, though typically in a different fashion. Early tests of a theory are typically concentrated on establishing the validity of the theory's core propositions. In subsequent tests, researchers begin exploring the mediators that explain those core relationships or the moderators that reflect the theory's boundary conditions. Eventually, in yet further tests they begin expanding the theory by incorporating antecedents or consequences that were not part of the original formulation. Weick (1995) described how empirical articles can provide "interim struggles" that can help inch scholars forward toward stronger theories. In this way, the findings, hypotheses, and diagrams found in a given empirical article might not comprise true theory (Sutton & Staw, 1995), but they may move the theorizing in a literature toward maturity (Weick, 1995). Over time, a stream of such studies can provide the inputs for more comprehensive theorizing. For example, the first full explication of goal setting theory was based on 22 years of empirical studies (Locke & Latham, 2004).

Figure 1 introduces a taxonomy that combines the dual components of an empirical article's theoretical contribution: theory building and theory testing. As the arc in the figure shows, we suggest that an empirical article can offer a strong theoretical contribution by being strong in theory building, strong in theory testing, or strong in both. We also suggest that the two components can be used to classify empirical articles into five discrete categories, which we refer to as *reporters*, *testers*, *qualifiers*, *builders*, and *expanders*. Builders, testers, and expanders tend to be higher in their theoretical contribution, whereas reporters and qualifiers tend to be lower in their theoretical contribution.

FIGURE 1
A Taxonomy of Theoretical Contributions for Empirical Articles



Before describing our taxonomy in more detail, it is important to note two of its limitations. First, as with any taxonomy, ours can be accused of collapsing meaningful distinctions in the interest of parsimony. After all, taxonomies—like theories—are attempts to eliminate some of the complexity found in the real world (Bacharach, 1989). Our intention was not to capture every nuance of theory building and theory testing, but rather to create a tool that could be used to chart trends in theoretical contributions over time. Second, Figure 1 only captures *what empirical articles are intended to do*—it does not capture *how well they actually do it*. One could conceive of a third axis that captures how interesting a new construct is, how much a new relationship adds to a literature, how rigorously a theory is tested, or the degree to which the mere writing of a paper makes a contribution in and of itself, apart

from the actual findings presented. These sorts of issues are clearly critical to the quality of an article’s theoretical contribution and are likely to be significant predictors of scholarly impact. Unfortunately, coding such issues requires an in-depth content expertise that is lacking in a journalwide review of this type.

Theory Building

The vertical axis of Figure 1 describes levels of theory building. Our conceptualization of theory building captures the degree to which an empirical article clarifies or supplements existing theory or introduces relationships and constructs that serve as the foundations for new theory. Many of the arguments used to describe the degrees of theory building on the vertical axis were inspired by

Whetten's (1989) discussion of what constitutes a theoretical contribution. Although Whetten (1989) was focusing specifically on the qualities of a strong *AMR* submission, many of his arguments are also applicable to theory building in empirical articles.

The first two points on our theory building axis represent relatively low levels of theory building. Replications are attempts to cross-validate the findings of earlier empirical studies. Lykken (1968) distinguished between operational replication, in which a researcher attempts to duplicate all the details of another published study's methods, and constructive replication, in which a researcher deliberately avoids imitation of the earlier study's methods to create a more stringent test of the replicability of the findings (see also Eden, 2002; Tsang & Kwan, 1999). Constructive replications are clearly vital for establishing the external validity of a study's findings (Cook & Campbell, 1979; Hendrick, 1991; Rosenthal, 1991) and key to the accumulation of scientific knowledge (Amir & Sharon, 1991). However, they offer neither new concepts nor original relationships (Tsang & Kwan, 1999).

The next point on our theory building axis represents studies that examine effects that have been the subject of prior theorizing but not of prior empirical study. Like replications, these studies do not add to the ideas present in existing theory, nor do they introduce new relationships or constructs. However, they do open important new avenues for theory-driven research. As Whetten (1989) argued, a theoretical model is most useful for guiding research when the relationships it describes have not yet been tested. Unfortunately, many of the theories that are built are never formally tested. Kacmar and Whitfield (2000) reviewed articles that cited 70 *AMJ* and *AMR* articles. The results indicated that the 70 articles had been cited over 1,500 times but that the theoretical propositions they offered had rarely been tested in the reviewed work. Indeed, only 9 percent of the *AMR* articles that were cited in a given paper were actually tested in that paper. These results reveal the importance of conducting an initial test of a previously built theory, so that the theory is more likely to become the focus of future research.

The third point on our theory building axis represents a moderate level of theory building—articles that introduce a new substantive mediator or moderator of an existing relationship or process. In Whetten's (1989) terms, these articles involve adding a new "what" (i.e., a construct or variable) to an existing theory in order to describe "how" a relationship or process unfolds or "where," "when," or "for whom" that relationship or process is likely to

be manifested. Such articles represent a moderate level of theory building because they do clarify or supplement existing theory. However, Whetten (1989) suggested that adding one or two variables to an existing model may not fundamentally alter the core logic of an existing theory.

The next two points on our axis represent high levels of theory building. Articles that examine a previously unexplored relationship or process can serve as the foundation for brand new theory. In describing *AMR* submissions that make strong theoretical contributions, Whetten (1989) noted that editors ask, What's new?—specifically gauging the degree to which a submission changes current thinking. The more a manuscript represents a radical departure from the extant literature, the more the field is impacted by the ideas presented within it. Research suggests that this emphasis on novelty extends to reviews of empirical articles. For example, Beyer, Chanove, and Fox's (1995) analysis of *AMJ* review process decisions between 1984 and 1987 revealed that articles were more likely to be accepted by reviewers and editors when the authors claimed that their content was novel.

Articles that introduce a completely new construct (or significantly reconceptualize an existing one) have the potential to be even more novel. The introduction of a new construct creates a radical departure from existing work by generating a number of new research directions that can shape future thinking. New constructs also represent an original and unique contribution on the part of authors, as opposed to new relationships between concepts already described, though not necessarily linked, in past research. Of course, a critical issue with such studies is whether the construct in question is *really new* or whether it represents "old wine in new bottles" (Spell, 2001). As in other areas of science, there is an ebb and flow to the life cycle of areas of inquiry in management, with previously dormant ideas being recycled and repackaged as new ones.

Theory Testing

The horizontal axis of Figure 1 describes levels of theory testing. Our conceptualization of theory testing captures the degree to which existing theory is applied in an empirical study as a means of grounding a specific set of a priori hypotheses. Many of the arguments used to describe the degrees of theory testing on the horizontal axis were inspired by Sutton and Staw's (1995) discussion of "what theory is not." Specifically, the intermediate points on the axis represent circumstances in which an article uses something other than theory to ground hy-

potheses. Although these “theory substitutes” fall short of supplying all the ingredients described in Campbell’s (1990) definition, they can be arrayed on a continuum ranging from “furthest from theory” to “closest to theory” (Weick, 1995).

The first two points on our theory-testing axis represent low levels of theory testing. Empirical articles that follow the inductive model do not include a priori hypotheses as a starting point, instead emphasizing the creation of propositions that can be tested in future studies. Such articles may draw on existing theory to trigger research questions or guide the categorizing of observations (Glaser & Strauss, 1967; Locke, 2002; Suddaby, 2006), as Weick observed when noting that his theorizing on wildland firefighting was done “with a head full of theories” (2007: 16). However, the data that are gathered are not used to explicitly test those theories (Eisenhardt, 1989b; Glaser & Strauss, 1967; Locke, 2002; Suddaby, 2006). Empirical articles that follow the hypothetico-deductive model may also be low in theory testing when they advance a priori hypotheses that are rooted only in logical speculation. Theory testing may be absent from such articles simply because no existing theory is relevant to the relationships of interest—giving the articles somewhat of an exploratory character.

The second point on our theory-testing axis represents empirical articles in which predictions are grounded with reference to past findings. Unlike the articles described in our preceding paragraph, these articles rely on the extant literature to ground a priori hypotheses. However, that grounding consists solely of lists of references to past findings, without explication of all the causal logic that might explain those findings. In Sutton and Staw’s words, “References are sometimes used like a smoke screen to hide the absence of theory” (1995: 373). A paragraph reciting the findings of past studies can convince the reader that the same sort of relationships should be observed in the current article, though an understanding of why those relationships might exist would still be lacking (Sutton & Staw, 1995).

