

Encyclopedia of Management Theory

Theory Development

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Within the field of management and organizational studies, an author's precise meaning of the term *theory* is often difficult to grasp, even for experienced readers. With the goal of informing the reading of this literature, this entry is divided into three sections. The first provides an overview of theory within the field of organizational and management scholarship, focusing on two broad topics: what is and isn't considered theory and different kinds of theory. It then focuses on the development (including by way of graphical modeling) of one kind of theory—referred to as middle-range—characterized as answers to questions of, Why? The second section traces the evolutionary nature of different “stages” of theorizing and theory enhancement. The final section provides a practical template for readers who wish to assess the nature of a theory as well as to construct better management theory themselves. Throughout the entry, the term *development* is used in both a descriptive (how to) and a prescriptive (making something better) manner. The first treatment focuses on the building blocks of middle-range theorizing; the second focuses on the improvement of middle-range theories.

[p. 850 ↓]

Fundamentals

What is and Isn't “Theory”?

In their classic 1995 article, Robert Sutton and Barry Staw specified “what theory is *not*.” Included in their list were references, data, variables, diagrams, and hypotheses. At the end of their treatise, the authors briefly addressed what theory is. Their depiction represents a fairly wide consensus within this field, and social science more generally:

Theory is the answer to queries of *why*. Theory is about the connections among phenomena, a story about why acts, events, structure, and thoughts occur. Theory emphasizes the nature of causal relationships, identifying what comes first as well as the timing of such events. (p. 378)

Some scholars consider theory as the answering of any question, while others focus on “process” questions pertaining to *how* something happened. In line with the view expressed by Sutton and Staw, the focus of this entry will be on questions of *why*, generally characterized as causal explanations. This naturally invites the follow-up question: What is and isn't an explanation?

One way to address this question is by comparing *explanation* (Why is it? How does it come to be?) with *description* (What is it?)—two complementary forms of scholarship used widely in this field. While descriptions focus on “a single thing” (What is *it*?), explanations necessarily encompass “multiple things”—often signified as an $X \rightarrow Y$ relationship. This leads to a second distinction. While descriptions of Y might use “arrows” to signify what things Y is related to (X is correlated with Y), it is customary and preferable to use arrows for causal explanations of Y (X is a cause of Y). Indeed, it has been argued that the “strength” of a particular theory depends on how well the causal mechanism implied by an arrow is specified. A third distinction involves the scope of an explanation: Whereas a description can apply to a single case (one manager, group, or organization), it is expected that an explanation applies to multiple cases—that is, it is expected that a theory is “broadly applicable.”

Different Kinds of Theory

Within this broad domain of theory-as-explanation, there are various kinds or types of theories. One of the most important distinctions is between *general* and *middle-range* theory. Although this distinction is rarely mentioned in organizational scholarship, it can help readers reconcile varied and seemingly inconsistent treatments of organizational *theory*. For example, calls for “new theory” typically refer to general theory, whereas admonitions to “improve theory” more often refer to middle-range theory. While, as their names suggest, these two types of theory vary in scope and breadth, they have other noteworthy differences.

General theories operate like paradigms—broad explanations that might help explain a variety of different outcomes. For example, “agency,” “need,” or “expectancy” theory might help explain why individuals make a variety of decisions. The promise of general theory is that if you look at a particular outcome-of-interest through this “lens,” your

attention will focus on one possible explanation (cause). The paradigmatic quality of general theory is reflected in its pattern of usage. Specifically, general theories are intended to be applied, not systematically tested and improved—except to clarify boundary conditions (e.g., does agency theory operate the same way in different cultures?). Note that if everyone who applied a general theory did so with the intent of changing it, soon it would lose its utility as a common frame of reference.

