

Developing “Good” Theory Through Articulation and Examination

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Summer, 2000

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Why Study Theory Development?

“There is nothing quite as *practical* as a *good* theory.” Kurt Lewin

1. “If manuscripts contain no theory, their value is suspect. Ungrounded theory, however, is no more helpful than are atheoretical data.” ASQ Notice to Contributors
2. “We reject more manuscripts at AMJ because they don’t contribute to theory than because their methods or statistics are flawed.” Rick Mowday, Editor
3. “The [theory development] products [resulting from] laziness and intense struggles may look the same.” Karl Weick
4. “Most graduate education teaches students how to *answer* questions. First, we need to help them learn how to *ask* questions.” Harry Morgan
5. “If it (research project) isn’t worth doing, it isn’t worth doing well.” Ph.D. Advisor
6. “Before you tell me your theory of interorganizational relations, I want to hear your theory of organizing.” Ph.D. Advisor
7. “You need to decide if you are going to be an ‘explorer’ or a ‘settler’—very few scholars can ‘be’ both.” Lou Pondy

Theory Development: “Interim Struggles”

“Many social scientists hesitate to claim they are writing theory. We would like writers to feel free to use [the term] theory whenever they are theorizing. Modesty is all very well, but leaning over too far backward removes a good word from currency. We plead only that they do not save theory to label their ultimate triumph, but use it as well to label their interim struggles.”

Runkel and Runkel (1984)

Cited in Weick, ASQ, September, 1995

But Only Good Theories Are Practical

Benefits of articulating and examining our theories

Purposeful action is theory-based. Effective action is based on good theory. Well intentioned but harmful actions are often manifestations of bad theory. Bad theories are at best ineffective and at worst harmful.

Bad theories come in two forms, each of which can be corrected by articulation and examination.

Deficiency	Remedy	Benefit
Inherently flawed (Bad thinking)	Formalize and test specific claims (Internally and externally valid?)	Improve conceptualization
Inappropriately applied (Sloppy thinking)	Make assumptions explicit (Cross time and place boundaries?)	Improve application

Theory: An Ambiguous Concept

“Like so many words that are bandied about, the word theory threatens to become meaningless. Because its referents are so diverse—including everything from minor working hypotheses, through comprehensive but vague and unordered speculations, to axiomatic systems of thought—use of the word often obscures rather than creates understanding.”

Merton (1967)

Cited in Sutton & Staw, ASQ, 9/1995: 371

What Theory Is Not

There is more agreement on what theory is not, than on what theory is.

1. *References are not theory.* Listing references to existing theories and mentioning the names of such theories is not the same as explicating the causal logic they contain.
2. *Data are not theory.* Data describe *which* empirical patterns were observed and theory explains *why* empirical patterns were observed or are expected to be observed.
3. *Lists of variables or constructs are not theory.* A theory must also explain why variables or constructs come about or why they are connected. “A dictionary of a language that possesses no sentences.” (Homans)
4. *Diagrams are not theory.* The logic underlying the portrayed relationships needs to be spelled out. Good theory is often representational *and* verbal.
5. *Hypotheses (or predictions) are not theory.* Hypotheses do not (and should not) contain logical arguments about why empirical relationships are expected to occur. Hypotheses are concise statements about *what* is expected to occur, not *why* it is expected to occur.

Sutton and Staw, “What Theory Is Not.”
ASQ, September, 1995

What Is Theory?

“A coherent group of general propositions used as principles of *explanation* for a class of phenomena.” Random House Dictionary

“We agree with scholars like Kaplan (1964) and Merton (1967) who assert that 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.