Articles in which predictions are grounded in past conceptual arguments offer a moderate level of theory testing. Here authors attempt to explain why a given relationship or process should exist by describing the logic supplied by scholars in past research. However, those conceptual arguments have not been developed or refined enough to constitute true theory, nor do they paint a comprehensive picture of the phenomenon of interest. Nevertheless, describing some of the causal logic behind a given prediction supplies a critical ingredient that references to past findings do not (Sutton & Staw,

1995). A reader is able to understand the justification for a prediction while connecting that justification to the existing literature.

The next two points on our axis represent high levels of theory testing. Empirical articles in which predictions are grounded with existing models, diagrams, and figures come very close to testing actual theory (Weick, 1995). Sutton and Staw (1995) noted that diagrams or figures can explicitly delineate the causal connections among a set of variables, though the logical nuances behind the boxes and arrows is often lacking. Still, models, diagrams, and figures provide the symbolic representation of theory that Campbell (1990) described, and they often explicitly indicate the critical mediators and moderators that govern particular relationships or processes.

Finally, the furthest point on our axis represents articles that ground predictions with existing theory. In Sutton and Staw’s (1995) terms, true theory goes beyond models and diagrams by delving into the underlying processes that explain relationships, touching on neighboring concepts or broader social phenomena, and describing convincing and logically interconnected arguments. Although Sutton and Staw (1995) focused on the degree to which an empirical article contained such discussion within its pages, we emphasized the degree to which such discussion could be found in existing descriptions of a theory. Those existing descriptions may be found in prior empirical articles, theoretical articles, or books and book chapters that provide the space needed to fully explicate a theory (Barley, 2006). For example, an author who uses population ecology to ground the predictions set forth in an article can find some elements of the theory described in seminal journal articles (Hannan & Freeman, 1977) and will find deeper and more comprehensive treatments provided in books (Carroll & Hannan, 2000; Hannan & Freeman, 1989).

Five Discrete Article Types

If we consider the theory-building and theory-testing axes of our taxonomy simultaneously, five distinct types of articles are evident (see Figure 1). We define *reporters* as empirical articles that possess relatively low levels of both theory building and theory testing. For example, Martinson and Wilkening (1984) conducted an examination of rural-urban differences in job satisfaction, attempting to replicate research that failed to uncover a significant effect for that background variable. Their study served as a constructive replication of past research, and their three hypotheses were

grounded in references to the findings of the 12 prior studies on the topic. Similarly, Cochran and Wood (1984) reexamined the relationship between corporate social responsibility and financial performance using statistical tools and methods that were more advanced than those used in prior studies. Their study therefore represented a constructive replication that was based largely in references to the conflicting findings of past research.

Testers are defined as empirical articles that contain high levels of theory testing but low levels of theory building. An exemplar of this category is Lee, Mitchell, Wise, and Fireman's (1996) test of the unfolding model of voluntary turnover, a model that was introduced in *AMR* two years earlier (Lee & Mitchell, 1994). Lee et al. (1996) operationalized the processes described in the unfolding model to conduct its first direct test. Another representative example of the tester category is Stroh, Brett, Baumann, and Reilly's (1996) investigation of the effects of agency-theory-based variables on the compensation of middle managers. The authors noted that agency theory, which is focused on responses to risk on the part of an organization's principals and agents (Eisenhardt, 1989a; Jensen & Meckling, 1976), had rarely been tested with middle managers as the sample. They therefore drew on the theory's propositions to derive hypotheses about the proportion of an employee's compensation that was variable.

Qualifiers are defined as empirical articles that contain moderate levels of both theory testing and theory building. Such articles qualify previously established relationships or processes using conceptual arguments rooted in the extant literature. An exemplar of this category is Skarlicki, Folger, and Tesluk's (1999) examination of personality as a moderator of the relationship between organizational justice and counterproductive behaviors. The authors showed that the justice-counterproductive behavior link could be qualified by negative affectivity and agreeableness and supported those findings using conceptual arguments from the personality literature. Another article falling into the qualifier category is Nohria and Gulati (1996); these authors further examined the relationship between slack resources and organizational innovation. Responding to the conflicting findings of past research, they showed that the slack-innovation relationship was actually curvilinear, with innovation being hindered by either too little slack or too much slack.

We define *builders* as articles that are relatively high in theory building but relatively low in theory testing. Builders include inductive studies that focus on new constructs, relationships, or processes.

For example, Butterfield, Trevino, and Ball (1996) noted that, despite the vast literature on punishment, scholars had neglected to examine what managers actually thought and felt about punishing their employees. Using a series of interviews, the authors identified a number of concepts that helped capture how managers viewed punishment. Builders may also include hypothetico-deductive studies that examine a relationship that has not been the subject of prior theorizing or empirical research. For example, Oldham (1975) conducted the first study linking supervisor characteristics (e.g., attractiveness, power, trustworthiness) to subordinate acceptance of assigned goals. Because the relationship had not been explored previously, he grounded his predictions by extrapolating from studies linking supervisor characteristics to subordinate performance.

Finally, *expanders* are articles that are relatively high in both theory building and theory testing. Like builders, expanders focus on constructs, relationships, or processes that have not been the subject of prior theorizing, but they conduct that examination while testing some existing theory. In so doing, they expand a given literature by taking it in a new and different direction. For example, Bateman and Organ (1983) introduced the citizenship behavior construct in a reexamination of the "satisfaction causes performance" hypothesis. Drawing on social exchange theory (Blau, 1964) to ground their hypotheses, the authors showed that several facets of job satisfaction were significantly correlated with their measure of citizenship behavior. Similarly, Klassen and Whybark (1999) introduced a new construct, environmental technology portfolio, to reflect a firm's observable pattern of investment used to improve its environmental performance. Drawing on the resource-based view (Barney, 1991) to justify their predictions, the authors showed that the composition of furniture manufacturing plants' environmental technology portfolios was significantly related to the plants' performance.

THEORETICAL CONTRIBUTION: TRENDS AND IMPACT

Having described a tool for capturing the theoretical contribution made by empirical articles, we now focus our attention on how that contribution might evolve over time and how it might shape the scholarly impact of an article. Turning first to trends over time, we asked, How have the theoretical contributions offered by *AMJ* articles changed over the past five decades? Some predictions can be derived from the literatures on scientific paradigms

and schools of thought (e.g., Cole, 1983; Glick, Miller, & Cardinal, 2007; Kuhn, 1963; Lodahl & Gordon, 1972; McKinley, Mone, & Moon, 1999; Pfeffer, 1993). Scholars in this area have noted that scientific disciplines vary in their levels of paradigm development, as reflected in the degree of agreement about research questions, theory, and methodology in a given discipline (Lodahl & Gordon, 1972). Disciplines in which consensus exists enjoy a number of potential benefits, including more efficient communication among scholars and decreased barriers to collaboration (Pfeffer, 1993). Both communication and collaboration are critical ingredients for testing a theory, as such efforts require learning about existing theory and framing tests within the larger stream of work on that theory.

Disciplines with consensus on paradigms are also more likely to allow editorial teams to emphasize conceptual and methodological rigor over author characteristics when judging journal submissions (Pfeffer, 1993). That emphasis on rigor suggests that such disciplines will generate higher expectations regarding the theory present in empirical articles. Indeed, Cole (1983) suggested that consensus on paradigms results in an increased level of theory testing in a literature, and an increased rate of obsolescence as new theories replace flawed predecessors. Popper emphasized the importance of such obsolescence in writing: "It is not the accumulation of observations which I have in mind when I speak of the growth of scientific knowledge, but the repeated overthrow of scientific theories and their replacement by better or more satisfactory ones" (1965: 215). DiMaggio (1995) echoed such sentiments in noting that the primary contribution of a particular theory may be serving as a place holder until it inspires a more valid or useful one. In Kuhn's (1963) terms, shared paradigms provide the context for "convergent thinking." Such thinking is demonstrated when scientists conduct incremental research that tests and extends existing theory.