Whereas general theories can be used to explain a variety of outcomes, *middle-range theories* are explanations of a particular outcome (Why Y?). In this way, middle-range theory is consistent with the goal of organizational leaders: increase or decrease specific kinds of performance or performance-related outcomes, such as organizational efficiency, product quality, group creativity, and employee satisfaction. If one thinks of general theories as “omnibus Xs” looking for particular Ys to explain, middle-range theories can be thought of as “particular Ys” looking for suitable explanations. As this comparison suggests, the Xs used to explain a particular Y are often inspired by relevant general theories. For example, X 1 might be inspired by agency theory, X 2 by need theory, and so forth. An additional feature of the best middle-range theories is that they specify the conditions under which they are likely to apply—the scope conditions. This characterization of middle-range theory can be summarized as, What causes what and why, and under what conditions. In the following sections, readers will notice that “and why” is a distinctive feature of *strong* theory and [p. 851 ↓] “under what conditions” is the hallmark of *useful* (high utility) theory.

Middle-Range Theory Development

With the benefit of this brief overview of the distinctive domain of theory, this entry now turns the readers’ attention to the process of theory development. Inasmuch as general theories are not assembled piece by piece and, once formulated, their function is incompatible with an ongoing process of testing and improvement (development), this section is limited to middle-range theorizing—inspired, if you will, by relevant general theories. The bulk of what follows introduces a structured approach, referred to as “modeling-as-theorizing.” It can be used to guide the initial articulation of posited answers to Why Y? questions, as well as their subsequent enhancement by others.

Following this discussion of middle-range theory modeling is an outline of the evolution traced by concept-focused scholarly conversations.

Everyday experience tells us humans that the quality of a product, whether created by our hands or our minds, depends on how well it was made. Aristotle famously set forth a dual standard for evaluating a body of knowledge: Is it complete? Is it systematic? The use of $X \rightarrow Y$ propositions, expressed as simple or complex graphical (box and arrow) models, offers a simple and universally understood medium for the long-term development of middle-range theory that becomes more and more complete and systematic. One of the benefits of using graphical models to both generate and communicate causal arguments is that they focus attention on the essential ingredients of middle-range theorizing: what causes what, and why, and under what conditions. These conventions can also aid the evolution of thinking within scholarly conversations, seeking to explain outcomes requiring complex explanations, for example, turnover, job satisfaction, mergers, and acquisitions. Thus, adapting a familiar adage, within the realm of middle-range theorizing, “a ‘picture’ is worth *at least* a thousand words.”

To begin, imagine a simple theory: X and Y in individual square boxes, an arrow pointing from one to the other, and these three elements circumscribed by a larger rectangular box, signifying relevant boundary conditions. One of the nice features of graphical modeling is that it can be used to convey a simple or highly complex theory, and the meaning of boxes (concepts) and arrows (causal relationships) remains constant, regardless of scale and complexity. In addition, an understanding of the basic structure of causal modeling helps those interested in improving a particular proposition identify a suitable intervention strategy. In what follows, the building blocks of middle-range theorizing—boxes, arrows, and boundary conditions—are briefly described.

Boxes or Concepts

One might think of the boxes composing a middle-range-theory model as the nouns in a sentence, or, as the main characters in a play. Recalling our definition of middle-range theory (what causes what and why, and under what conditions), the boxes are the whats. The simplest middle-range theory contains two boxes (an X and a Y). The more boxes included in a model the more complex the theoretical argument. While

the addition of new elements doesn't necessarily improve the quality of a theory, it is clear that within the social realm, models containing a single X are always incomplete explanations of Y. Thus, each box within—and the large rectangular box circumscribing—any size of causal model is a salient visual invitation to “think outside the box” (what's missing?)

Experience has shown that the modeling-as-theorizing process works best when authors follow three key specifications for the selection and naming of boxes. First, they should be expressed as nouns or brief noun phrases (e.g., group composition, task interdependence, organizational size). Second, for theorizing intended for scholarly publication, it is best to use concepts (sometimes called constructs) utilized with the targeted body of literature, rather than everyday terminology—such as organizational reputation, rather than outsiders' opinions. Third, every box must be capable of being operationalized as a variable (a measurable range, from high to low, or, even on and off) and functioning as a cause or an effect. Importantly, these specifications caution against the use of broad categories (environment, leadership, culture) from middle-range theorizing. In these cases, the addition of an adjective to these categories often allows them to be operationalized as variables and incorporated into testable propositions (e.g., perceived environmental uncertainty, charismatic leadership style, individualistic culture).