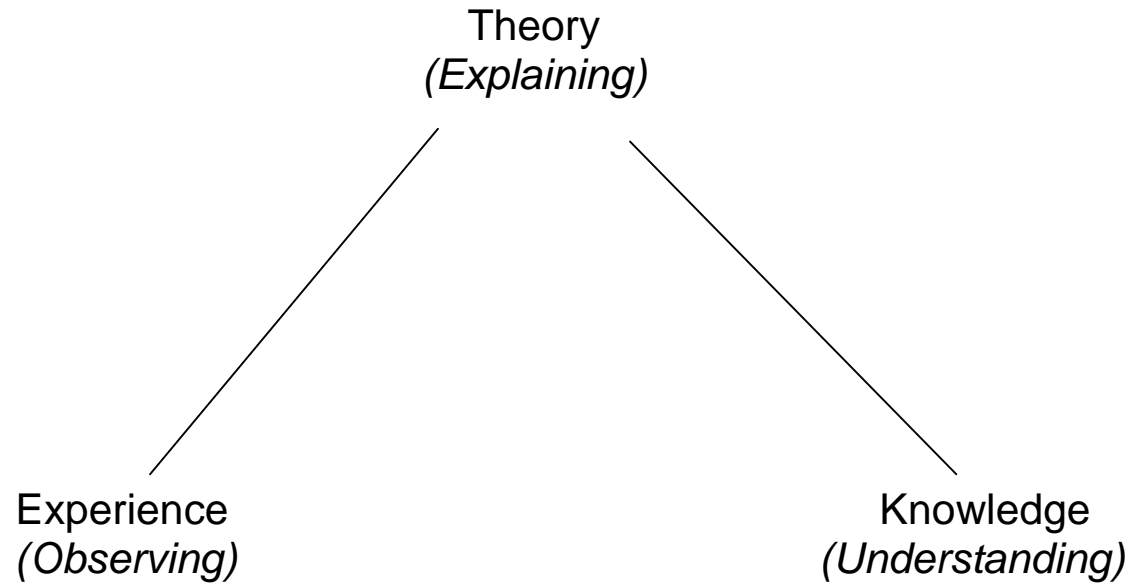
Strong theory, in our view, delves into underlying processes so as to understand the systematic reasons for a particular occurrence or nonoccurrence. It often burrows deeply into microprocesses, laterally into neighboring concepts, or in an upward direction, tying itself to broader social phenomena. It usually is laced with a set of convincing and logically interconnected arguments. It can have implications that we have not seen with our naked (or theoretically assisted) eye. It may have implications that run counter to our common sense. As Weick (1995) put it succinctly, a good theory explains, predicts, and delights.”

Sutton and Staw, “What Theory Is Not.”
ASQ, September, 1995: 378

Theory-as-Explanation

- The goal of science is “profound understanding.”
- Claims of scientific understanding come in three flavors: Description, explanation, and prediction. These are commonly conceived as a nested set, with prediction being at the top.
- Theory-as-explanation treats theoretical claims as a critical bridge, linking description and prediction.
- For scholars, theories also serve as a link between experience and knowledge.

Theory: Linking Experience and Knowledge



“Perception without conception is blind; conception without perception is empty.” Kant

“Theories, then, serve to satisfy a very human ‘need’ to order the experienced world.” Robert Dubin