The arguments described above suggest that levels of theory testing should increase as management research attains strong consensus in its theoretical paradigms. Although scholars acknowledge that management has much more dissensus in paradigms than the hard sciences (Glick et al., 2007; Pfeffer, 1993), partially because management is interdisciplinary in nature (Rousseau, 2007), the critical question for our purposes concerns whether that fragmentation has decreased over the past five decades. Clearly the fact that Miner's (2003) review of scientific validity included 73 theories representing the management domain reveals a certain

lack of consensus on paradigms. However, the past few decades have seemed to bring an increased focus on a smaller set of theories in the micro and macro domains, including the theories judged by Miner (2003) to be highest in scientific validity.

For example, concepts and models rooted in goal setting theory (Locke, 1968), expectancy theory (Vroom, 1964), job characteristics theory (Hackman & Oldham, 1976), social exchange theory (Blau, 1964), and social learning theory (Bandura, 1977) can be found in many different areas of organizational behavior. Similarly, research driven by agency theory (Jensen & Meckling, 1976), resource dependence theory (Pfeffer & Salancik, 1978), the resource-based view (Barney, 1991), population ecology (Hannan & Freeman, 1977), and institutional theory (DiMaggio & Powell, 1983) can be found in many areas of organization theory and strategic management. As research efforts on these theories have progressed, they seem to have created more agreement on the theoretical paradigms that are represented in the pages of top management journals. At the same time, methodological trends, such as the increased use of structural equation modeling (e.g., Henley, Shook, & Peterson, 2006; James, Mulaik, & Brett, 2006), seem to have brought more consistency in the approaches used to test those theories. As a result, our first prediction was that theory-testing levels would exhibit an upward trend over the past five decades, a trend partially symptomatic of increasing agreement about key theories and appropriate methods.

What does that theory testing trend suggest about levels of theory building over time? Kuhn's (1963) classic term "essential tension" describes how the convergent thinking created by theoretical consensus actually fosters, rather than inhibits, the "divergent thinking" needed for path-breaking research. Specifically, Kuhn (1963) argued that scholars need to be well versed in a current way of thinking before they can recognize the gaps in scientific understanding that trigger the building of new theories. Similarly, McKinley et al. (1999) described how scientific schools of thought are established and maintained by a mix of continuity, reflecting theory testing, and novelty, reflecting new constructs, relationships, and research directions. Continuity is needed for scholars to understand how to work within a given school of thought, whereas novelty is needed to attract attention to and interest in the school. Taken together, these arguments suggest that theory building will also rise as the paradigms in the management literature become more mature.

The literatures on scientific paradigms and schools also describe the importance of theory test-

ing and theory building to the scholarly impact of journal articles. McKinley et al. (1999) drew on human information processing arguments to describe when information is more likely to be salient and memorable to scholars. Specifically, they suggested that novel information separates a given article from the multitude of articles competing for a scholar's attention. That suggestion echoes Davis's (1971) emphasis on generating theories that are not just "true" but "interesting." McKinley et al. (1999) further emphasized that an article must also include a bridge to a scholar's existing knowledge to be included in the "to be read" pile (see also Davis, 1971). Creating that bridge supplies the communication efficiency and decreased barriers to collaboration that can make a given article impactful to a stream of research (Pfeffer, 1993). We therefore expect that the theory building and theory testing associated with a given empirical article will be positively associated with its scholarly impact, as judged by citation rates.

To summarize, in our study we used the taxonomy shown in Figure 1 to examine three specific questions: (1) How has the level of theory building in empirical articles changed over time? (2) How has the level of theory testing in empirical articles changed over time? and (3) What are the implications of those trends for the scholarly impact of empirical articles? As noted at the outset, *AMJ* is an appropriate outlet for examining such questions because it has long emphasized theoretical contribution. In fact, one could argue that *AMJ* possesses an "organizational culture" that gives special priority to theoretical concerns. Schein (1985) described an organization's culture as existing simultaneously at three levels: assumptions (i.e., taken-for-granted beliefs), values (i.e., principles or standards with intrinsic worth), and artifacts (i.e., visible and tangible manifestations of those assumptions and values).

Journals, like organizations, can have cultures that impact the kinds of manuscripts that are submitted to them, how those manuscripts are written and framed, and how editors and reviewers receive and critique them. A secondary focus of our study was therefore to examine how trends in theory building and theory testing within *AMJ* corresponded to changes in the artifacts that might represent the journal's culture. The most salient tangible manifestations of *AMJ*'s values likely include its "Information for Contributors," which instructs authors on how to prepare journal submissions, and its "From the Editors," which provides a forum for editors to speak directly to the journal's readership (Beyer, 1987; Vance, 1967). Given the limitations of our data, we were unable to directly attribute any

shift in theory-building or theory-testing levels to changes in these journal artifacts. Still, we present this analysis in a descriptive and historical fashion in an attempt to provide some context for the trends observed in our data.

METHODS

Data and Sample

The data for our study were taken from *AMJ* articles published between 1963 and 2007. *AMJ*'s first issue was actually published in April 1958 (for historical reviews, see Adams and Davis [1986]; Kirkman and Law [2005]; Mowday [1997]; Schminke and Mitchell [2003]). However, the first five volumes of the journal contained few empirical articles, with many issues instead including essays, reviews, and discussions of management education issues. We therefore began our review in 1963, so that our coding of theory building and theory testing would be based on a larger set of articles. Our coding covered all issues of every third volume of the journal. As each *AMJ* editor serves a three-year term, our coding therefore included issues from every editorial term, beginning with Dalton McFarland (1961–63) and ending with Sara Rynes (2005–07). We included the first five issues of 2007 in our review to be as current as possible. In all, the sample included 16 volumes, 75 issues, and 770 articles (*AMJ* volumes included four issues until 1991, moved to five in 1992, then began including six issues in 1993). Of those 770 articles, 667 were empirical articles that could be coded on theory building and testing. The remaining 103 articles were methods pieces, introductions to special research forums, and conceptual articles written before the launch of *AMR* in 1976.

Procedures

We used the theory-building and theory-testing axes shown in Figure 1 to code the articles. Both axes were conceptualized as "nearly interval" scales (Schwab, 2005), with the anchor descriptions in the figure used to reduce ambiguity, as in a behaviorally anchored rating scale (Smith & Kendall, 1963). The first step in data collection involved ensuring that the scales in Figure 1 would allow us to code the *AMJ* articles in a reliable manner. To check reliability, both authors coded articles from the 1983 volume—a volume that was not included in our review. This volume included 50 empirical articles. We checked interrater reliability using the ICC(1) form of the intraclass correlation (James, 1982; Shrout & Fleiss, 1979). The

magnitude of the ICC(1) can be interpreted as the reliability associated with a single assessment of an article's building or testing rating, with high values being around .30 (Bliese, 2000). The ICC(1) for our theory building rating was .51, and the ICC(1) for our theory testing rating was .59. Having established adequate reliability, the first author coded half of each issue included in our review, and the second author coded the other half of those same issues.

We coded using paper copies of all articles so that notes could be recorded. When coding theory building, we noted when new or reconceptualized constructs were being introduced. This was most often evident when a sentence introduced and defined a new term but lacked citations to past articles. Citing existing and still-relevant definitions of a concept in the management literature, even if these definitions were only in a second-tier journal article or a book chapter, typically prevented an article from being coded as introducing a new construct. Two other points should be noted about our coding of theory building. First, in coding an article as forwarding a new moderator of an existing relationship or process, we used a broad definition of moderation, including identifying curvilinear effects or exploring variations in effects over time. Second, if a mediator or moderator of an existing effect had been the subject of prior research, that article was coded as an attempt to replicate previously examined findings.

When coding theory testing, we noted when a particular model or theory was being applied to ground predictions. Two points should be noted about our coding of theory testing. First, we focused our coding primarily on the sections used to ground an article's a priori hypotheses. This focus was meant to ensure that an author was using a given theory in a substantive fashion rather than merely including some citations to theory in the opening of his or her paper. Second, articles that followed an inductive model and lacked explicit a priori hypotheses were rated as low on theory testing. As noted earlier, in writing such articles authors may have drawn on existing theory to guide their research, but the data that were gathered were not used to explicitly test those theories (Eisenhardt, 1989b; Glaser & Strauss, 1967; Locke, 2002; Suddaby, 2006).