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Arrows or Causal Relationships

Graphically, the answer to what *causes* what, and *why* is signified by arrows. Building on earlier analogies, arrows can be thought of as the verbs in a sentence or the plot of a play. There are basically three kinds of causal relationships utilized in middle-range theorizing: direct, mediated (indirect), and moderated. Direct causes are the easiest to describe. Regardless of the number of X-antecedents included in a model, each one with an arrow pointing directly at a Y-outcome is considered a direct cause. To clarify the causal mechanism signified by an arrow—the “and why” component of our definition—the relationship might be described in the text as, X causes Y, because ... The extent to which an arrow signifies a specific causal mechanism, rather than

simply a correlation, is a distinguishing characteristic of *strong* (not weak) theory. Completing this sentence is much easier when the selection of X-antecedents reflects an investigator's interest in applying one or more relevant general theories. In these cases, the arrow in a proposition signifies a distinctive causal mechanism associated with a particular general theory (X causes Y, because [general theory mechanism]). Examples of such ties between concepts used as X-antecedents and related general theory mechanisms in this field include the following: in institutional theory, legitimacy (concept)—and isomorphism (mechanism); in social identity theory, organizational identification (concept)—and social identification (mechanism); in social justice theory, perceived fairness (concept)—and expectations of fairness (mechanism).

A mediated causal argument contains three boxes, connected by two arrows, signifying a “two-stage,” causal sequence. A simple analogy might help illustrate how a mediated cause works. Imagine three balls lined up in fairly close proximity. The first ball represents an X, the third ball represents a Y, and the middle ball operates as the *mediator*. In what's called a “fully mediated” relationship, the effect of the first ball on the third ball goes entirely through the middle one. For example, it might be argued that the effect of leadership style on group performance is mediated by (goes through) the motivation level of group members. It is worth noting that when a mediator is introduced into an existing Why Y? proposition, the focus typically shifts from the existing X-antecedent to the Z-mediator, as the direct cause of Y.

The third type of relationship “looks different,” because the arrow of a moderator points to another arrow, not to a box. Using yet another analogy, if we think of the arrow in an $X \rightarrow Y$ proposition as representing an electrical current moving from X to Y, then a *moderator* can be thought of as a switch, controlling the current's flow. This might be a simple on-off switch, a rheostat, or one that is capable of reversing the current's polarity (+ or -). In statistics, Z-moderators are used to create interaction variables, combining in some specified manner the effects of an X-antecedent and a Z-moderator on a Y. Conflicting results from multiple empirical tests of an $X \rightarrow Y$ proposition, involving different samples of individuals or organizations (from different cultures, for example), often prompt further theorizing about possible moderating factors.

An important implication of this brief overview of the three kinds of relationships utilized in causal modeling is that, as a set, they delineate the logical possibilities for improving

an existing Why-Y? explanation. That is, we can add X-antecedents (direct causes), Z-mediators (indirect causes), or Z-moderators (moderated causes). Inspiration for these enhancements comes from imagining key elements of a better, more complete explanation that have been overlooked. This process can be thought of as bringing what was previously outside (the rectangular box) into the model as new boxes and arrows. An important source of this information is the model's contextual boundary conditions.

Contextual Boundaries

As noted earlier, a large rectangular box circumscribing a middle-range theory can be used to signify the theory's boundary conditions. Inasmuch as all explanations must apply to more than a single condition, the *utility* of a particular $X \rightarrow Y$ argument is to a large extent based on the specification of its applicable conditions: when, where, and for who it does or does not apply. To be clear, failure to enumerate a theory's contextual boundaries does not qualify it as a universal theory. Instead, this common oversight actually limits a theory's value as a guide for both scholars interested in theory testing, and practitioners interested in theory application. The systematic assessment of a theory's boundaries often extends over a long period of time. In the end, the goal is to produce "useful theory" containing an up-to-date "users guide," describing suitable who, when, and where applications.

[p. 853 ↓]

Evolution

Broadening the scope of our focus, from a discrete theory-development contribution to the evolution of a theory over time and across contributors, it is instructive to consider different "stages" of theorizing. Herein, *stages* is used loosely to connote different forms or types of middle-range theory development that are depicted, more or less, as a series of enhancements. (Note: One stage doesn't necessarily lead to another, and as a set, the stages are not necessarily linear.) Equipped with this heuristic, readers of a particular theory-based literature within organizational scholarship might better

understand the focus of current and past theorizing and recognize opportunities for further theory development.