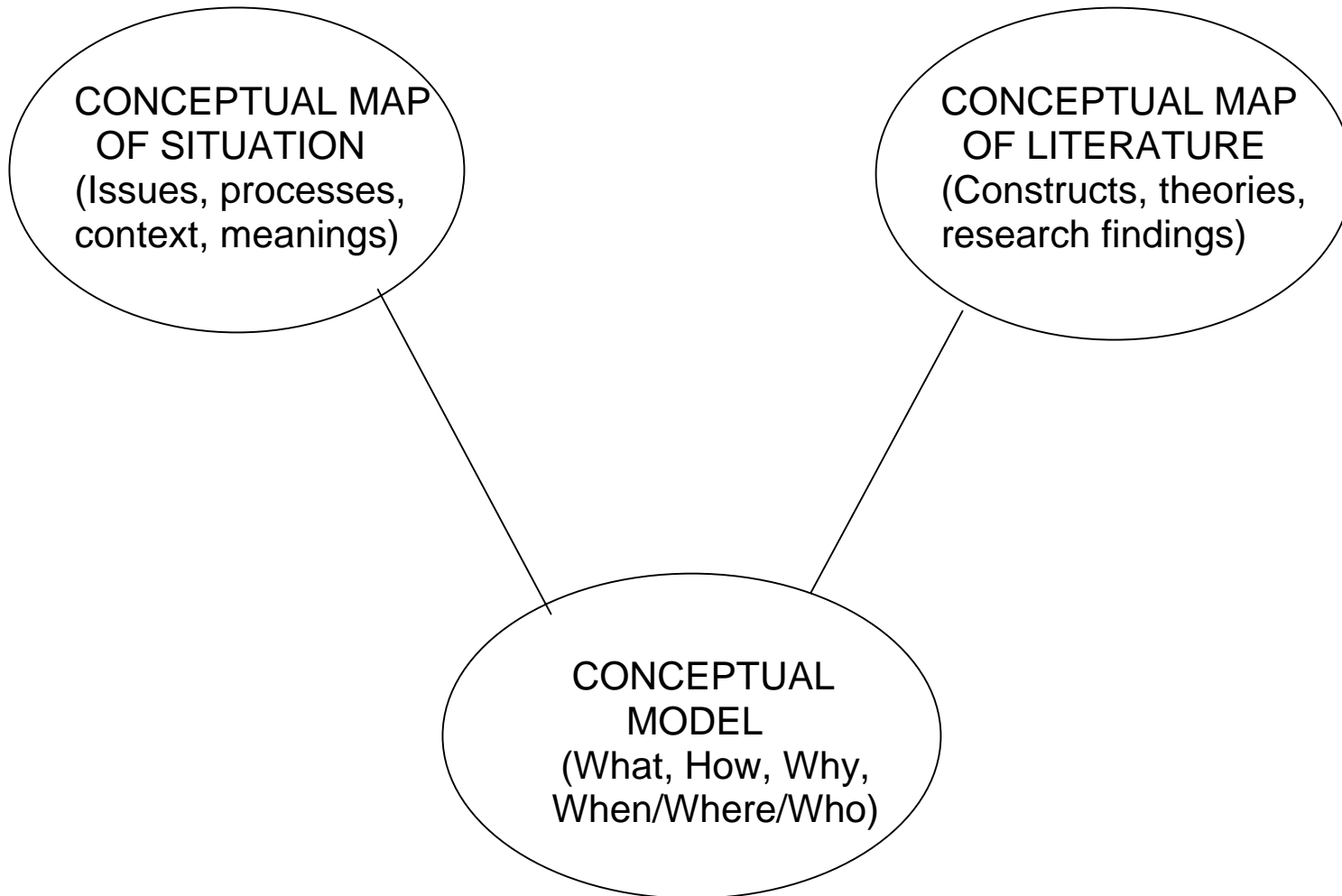
“We don’t need more experiences. We need to better understand the experiences that we have already had.” Edith Penrose

“An explanation rests on a theoretical generalization, but a prediction need not have such a basis.” Abraham Kaplan

“Theorizing consists of activities like abstracting, generalizing, relating, selecting, explaining, synthesizing, idealizing.” K. Weick

“Theory as narrative: 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.” Paul DiMaggio

The Merits of Using Conceptual Models to Guide Research



The Role of Theory Development in Organizational Science

(My claims on the concept of “science.”)

Organizational science is an “applied discipline.”

- Organizational scholars are generally interested in improving their understanding of practice and/or improving practice.
- With Lewin, I see “good theory” as a key to “good practice,” not as an unrelated tangent, or fanciful, academic, distraction.
- Therefore, although in this discussion I don’t focus on the criteria of “practical knowledge” it is implied, throughout.

I subscribe to a Kantian view of scientific knowledge.