In many cases, empirical articles actually represented blends of different theory-building and theory-testing components. For example, an article might describe an examination of a previously unexplored relationship as a relatively minor facet of a study while focusing more attention on replicating previously examined effects. Alternatively, an article might present some theory-grounded hy-

potheses and describe others as based on past findings. In such cases, in coding we averaged ratings on the multiple components while giving more weight to the ones that were more central to a focal article. As a result, we allowed our coding to include half-points in addition to integers (1.5, 2.5, 3.5, 4.5).

For analyses involving the five discrete categories in Figure 1, we used the following computations: *Reporters* were articles that received a rating of 1 or 2 on theory building and a 1 or 2 on theory testing. *Testers* were articles that received a 1 or 2 on theory building and a 4 or 5 on theory testing. Articles that received from 2.5 to 3.5 on theory building and from 2.5 to 3.5 on theory testing were categorized as *qualifiers*. Articles that received a 4 or 5 on theory building and a 1 or 2 on theory testing were categorized as *builders*. Finally, *expanders* were articles that received a 4 or 5 on theory building and a 4 or 5 on theory testing.

We also printed all of *AMJ*'s "From the Editors" sections (originally called "Editorial Comments") and "Information for Contributors" sections (originally called "Suggestions to Authors"). We noted cases in which these sections articulated the journal's policy on theoretical contributions. Some of the cases concerned a change or adjustment to the policy, whereas others were efforts to clarify or deepen potential authors' understanding of the existing policy. Appendix A summarizes the most significant changes in *AMJ*'s "Information for Contributors" over the past five decades. The Appendix includes the editor who originally crafted each statement, the years in which the statement was in effect, and an excerpt relevant to the issue of making a theoretical contribution.

Finally, we assessed the impact of empirical articles using citation counts from the Institute for Scientific Information's (ISI) Social Sciences Citation Index (SSCI). The SSCI provides citation counts for articles published in thousands of journals since 1954. It therefore includes data on all *AMJ* volumes. Citation counts are a commonly used metric for assessing the impact, quality, and scientific merit of journal articles and have been used to gauge the relative prominence of scholarly journals (Podsakoff et al., 2005; Tahai & Meyer, 1999) and the effects of article, author, and journal-based variables on article influence (Judge, Cable, Colbert, & Rynes, 2007).

RESULTS

Descriptive Statistics

Table 1 presents the means, standard deviations, and zero-order correlations among our theory-

TABLE 1
Descriptive Statistics and Zero-Order
Correlations^a

Variable	Mean	s.d.	1	2	3
1. Theory building	2.52	1.13			
2. Theory testing	3.10	1.19	.15*		
3. Citations	31.45	40.70	.00	.09*	
4. Year	26.92	11.33	.51*	.41*	-.06

^a $n = 667$ empirical articles. Year ranges from 0 for 1968 to 44 for 2007.

* $p < .05$

building and theory-testing numbers, along with article citations and coded years (ranging from 0 for 1963 to 44 for 2007). The theory-building mean was 2.52 (s.d. = 1.13), indicating that the typical article published in *AMJ* during our five-decade span either examined effects that had been the subject of prior theorizing or introduced a new mediator or moderator of an existing relationship or process. The theory-testing mean was 3.10 (s.d. = 1.19), indicating that in the typical article past conceptual arguments were utilized as a means of grounding hypotheses. Table 1 also reveals a weak positive correlation between theory building and theory testing ($r = .15$), suggesting that levels of the two facets of a theoretical contribution are largely independent. The strong positive correlations between

coded year and theory building and theory testing suggest that more recent articles included higher levels of the two facets. We explore those trends more fully below.

Trends in Theory Building and Theory Testing over Time

Figure 2 presents the trends in theory-building and theory-testing levels from 1963 to 2007. It should be noted that the 1963 and 1966 averages are based on only 3 and 5 empirical articles, respectively. The 1969 and 1972 averages are based on 17 and 16 studies, with the remaining 12 coded years averaging 52 studies. As expected, the trend moves upward for theory building after an initial decline during the first few editorial terms. A one-way analysis of variance (ANOVA) revealed a significant effect of publication year on theory-building levels ($F[15, 666] = 18.83, p < .001$). Figure 2 also illustrates a fairly steady upward trend for theory testing. A one-way ANOVA showed that the theory testing trend was also statistically significant ($F[15, 666] = 9.98, p < .001$).

Another way of examining these trends is to explore the relative frequencies of the reporter, qualifier, builder, tester, and expander categories over time. Figure 3 summarizes these category trends. The graph reveals a decline in the frequency of

FIGURE 2
Trends in Theory Building and Testing from 1963 to 2007

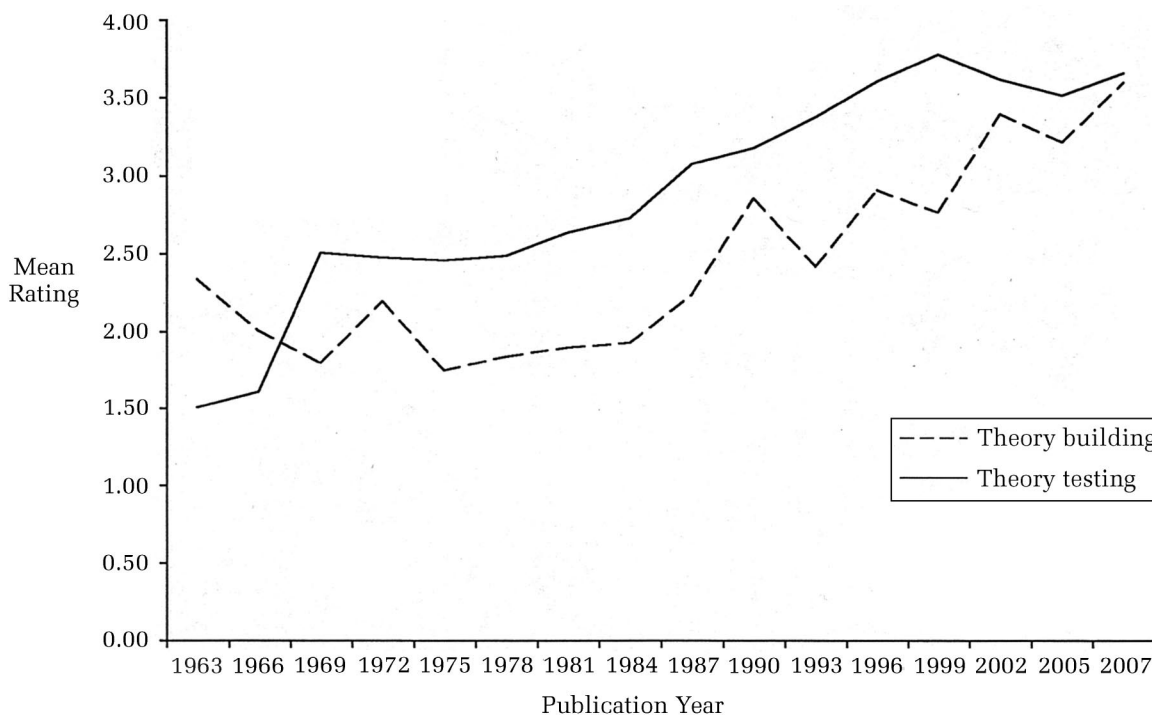
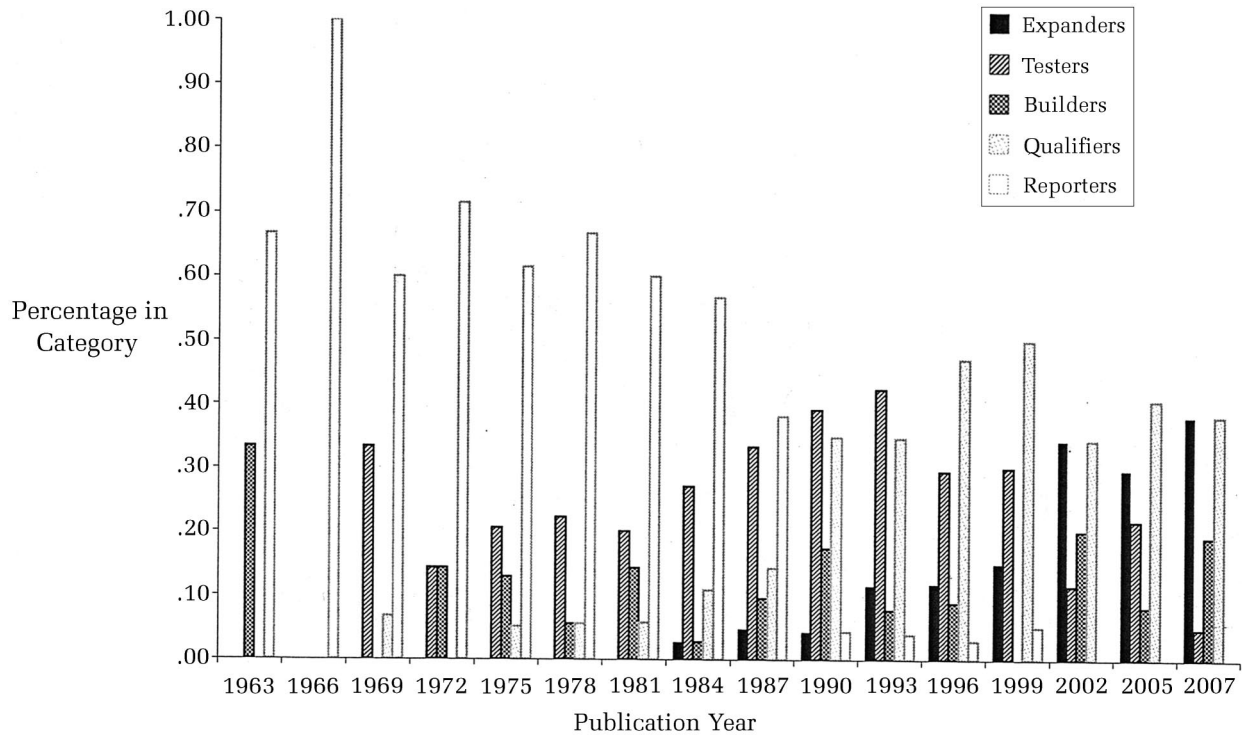