The initial stage in this framework is technically speaking pre-theory, in that the *introduction* of a new concept focuses attention on a single *what* (though often enriched by description of its surrounding [proposed] conceptual and empirical context). This stage often entails debates about the concept's meaning and proposed measures. These discussions often include efforts to logically distinguish the new concept from a network of related extant concepts (what it is similar to and how it differs from similar others). Subsequent uses of the concept (stages 2–4) are likely to prompt refinements in its initial introduction, possibly leading to the specification of multiple meanings, interpretations, or applications.

Once there is some agreement about what *it* is, a recently introduced concept might, in Stage 2, be combined with an existing concept to form a novel $X \rightarrow Y$ proposition. Unless the new concept is generally considered an outcome (e.g., employee turnover), its first appearance in middle-range theorizing is likely to be as an X-antecedent. Further, it will most likely be deliberately paired with what like-minded scholars view as a very important Y-outcome (e.g., organizational commitment, firm performance), forming a Why X? proposition (Why is X an important concept?). This supposition about the initial casting of a new concept as an X-antecedent reflects the following logical argument: Something is worth explaining (cast as a Y-outcome) if it is a proven explanation of something else, of greater perceived importance. Thus, a hallmark of Stage 2 propositions is the *justification* of a new concept as theoretically relevant—something whose utility in middle-range theorizing has been demonstrated. If and when a body of scholars agrees that a new concept is a significant direct cause of one or more important outcomes, the $X \rightarrow Y$ proposition in which it is embedded often becomes the subject of further theory development.

One option, referred to here as Stage 3, is for the X and the Y in a Stage 2 proposition to remain the same, while the possibility of “expanding the middle” by adding suitable mediators or moderators is explored. (Think of a Stage 2 proposition becoming a 3+ column model, with the X on the left and the Y on the right, and 1+ mediators and/or moderators in the middle.) When appropriate, the *specification* of a direct cause argument is enhanced by the addition of a mediated relationship—dividing it into a two-

step causal sequence. In a similar manner, enhanced *contextualization* comes from the addition of one or more moderators. This is an important step in the evolution of Why Y? explanations in that it focuses attention on the important qualifiers in our definition of theory: (a) why and how exactly does X cause Y, and (b) under what conditions. Reinforcing a point made earlier, the need to add a mediator is more likely when the X-antecedent in a Stage 2 proposition does not explicitly invoke the causal mechanism of a specific general theory.

An even greater transformation of a Stage 2 proposition occurs when, in Stage 4, a “proven X” is recast as a “promising Y” and becomes the focus of a new Why Y? investigation. In other words, what was an X-antecedent in Stage 2 becomes a Y-outcome in Stage 4. What is referred to as the *explanation* stage of middle-range theorizing typically features “tall models,” depicting posited direct causes of the new Y. (Imagine a model with two columns: The column to the right consists of a single Y and the one to the left contains a vertical list of proposed Xs, each connected with an arrow to the Y.) Consistent with the objective of formulating “complete” explanations of Y, it is advisable to build Stage 4 models mostly using X-antecedents that are unrelated to each other. Said differently, it is important to distinguish Stage 4 models from multiple-X Stage 2 models, in which additional (presumably weaker) Xs are used to justify the merits of the favorite X, or, in which a cluster of related Xs are used to demonstrate their value (e.g., various types of personality). Recalling an early distinction, one way to ensure the selection of unrelated X-antecedents is to link each one to a different general theory.

[p. 854 ↓]

Importance

The elements of the preceding discussion suggest four “levels of theoretical utility” for evaluating specific middle-range theories. First, building on an earlier distinction, when authors use arrows to merely signify a correlation between X and Y, the $X \rightarrow Y$ proposition can be categorized as a *non-theory*. Second, when it seems reasonable to assume that X causes Y, but authors offer no specifics about how and why this occurs, the proposition is a *weak theory*. Third, propositions that signify a clearly specified

causal argument (X causes Y, because ...) qualify as *strong theory*. Fourth, when the contextual conditions of a strong theory are delineated, it becomes a *useful theory*—in the sense that it can be confidently tested and applied.