- Theories satisfy the natural human impulse to *understand* and *explain* experience.
- A body of knowledge should be *complete* and *systematic*.
- Note: This refers to a shared understanding, not to a single piece of the puzzle.

Implication: Neither the inherent need for, nor the actual use of, theory is unique to the scientific enterprise. But because theory is more central to the business of science, scientists need to be better-than-average theorists.

- Science is a public, communal endeavor and theoretical claims are the “terms of discourse.”
- Implicit theories (beliefs, myths) can be useful to scientists-as-individuals, but they limit what individuals-as-scientists can do.

Theory Development Compared with Theory Application

(My claims on the concept of “theory development.”)

Theory application addresses Kant’s criteria of “complete” understanding.

- Use theories as heuristics, or lenses, for studying organizational phenomena.
- Offer support for a theory by confirming that we saw what we were supposed to see when we looked through a particular theoretical “lens.”
- “Test” the relative explanatory power of multiple, relevant theories by comparing their relative explanatory power.

Theory development addresses Kant’s criteria of “systematic” understanding.

- Look through the lens AND look at the lens.
- Improve our theoretical lenses using logical, empirical, and/or practical tests.
- Requires “unpacking” a theory, e.g., specify its key components, propositions, etc.
- *Formal models and propositions facilitate detailed analysis of broad theoretical perspectives.*

“It is probably true (as several recent writers have suggested) that those who work in the sciences spend relatively little time weighing theories, that is, deciding whether to accept or reject them. Rather, taking various theories for granted they spend most of their time making these more *precise* or engaging in research problems suggested by them with more *precision*, and so forth.” Nicholas Wolterstorff

Model Building as a Tool for Theory Development / Improvement

“When theorists build theory, they design, conduct, and interpret imaginary [thought] experiments.” Karl Weick

Model building facilitates careful, disciplined “thought experiments.”

- Makes our theoretical explanations clearly explicit and explicitly clear (distinguishes thought experiments from creative thinking, brainstorming, inspirations, hunches, etc.).
- Encourages examination of theoretical claims (systematic, complete).

Formal models depicting extant theories facilitate theory improvement.

- Foster productive debates among different perspectives (by clarifying the subject matter there is less chance of misunderstanding).
- Provide a standard vocabulary that can be used to discuss causal arguments, development sequences, logical arguments, event histories, processes, etc.
- Suggest natural / logical groups of variables to include in specific research designs.
- Suggest opportunities for making specific contributions to the current conversation.
- Provide a natural framework for proposing theoretical contributions, based on logical and/or empirical evidence.

Modeling is a useful “habit of the mind” that fosters clear analysis and productive discourse.

- Critiquing (diagramming) an argument.
- Summarizing a body of literature.
- Making sense of our experiences / observations in organizations.
- Discussing research proposals.

Model Building as a Tool for Critical Thinking (“Habit of the Mind”)

The Problem:

Everyone thinks; it is our nature to do so. But much of our thinking, left to itself is biased, distorted, partial, uninformed or down-right prejudiced. Yet the quality of our life and that of what we produce, make, or build depends precisely on the quality of our thought. Shoddy thinking is costly, both in money and in quality of life. Excellence in thought, however, must be systematically cultivated.

A Definition:

Critical thinking is that mode of thinking—about any subject, content, or problem—in which the thinker improves the quality of his or her thinking by skillfully taking charge of the structures inherent in thinking and imposing intellectual standards upon them.

The Result:

A well cultivated critical thinker:

- raises vital questions and problems, formulating them clearly and precisely;
- gathers and assesses relevant information, using abstraction to interpret it effectively;
- comes to well-reasoned conclusions and solutions, testing them against relevant criteria and standards;
- thinks open-mindedly within alternative systems of thought, recognizing and assessing, as need be, their assumptions, implications, and practical consequences;
- communicates effectively with others in figuring out solutions to complex problems.