FIGURE 3
Trends in Article Types from 1963 to 2007



reporters over time, with those articles filling around 70 percent of early volumes in the 1970s and early 1980s before declining to a handful in the 1990s and none in the 2000s. A chi-square test showed that this trend was statistically significant ($\chi^2[df = 15, n = 667] = 166.86, p < .001$). A significant increase in qualifiers was observed: only a handful of these were published in the late 1970s and 1980s before they rose to 40 percent of a typical volume in the late 1990s and 2000s ($\chi^2[df = 15, n = 667] = 45.32, p < .001$). The figure also reveals an increase in expanders from the late 1990s to the 2000s, with their representation reaching a peak of 30–40 percent of a typical volume in the 2000s ($\chi^2[df = 15, n = 667] = 56.45, p < .001$). In contrast, there was no significant change in the representation of either builders ($\chi^2[df = 15, n = 667] = 18.63, n.s.$) or testers ($\chi^2[df = 15, n = 667] = 19.63, n.s.$) over time. Builders hovered around a mean of 6 percent of a volume, with no detectable trend taking place. Testers oscillated around a mean of 14 percent of a volume, though they seemed to be declining from the mid 1990s into the 2000s.

Our analyses of *AMJ*'s "Information for Contributors" and "From the Editors" showed that changes in the journal's communication about theory seemed to coincide with shifts in building and test-

ing levels. During the 1960s, the diversity in articles likely made it difficult for the journal to develop an identity, as many types of articles were included that are not part of contemporary volumes (e.g., essays, conceptual articles, management education pieces). Vance provided one of the first explicit articulations of the journal's "big tent" philosophy, noting in a "From the Editors" that "as space permits, we will try to include the researched endeavors of classicists and iconoclasts, quantifiers and verbalizers, eclectics and functionalists, empiricists and conceptualists, behaviorists and nonconformists" (1967: 7). Although no explicit mention was made of theory, that profile clearly allowed for several different mixes of theory building and theory testing. The "Information for Contributors" statements authored by Dauten in 1958 and Scott in 1970 did explicitly mention theory, though they included no details on what constituted a theoretical contribution (see the Appendix).

The first significant evolution in the "Information for Contributors" occurred during Miner's term, and the version of the statement Miner authored stayed in effect from 1973 to 1984. The updated statement now explicitly referenced the testing of theoretical propositions, while noting that exploratory research and replications were still welcome. Two other historical points about Min-

er's term seem relevant. First, the "research note" category was introduced in 1973 and would continue to exist until 2005. As might be expected, given the description of research notes in the "Information for Contributors" in the Appendix, those articles tended to have lower levels of theory building. Specifically, the 193 research notes in our data averaged a 2.19 for theory building as compared to an average of 2.65 for the 474 articles ($t[665] = 4.82$, $p < .001$). No significant differences were found for theory testing, however, with 3.01 for research notes as compared to 3.14 for articles ($t[665] = 1.34$, n.s.). Second, Miner's term led into the launch of *AMR*, a companion outlet for theory building articles. Taken together, these events may have contributed to the high levels of reporters and testers observed in the 1970s and 1980s.

The next major evolution in the "Information for Contributors" occurred during Beyer's term, and the statement she wrote stayed in effect from 1985 to 1996. For the first time, the statement explicitly referred to both theory building and theory testing, using words such as "develops" and "tests." In her inaugural "From the Editors" essay, Beyer (1985) noted hearing criticisms that *AMJ* was "dull" and "uninteresting," and she promised to consider interest to readership as a criterion for accepting manuscripts. Elsewhere she described a lack of convincing theoretical grounding as a major reason for manuscripts being rejected, noting, "Even studies that do not intend to advance theory must be placed within some body of theory to make them scientifically meaningful" (Beyer, 1987: 624). Such sentiments coincided with a sharp decline in the number of reporters and a general increase in theory-building and theory-testing levels.

The transition from Tsui's term to Northcraft's term brought a now familiar element to *AMJ*'s "Information for Contributors": the statement that articles must make a strong theoretical contribution. The revised statement, in effect from 1999 to 2004, also departed from previous volumes in two other respects: Research notes were now expected to make theoretical contributions (albeit smaller in scope), and replications and incremental research were more explicitly discouraged. In addition to this shift, no fewer than six "From the Editors" essays under Tsui's, Northcraft's, and Lee's terms were used to flesh out the theory requirement in more detail (Bergh, 2003; Eden, 2002, 2004; Lee, 2001; Northcraft, 2000; Rynes, 2002; Schminke, 2004; Tsui, 1999). This emphasis corresponded with increases in theory building and the first clear rise in articles in the expander category.

The last major revision to the "Information for Contributors" occurred early in Rynes's term, in

2005. Although the bolded theoretical contribution statement remained, the potential avenues for making that contribution were expanded to include theory building using inductive or qualitative methods, the first empirical test of an existing theory, meta-analysis with theoretical implications, and constructive replications that clarified the boundaries of a theory. This more multifaceted conceptualization of theoretical contribution echoed earlier critiques noting that *AMJ* had emphasized novelty and originality at the cost of tests of existing theory (Eden, 2004). It also coincided with editorial board member perceptions that the journal should loosen the theory requirement while striving to publish more interesting and innovative research (Rynes, 2005). Comparisons of 2007 and 2005 indicate that these changes have been associated with rises in both theory building and theory testing, along with peak levels of expander articles.