Several points from this entry can be applied to enhance strength of theorizing. Theory is answering a specific question with an explanation—usually about what causes what and why. Scholars must take care not to substitute references, data, variables, diagrams, and hypotheses *in place of* rather than *in support of* underlying (theoretical) explanation. Often, general theories aid and inspire the process of explaining, while middle-range propositions provide precision and empirically verifiable clarity. Management scholars can make contributions “of” theory—by applying a theory downstream to particular contexts and phenomena; or scholars can make a contribution “to” theory—by applying empirical findings upstream to enhance or extend extant theoretical arguments. (Junior scholars will likely spend more time applying theories downstream.) Either way, graphical models of theory are a powerful method for enhancing lucidity, insight, and communicability throughout the theorizing process. By considering the evolutionary stages of theory, the theoretical arguments at the core of many scholarly conversations can be better understood and “grafted” into.

While we have not discussed how to select “what to explain” in this entry, it is equally crucial to explain the right things as it is to explain them well. *Interesting* theory is likely to be important to managers and theorists, alike. Important aspects of the causal what(s)-being-explained condition include novelty, an answer to the so what/who cares? question, impact, timing, and applicability to actual management situations—are managers seeking explanations for the individual, group, or organizational outcome my theory purports to provide? In the end, the goal of theory-based management scholarship is to enhance managers’ efforts to facilitate good outcomes and to minimize bad outcomes, by better understanding what causes what and why, and under what conditions.

In conclusion, Kurt Lewin's dictum, “There is nothing quite so practical as a good theory,” nicely frames this brief overview of theory and theory development. Although unstated, Lewin's praise of theory presumes a shared understanding of what theory is and isn't and what kind of theory we're talking about. Of greater significance, we can infer from this statement that only “good” theory has practical value—this is consistent

with our everyday observations that “bad” theory is not only impractical but also often causes harm. Focusing on the formulation of good theory, the second part of this entry depicted a structured, cumulative theorizing process and set of principles that can over time yield more complete and systematic explanations of important management and organizational outcomes.

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See also

- [Academic-Practitioner Collaboration and Knowledge Sharing](#)
- [Action Research](#)
- [Analytical and Sociological Paradigms](#)
- [Appendix: Central Management Insights](#)
- [Bad Theories](#)
- [Engaged Scholarship Model](#)
- [Evidence-Based Management](#)
- [Multilevel Research](#)
- [Organizational and Managerial Wisdom](#)
- [Process Theories of Change](#)
- [Theory of the Interesting](#)

Further Readings

Bacharach, S.B. (1989). Organizational theories: Some criteria for evaluation . *Academy of Management Review* , 14(4), 496–515.

Christensen, C.M., & Raynor, M.E. (2003, September). Why hard-nosed executives should care about management theory . *Harvard Business Review*, 66–74.

Colquitt, J.A., & Zapata-Phelan, C.P. (2007). Trends in theory building and theory testing: A five-decade study of the *Academy of Management Journal* . *Academy of Management Journal* , 50(6), 1281–1303. <http://dx.doi.org/10.5465/AMJ.2007.28165855>

Corley, K.G., & Gioia, D.A. (2011). Building theory about theory building: What constitutes a theoretical contribution . *Academy of Management Review* , 38(1), 12–32.

Sutton, R.I., & Staw, B.M. (1995). What theory is not . *Administrative Science Quarterly* , 40, 371–384. <http://dx.doi.org/10.2307/2393788>

Van de Ven, A.H. (2007). *Engaged scholarship: A guide for organizational and social research* . Oxford, England: Oxford University Press.

Weick, K.E. (1989). Theory construction as disciplined imagination . *Academy of Management Review* , 14, 516–531.

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

Whetten, D.A. (2009). An examination of the interface between context and theory with applications to the study of Chinese organizations . *Management and Organizational Research* , 5(1), 29–55.

Whetten, D.A. (2009). Modeling theoretical propositions . In A. Huff (ed.), *Designing research for publication* (pp. 217–250). Thousand Oaks, CA: Sage.