What Constitutes a Theoretical Contribution

AMR: October, 1989

Required ingredients of a "good" theory:

1. What: The essential, or constituent, elements of a behavioral phenomenon.
 - Constructs, or variables (boxes, nouns)
2. How: The relationships between the constructs.
 - Sequential, logical, causal, etc. (arrows, verbs)
3. Why: The underlying assumptions about human behavior, or organizing.
 - Necessary conditions (meta theory)
4. When, Where, and Who: The boundaries of generalizability
 - Limiting conditions (parameters)

Shift in my thinking: Elements of a good theory → Steps for developing good theory by creating formal models

Building Good Models

- 1a. List all the "whats" pertaining to the theoretical question
 - Include causes, effects, and correlates
 - Use only one construct per "box"
 - Preferably use variables, not variable "levels," e.g., height, not tall
- 1b. Evaluate construct set
 - Maintain a consistent level of abstraction (behavior vs. trait)
 - Maintain a consistent level of analysis (individual vs. organization)
 - Ask "necessary" and "sufficient" questions (Complete set, yet?)
- 2a. Identify relationships ("hows") by arranging constructs in a logical order
 - Left being earlier, or former; right being later, or after
 - Place main sequence of mediating variables along horizontal axis
 - Place related variables (moderators, mediators) above or below
- 2b. Specify the nature of the key relationships
 - Logical, sequential, causal, etc.
 - Causal is the "highest order" relationship--greatest explanatory value
 - "Try out" causal arrows between main constructs
- 3&4. Explicate underlying assumptions, and other circumscribing conditions
 - Draw a box around the model and list necessary and limiting conditions
 - List "why" assumptions: What we must agree on for the model to "work"
 - List "when / where / who," e.g., time, place, people

Formulating Good Propositions

1. Necessary conditions
 - If / when Y, then X (Y will always be preceded by X)
2. Sufficient conditions
 - If / when X, then Y (X will always be followed by a Y)
3. Moderating relationships
 - When B is present, the effect of A on C is different
4. Mediating relationships
 - The effect of A on C is through B
5. Testable propositions
 - Operationalize constructs, relationships, and parameters?
6. Appropriate level of analysis
 - “Applied science” = middle range theory (implication and application)
7. Number of causal links (and levels of analysis)
 - Inverse relationship with explained variance

FAQ: Does My “Research Paper” Make a Theoretical Contribution (AMJ)? That Depends...

Does this study provide an *explanation for the phenomena*? (Contribution of theory—deeper level of understanding, compared with description, appreciation, interpretation.)

- Credible examination of causes, sources, origins, directions, processes, etc.
- Reasonable attempt to eliminate alternative explanations.

Do the implications of this study suggest *modifications in an extant theory*? (Contribution to theory—based on these results, we need to rethink a key element in this theory.)

- Study must use standard constructs, measures, etc.
- Study’s results must stand up to close scrutiny.

Does the theory used in this study provide non-intuitive *implications for practice*? (Contribution *from* theory—we are better able to solve a problem, overcome an obstacle to good practice, etc.)

- The theory “fits” this situation, therefore...
- The implications of this theory are that we should try the following...

Assertion: Using formal models and propositions to design research studies increases the likelihood that the results will make a theoretical contribution.

FAQ: Does My “Theory Paper” Make a Contribution to Theory (AMR) Proposed Components of a Self-Test

Initial screening questions:

- Is this a conceptual versus a theoretical contribution (theoretical is a subset of conceptual; theoretical arguments make explicit explanation claims)?
- Will it inform the experts’ understanding of the subject, or is the author the primary person informed by the paper?
- Have I received feedback from several colleagues who are familiar with the subject and the style of the target journal?

Framework for supporting a “theoretical contribution” (to an existing theory) claim:

- Specify current “gaps” in an extant theory and make a case for addressing them.
(Gaps: Flawed or incomplete?)
- Propose improvements and make side-by-side comparisons.
(How are the old and the new versions different?)
- Answer the “so what” question, e.g., implications for designing a research project.
(Are these meaningful differences?)