Theory Building, Theory Testing, and Article Impact

Table 2 presents the results of regression analyses in which we assessed the relationship between theory building, theory testing, and article citations. Our analyses revealed an inverted U-shaped relationship between coded year and citations, with articles in the 1950s and 1960s garnering few citations and articles in the late 1990s and 2000s also receiving few citations. We therefore controlled for squared and cubic versions of coded year in the first step of our regressions, in which those variables explain 24 percent of the variance in citations. The effects of theory testing and theory building are modeled in step 2, where those ratings explain an incremental 1 percent of the variance. The unstandardized regression coefficients reveal that a one-unit increase in theory building or theory

TABLE 2
Theory Building, Theory Testing, and Article Impact^a

Regression Step and Variable	Citations		
	R^2	ΔR^2	b
1. Year	.24*	.24*	0.24
Year squared			0.20*
Year cubed			-0.01*
2. Theory building	.25*	.01*	3.72*
Theory testing			3.34*

^a $n = 667$ empirical articles. Year ranges from 0 for 1968 to 44 for 2007.

* $p < .05$

testing ratings was associated with approximately 3.5 more citations per empirical article. Note that the articles in our database averaged 31.45 citations (s.d. = 40.70), making an increment of 3.5 citations significant from a practical perspective. We explored the effects of a theory testing by theory building product term, but that analysis revealed no significant interaction effect.

Another way of examining these trends was to explore the citations associated with the reporter, qualifier, builder, tester, and expander categories. To test these relationships, we selected only the articles that we had coded into those five categories, omitting articles that earned low-moderate, moderate-low, moderate-high, or high-moderate classifications on the theory-building and -testing axes in Figure 1. Limiting our analyses to the five named categories resulted in a sample of 392 empirical articles.

Table 3 shows the results of our regression analyses. The three coded year terms explained 26 percent of the variance in citations. The four dummy codes representing article categories explained an additional 3 percent, with reporters as the referent group. The unstandardized regression coefficient for testers shows that articles in that category garnered 16 more citations on average than reporters, with builders receiving 13 more citations on average. The citation advantage for qualifiers and expanders was larger, with articles in those categories receiving an average of 23 more citations than reporters.

DISCUSSION

What stands out most from the results of our study is the increase in both theory building and

theory testing in management research, as represented by the 16 volumes of *AMJ* included in our review. The level of theory building in 2007 was more than one and a half standard deviations higher than its lowest level (in 1975), and the level of theory testing was almost two standard deviations higher than its lowest level (in 1963). These trends have impacted the kinds of articles that find their way into the management literature. For example, the reporters that were so common in the 1970s and 1980s have become largely extinct in the pages of *AMJ*, replaced by articles that make a more significant theoretical contribution.

In particular, reporters have been replaced by articles that blend theory building and theory testing. These include qualifiers, which have moderate levels of both, and expanders, which have high levels of both. Our citation analyses revealed that qualifiers and expanders are the two most impactful kinds of articles published in *AMJ*, garnering an average of 23 more citations than reporters. Such articles enjoy additive combinations of the typical citation advantages associated with increased theory building and testing: 3–4 additional citations, in our data. We suspect that the building-testing balance explains that impact, as it represents a balance between novelty and continuity. As McKinley et al. (1999) described, novelty—in the form of a new construct or relationship or a new mediator or moderator—attracts attention to a given article. Continuity, in turn, provides a bridge to scholars' current understanding, increasing the likelihood that an article will be read.

Of course, expanders and qualifiers were not the only types of articles that were significantly more impactful than reporters. Testers enjoyed around 16 more citations on average than reporters and likely benefited from continuity with established literatures and paradigms (McKinley et al., 1999). However, the level at which testers are published has not changed significantly over the past five decades in *AMJ*, and it even seems to have decreased in recent years. Is that problematic, given the critical role that early tests play in the establishment of a new theory, and the importance of a series of constructive replications to the accumulation of knowledge (Amir & Sharon, 1991; Hendrick, 1991; Rosenthal, 1991; Tsang & Kwan, 1999)? To explore that question, we examined *AMJ*'s relative presence in the literatures of 12 major micro theories and 7 major macro theories. Tables 4 and 5 present these results. We drew the theories from a combination of sources, including Miner's (2003) review, the list of theoretical areas that *AMJ* provides for authors to utilize during the online submission process, and the theories represented in

TABLE 3
Five Article Types and Article Impact^a

Regression Step and Variable	Citations		
	<i>R</i> ²	ΔR^2	<i>b</i>
1. Year	.26*	.26*	–1.21
Year squared			0.29*
Year cubed			–0.01*
2. Qualifiers	.29*	.03*	23.30*
Builders			12.64 [†]
Testers			15.89*
Expanders			22.16*

^a *n* = 392 empirical articles. Year ranges from 0 for 1968 to 44 for 2007; *b*'s are judged with reporters as the reference group.

[†] *p* < .10

* *p* < .05

TABLE 4
Citations to Micro Theories in AMJ Articles^a

Micro Theories	Academy of Management Journal	Journal of Applied Psychology	Personnel Psychology	Organizational Behavior and Human Decision Processes
1. Job characteristics theory (Hackman & Oldham, 1976)	.0172 (32/1,858)	.0300 (89/2,966)	.0086 (34/3,932)	.0087 (15/1,729)
2. Expectancy theory (Vroom, 1964)	.0064 (16/2,490)	.0122 (52/4,259)	.0016 (8/4,927)	.0188 (40/2,124)
3. Equity theory (Adams, 1963)	.0057 (14/2,464)	.0072 (30/4,185)	.0020 (11/4,903)	.0099 (36/2,124)
4. Goal setting theory (Locke, 1968)	.0089 (21/2,369)	.0195 (76/3,907)	.0021 (10/4,699)	.0129 (27/2,089)
5. Social exchange theory (Blau, 1964)	.0104 (26/2,490)	.0099 (42/4,259)	.0014 (7/4,927)	.0075 (16/2,124)
6. Social identity theory (Tajfel & Turner, 1979)	.0113 (19/1,679)	.0073 (19/2,620)	.0011 (4/3,577)	.0157 (24/1,529)
7. Social learning theory (Bandura, 1977)	.0083 (15/1,798)	.0137 (39/2,847)	.0031 (12/3,888)	.0073 (12/1,651)
8. Cognitive evaluation theory (Deci, 1972)	.0033 (7/2,135)	.0048 (17/3,531)	.0000 (0/4,304)	.0092 (18/1,961)
9. Path goal theory (House, 1971)	.0146 (32/2,192)	.0058 (21/3,630)	.0027 (12/4,504)	.0140 (28/1,998)
10. Transformational leadership (Burns, 1978)	.0075 (13/1,741)	.0099 (27/2,719)	.0011 (4/3,734)	.0019 (3/1,585)
11. Prospect theory (Kahneman & Tversky, 1979)	.0054 (9/1,679)	.0015 (4/2,620)	.0000 (0/3,577)	.0366 (56/1,529)
12. Social information processing theory (Salancik & Pfeffer, 1978)	.0190 (33/1,741)	.0162 (44/2,719)	.0080 (30/3,734)	.0145 (23/1,585)

^a Numbers in boldface indicate the journal with the highest levels of testing for a given theory. Words in boldface indicate the exact keywords used in the search.

TABLE 5
Citations to Macro Theories in AMJ Articles^a

Macro Theories	Academy of Management Journal	Administrative Science Quarterly	Strategic Management Journal	Organization Studies
1. Agency theory (Jensen & Meckling, 1976)	.0258 (48/1,858)	.0087 (17/1,945)	.0415 (63/1,518)	.0222 (15/676)
2. Resource dependence theory (Pfeffer & Salancik, 1978)	.0057 (10/1,741)	.0067 (12/1,798)	.0059 (9/1,518)	.0148 (10/676)
3. Transaction cost economics (Williamson, 1975)	.0088 (17/1,942)	.0030 (6/2,025)	.0389 (59/1,518)	.0547 (37/676)
4. Resource-based view (Barney, 1991)	.0292 (30/1,027)	.0011 (1/935)	.1537 (164/1,067)	.0429 (29/676)
5. Population ecology (Hannan & Freeman, 1977)	.0061 (11/1,798)	.0070 (13/1,864)	.0033 (5/1,518)	.0089 (6/676)
6. Institutional theory (DiMaggio & Powell, 1983)	.0181 (26/1,439)	.0134 (20/1,494)	.0147 (21/1,428)	.0488 (33/676)
7. Contingency theory (Lawrence & Lorsch, 1967)	.0083 (20/2,407)	.0018 (5/2,740)	.0138 (21/1,518)	.0178 (12/676)
8. Upper echelons theory (Hambrick & Mason, 1984)	.0508 (70/1,378)	.0174 (25/1,436)	.0642 (88/1,370)	.0296 (20/676)

^a Numbers in boldface indicate the journal with the highest levels of testing for a given theory. Words in boldface indicate the exact keywords used in the search.

the 16 volumes that we coded. Although our list is certainly not exhaustive, the theories represent many of the major schools of thought in the micro and macro areas of management.

To examine *AMJ's* relative presence in these literatures, we searched ISI's database using the bolded keywords in the tables, restricting the output to *AMJ*, three top micro journals (*Journal of*

Applied Psychology, *Personnel Psychology*, and *Organizational Behavior and Human Decision Processes*), and three top macro journals (*Administrative Science Quarterly*, *Strategic Management Journal*, and *Organization Science*). If the name of a theory was a viable search term, we used that name; otherwise the author string for the article introducing the theory was used (note that ISI's database does not include books or book chapters, so those sources cannot be used as search terms). The table presents the total number of "hits" in the database for a search term in each journal, relative to the total number of articles that had appeared in the journal since the first publication of the theory. For example, a search for "agency theory" yielded 48 hits in *AMJ*, out of 1,858 articles appearing in the journal from 1976 on.

Although the differences between journals are sometimes minor, the results reveal that *AMJ* tends to have the second most visible presence in micro theory literatures, typically trailing *JAP* and sometimes *OBHDP*. With respect to macro theories, *AMJ* tends to have either the second or third most visible presence; the journal leaders vary considerably across the theories. Of the 20 theories included in the tables, *AMJ* has the most visible presence for only three (social exchange theory, path goal theory, and social information processing). Of course, these results are largely dictated by *AMJ*'s "big tent" status, as it strives to maintain a balance of micro and macro articles (Schminke & Mitchell, 2003) while appealing to the membership of multiple Academy of Management divisions (Wiseman & Skilton, 1999). However, it may also be that the journal's culture, as represented in its "Information for Contributors" and "From the Editors," has discouraged the submission or acceptance of articles in the tester category. It may be that Rynes's revision of the "Information for Contributors," which encourages the submission of first empirical tests of a theory (Rynes, 2005; see also Eden, 2004), could ultimately increase the presence of testers. This does not appear to have occurred as of 2007, however.

Like testers, builders have remained a steady presence over the past five decades, though appearing recently at a lower mean level. They also enjoy a citation advantage relative to reporters, garnering 13 more citations on average. A number of calls for more qualitative submissions to *AMJ* seem to have increased the number of builders in the journal (Lee, 2001; Rynes, 2005; Suddaby, 2006), to the point where they outpaced testers in the last three volumes we coded. The increase in builders may also reflect the increased attention focused on publishing interesting research (Barley, 2006; Bar-

tunek, Rynes, & Ireland, 2006; Rynes, 2005). For example, in 2005 the journal added "interestingness, innovativeness, and novelty" as an explicit rating category on its reviewer rating form (Rynes, 2005), an action with a great deal of cultural significance.

One potential concern raised by an increased number of builders and expanders is construct proliferation—an already fragmented literature becoming even more so through the addition of new constructs (Barley, 2006; Pfeffer, 1993). A related concern is construct redundancy, whereby "new" constructs actually represent older concepts with new labels (Spell, 2001). Given the increase in expanders over time, we wondered whether the new constructs introduced in *AMJ* are vulnerable to such criticisms or whether they have truly expanded theoretical areas in meaningful ways. To explore this issue, we included the new and reconceptualized constructs uncovered in our review in Table 6 and supplemented that list with an inspection of the other volumes of the journal. Although Table 6 may not offer an exhaustive list, we believe it does reflect the vast majority of constructs introduced in *AMJ*.

The table includes many cases in which an existing concept was reconceptualized or redefined in the interest of guiding future research (e.g., Finkelstein, 1992; McAllister, 1995; Rindova, Williamson, Petkova, & Sever, 2005; Washington & Zajac, 2005). The table also includes cases in which a more specific version of a broader construct was introduced (e.g., Pierce, Gardner, Cummings, & Dunham 1989; Tierney & Farmer, 2002). Two noteworthy trends are evident in the table. First, some of the constructs have been very impactful to the management literature, most notably citizenship behavior (Bateman & Organ, 1983), affect- and cognition-based trust (McAllister, 1995), employee deviance (Robinson & Bennett, 1995), and relational demography (Tsui & O'Reilly, 1989). However, other constructs have had less impact, as judged using citations, and appear somewhat similar to existing constructs in the management literature. For example, Kahn's (1990) personal engagement is similar to a number of constructs, including job involvement, intrinsic motivation, and organizational commitment. Frese, Kring, Soose, and Zempel's (1996) personal initiative is similar to many existing forms of organizational citizenship behavior, as is Morrison and Phelps's (1999) taking charge construct. Finally, Duffy, Ganster, and Pagon's (2002) social undermining is similar to many aspects of employee deviance (Robinson & Bennett, 1995). Second, the rate of new and reconceptualized constructs being introduced appears to

TABLE 6
New Constructs Introduced in AMJ Articles

Construct	Definition	Citations
Competitive tension (Chen, Su, & Tsai, 2007)	The strain between a focal firm and a given rival that is likely to result in the firm taking action against the rival.	0
Cutthroat cooperation (Johnson, Hollenbeck, Humphrey, Ilgen, Jundt, & Meyer, 2006)	The type of cooperation seen among past competitors, as opposed to the type of cooperation seen among those who have always cooperated.	0
Expertness diversity (Van der Vegt, Bunderson, & Oosterhoff, 2006)	Differences in the level of expertise (i.e., "expertness") of team members.	0
Organizational reputation (Rindova, Williamson, Petkova, & Sever, 2005)	The degree to which stakeholders evaluate an organization positively on an attribute (perceived quality) and the degree to which an organization receives recognition in its field (prominence).	0
Servant leadership (Schneider, Ehrhart, Mayer, Saltz, & Miles-Jolly, 2005)	Leadership that communicates a commitment to high levels of service quality.	0
Organizational status (Washington & Zajac, 2005)	A socially constructed, intersubjectively agreed-upon and accepted ordering or ranking of individuals, groups, organizations, or activities in a social system.	2
Technological dynamism (Wu, Levitas, & Priem, 2005)	The rate of change in and the unpredictability of new technologies.	0
Transient slack (George, 2005)	Excess resources available after resource demands for operations have been met.	2
Creative self-efficacy (Tierney & Farmer, 2002)	The belief that one has the ability to produce creative outcomes.	15
Cultural competitiveness (Hult, Ketchen, & Nichols, 2002)	The degree to which supply chains are predisposed to detect and fill gaps between what the market desires and what is currently offered.	16
Intergenerational reciprocity (Wade-Benzoni, 2002)	Passing on benefits (or burdens) to future generations as a matter of retaliation for the good (or bad) received from past generations.	2
Relational job learning (Lankau & Scandura, 2002)	Increased understanding about the interdependence or connectedness of one's job to others.	18
Social undermining (Duffy, Ganster, & Pagon, 2002)	Behaviors intended to hinder, over time, the ability to establish and maintain positive interpersonal relationships, work-related success, and favorable reputation.	24
Symbolic isomorphism (Glynn & Abzug, 2002)	The resemblance of an organization's symbolic attributes to those of others within its institutional field.	13
Job embeddedness (Mitchell, Holtom, Lee, Sablinski, & Erez, 2001)	The extent to which people have links to other people, the extent to which their jobs and communities fit with their lives, and the ease with which links can be broken.	40
Ecological embeddedness (Whiteman & Cooper, 2000)	The extent to which a manager is rooted in the land.	9
Environmental technological portfolio (Klassen & Whybark, 1999)	An observable pattern of investment designed to improve a firm's environmental performance.	42
Taking charge (Morrison & Phelps, 1999)	Voluntary and constructive efforts to effect organizationally functional change with respect to how work is executed.	44
Personal initiative (Frese, Kring, Soose, & Zempel, 1996)	A behavior syndrome resulting in an individual's taking an active and self-starting approach to work and going beyond what is formally required in a given job.	70

TABLE 6
(Continued)

Construct	Definition	Citations
Affect- and cognition-based trust (McAllister, 1995)	Trust grounded in reciprocated interpersonal care and concern (affect-based) and individual beliefs about peer reliability and dependability (cognition-based).	278
Change schema (Lau & Woodman, 1995)	A mental map representing the knowledge structures of change attributes and relationships among different change events.	27
Employee deviance (Robinson & Bennett, 1995)	Voluntary behavior that violates significant organizational norms and in so doing threatens the well-being of an organization.	133
Archetypes (Greenwood & Hinings, 1993)	A set of structures and systems that reflects a single interpretive scheme.	81
Top manager power (Finkelstein, 1992)	The capacity of individual actors to exert their will as a function of structures, ownership, expertise, and prestige.	137
Personal engagement (Kahn, 1990)	The harnessing of organization members' selves to their work roles such that people employ and express themselves physically, cognitively, and emotionally during role performances.	75
Task revision (Staw & Boettger, 1990)	Taking action to correct a faulty procedure, inaccurate job description, or dysfunctional role expectation.	55
Organization-based self-esteem (Pierce, Garder, Cummings, & Dunham, 1989)	The degree to which organizational members believe that they can satisfy their needs by participating in roles within the context of an organization.	99
Relational demography (Tsui & O'Reilly, 1989)	The comparative demographic characteristics of members of dyads or work groups who are in a position to engage in regular interactions.	302
Citizenship behavior (Bateman & Organ, 1983)	Those gestures (often taken for granted) that lubricate the social machinery of the organization but that do not directly inhere in the usual notion of task performance.	226
Alienation (Korman, Wittig-Berman, & Lang, 1981)	Seeing a discrepancy between one's everyday behavior and one's self-image (personal alienation) and seeing the self as separated from others (social alienation).	45

be increasing in recent years, which is partially symptomatic of the increase in expanders in the 2000s. If interestingness, innovativeness, and novelty continue to be emphasized in management research, then it will be critical to ensure that new and reconceptualized constructs actually add value to the literature (Pfeffer, 1993; Spell, 2001).

Limitations

Our article has some limitations that should be noted. First, we reiterate our earlier points about the taxonomy in Figure 1. Not only does it collapse potentially meaningful distinctions in the interest of parsimony, but also, it captures only what au-

thors intended to do in their studies. Certainly some articles ground predictions in better theory than others, and some articles examine new constructs and relationships that are more important (and less redundant) than others. Indeed, we suspect that, if such "quality of execution" could be reliably coded, it would explain more variance in article citations than our theory-building and theory-testing categorizations. Our taxonomy also neglects the quality of authors' explication. Sutton and Staw (1995) argued that authors should describe exactly why a theory predicts what it does so readers do not need to consult other sources on the theory. Some authors clearly have a talent for writing that elevates the contributions of their articles

beyond their particular objectives. That writing, which is often most evident in Discussion sections, may create contributions not reflected in our coding.

Three other limitations of this study lay outside our taxonomy. First, our coding was limited to every third volume of *AMJ*. It remains an empirical question whether the trends observed in our data would hold with all volumes coded. Second, it may be that the trends observed in our data would have differed if other top management journals had been coded. As noted previously, journals develop their own particular cultures, which may alter the levels (and impact) of theory testing and building over time. Third, we utilized citation rates as a means of capturing the impact of empirical articles. A key limitation of citation counts is that they weigh each citation equally, regardless of the importance of the cited article to the citing manuscript (Kacmar & Whitfield, 2000). Citation counts are also driven by a number of factors that were not captured in our study, including specific methodological and article characteristics (Judge et al., 2007).

Conclusion

In their discussion of “what theory is not,” Sutton and Staw (1995: 380) raised the following question: Should management journals strive to publish innovative theory building and rigorous theory testing, or is trying for such a balance “a quixotic venture?” Our results suggest that it need not be a quixotic venture. The trends revealed in *AMJ* over the past five decades show that theory testing and theory building are not zero-sum ideals. Both represent key components of theoretical contribution that can coexist within a given empirical article and within a given stream of research. Moreover, both have their own unique impacts on the citations of scholarly works, and thus on the accumulation and sharing of knowledge.

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APPENDIX

The Evolution of Expectations about Theoretical Contribution in *AMJ*'s "Information for Contributors"

Editor Crafting the Statement	Years in Effect	Relevant Quotations about Theory Expectations
Paul M. Dauten	1958–69	The Academy is founded to foster the search for truth and the general advancement of learning through free discussion and research in the field of management. The interest of the Academy lies in the theory and practice of management, both administrative and operative.
William G. Scott	1970–72	The interest of the Academy of Management lies in management theory, research, teaching, and practice. To foster these interests, the <i>Journal's</i> objectives are: (1) the development of management research and theory that will help achieve the economic and social objectives of industrial societies; (2) the advancement of understanding about administrative leadership and behavior through research within the environment of such societies; (3) the enlargement of scholarly communication and cooperation among colleagues engaged in management research and theory.
John B. Miner	1973–84	The <i>Journal</i> publishes original research of an empirical nature either in the form of articles or as research notes. Although studies which serve to test either theoretical propositions or hypotheses derived from practice are of particular interest, exploratory work and survey research findings are also included. . . . For consideration in the <i>Research Notes</i> category, articles should not exceed ten double spaced typewritten pages in length, including tables. Replications, survey reports, and studies which fail to obtain significant results that might have been expected on other grounds are especially appropriate.
Janice M. Beyer	1985–96	In its articles, the <i>Journal</i> seeks to publish reports of research that develops, tests, or advances management theory and practice. All types of empirical methods—quantitative, qualitative, or combinations—are acceptable. . . . Atheoretical exploratory or survey research, methodological studies, replications or extensions of past research, and commentaries with new empirical content are also of interest for publication as research notes if they make an important contribution to knowledge relevant to management.

**APPENDIX
(Continued)**

Editor Crafting the Statement	Years In Effect	Exemplary Quotations about Theory Expectations
Anne S. Tsui and Gregory B. Northcraft	1999–2004	All articles published in the <i>Journal</i> must make a strong theoretical contribution. Submissions should reflect a clear understanding of the position of the contribution in the related organization and management literatures. Methodological articles are welcome to the extent that they contain an accompanying theoretical contribution. All articles published in the <i>Journal</i> must be clearly relevant to management theory and practice. The best submissions are those that identify both a compelling practical management issue and a strong theoretical framework for addressing it. . . . Manuscripts that offer an original theoretical and empirical contribution, but one that is small in scope, may be published as research notes. . . . Replications of previously published work and very incremental research rarely offer enough of a contribution to warrant publication. Authors should strive to be original, insightful, and theoretically bold; demonstration of a significant “value-added” advance to the field’s understanding of an issue or topic is critical to acceptance for publication.
Sara L. Rynes	2005–07	The mission of the <i>Academy of Management Journal</i> is to publish empirical research that tests, extends, or builds management theory and contributes to management practice. All empirical methods—including, but not limited to, qualitative, quantitative, field, laboratory, meta-analytic, and combination methods—are welcome. To be published in <i>AMJ</i> , a manuscript must make strong empirical and theoretical contributions and highlight the significance of those contributions to the management field. Thus, preference is given to submissions that test, extend, or build strong theoretical frameworks while empirically examining issues with high importance for management theory and practice. . . . Authors should strive to produce original, insightful, interesting, important, and theoretically bold research. Demonstration of a significant “value-added” contribution to the field’s understanding of an issue or topic is crucial to acceptance for publication. . . . All articles published in the <i>Academy of Management Journal</i> must also make strong theoretical contributions. Meaningful new implications or insights for theory must be present in all <i>AMJ</i> articles, although such insights may be developed in a variety of ways (e.g., falsification of conventional understanding, theory building through inductive or qualitative research, first empirical testing of a theory, meta-analysis with theoretical implications, constructive replication that clarifies the boundaries or range of a theory). Submissions should clearly communication the nature of their theoretical contribution in relation to the existing management and organizational literatures. Methodological articles are welcome, but they must contain accompanying theoretical and empirical contributions.



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