



THEORY DEVELOPMENT

SYNTHESIS, DERIVATION, ANALYSIS

Yann-Fen C. Chao, RN, PhD

THEORY SYNTHESIS

- The process of transforming forming practice-related research about phenomena of interest into an integrated whole allows the theorist to bring bits and pieces of knowledge together in a more useful and coherent form.
- It is probably more useful to think first of this strategy as a means for making sense of a jumble of facts, or bringing order to the process of a specific nursing intervention.
- Later, after the work is completed, dialogue and feedback from colleagues can help the aspiring theory builder determine how best to depict the work to the larger nursing community.



DEFINITION AND DESCRIPTION

- Theory synthesis involves three steps or phases:
- (1) specifying focal concepts to serve as anchors for the synthesized theory,
- (2) reviewing the literature to identify factors related to the focal concepts and to specify the nature of relationships, and
- (3) organizing concepts and statements into an integrated and efficient representation of the phenomena of interest.



BENEFIT AND LIMITATION

- A theory may connect a number of concepts to each other and also specify complex direct and indirect linkages among concepts.
- Theory synthesis builds on a base of empirical evidence.
- Synthesized theory is limited in its generalizability or external validity by the extent and quality of evidence upon which it is based.
- Require testing or cross-synthesized theories, require testing or cross-validating to reaffirm their empirical validity.



PURPOSE AND USES

- The aim of theory synthesis is to represent a phenomenon through an interrelated set of concepts and statements.
- Three specific aims for theory synthesis include the following:
 - To represent the factors that precede or influence a particular event
 - To represent effects that occur after some event, such
 - To put related, but discrete scientific information into a more theoretically organized form.
- The type and amount of available evidence influences which of the three specific aims of theory synthesis will be most feasible in any given situation.
- The richer the pool of research information available to the theorist, the greater the complexity and precision possible in a synthesized theory.



STEPS THEORY SYNTHESIS:

- specifying focal concepts or a framework of several focal concepts.
- reviewing the literature to identify factors related to the focal concepts and the relationships among these, and
- organizing concepts and statements into an integrated and efficient representation of the phenomena of interest.
 - Diagrams are particularly helpful in expressing relationships among concepts.
 - To collapse several highly similar variables into a more comprehensive summary concept is a useful mechanism.
 - “inventory of determinants” vs. “inventory of results.”
 - They differ only in whether the focal concept is viewed as an outcome of certain variables or a determinant of them.



THEORY DERIVATION

- Using analogy to obtain explanations or predictions about a phenomenon in one field from the explanations or predictions in another field is the basis for theory derivation. See analogous redefine and transpose
- Seeing an analogy requires imagination and creativity;
- True theory derivation requires that at least some modifications in content or structure be made.
- Adopting and adapting the structure to fit the concepts being considered.
- Another theory in a different field may provide the theorist with a set of analogous concepts.




PROCEDURES FOR THEORY DERIVATION

- The theorist goes back and forth between some or all of the steps until the level of sophistication of the theory is acceptable.
- Allowing your imagination and creativity free reign opens your mind to possible analogies. Discovering analogies is often done accidentally or as a creative intuitive leap rather than systematically.
- Identify what content and/or structure from the parent theory is to be used.
- Develop or redefine any new concepts or statements from the content or structure of the parent theory in terms of the phenomenon of interest to the theorist.
- Basically, the concepts or structure that is borrowed from the parent field is modified in such a way that it becomes meaningful in the theorist's field.
- It must first be validated before it can be used.



ADVANTAGES AND LIMITATIONS

- Theory derivation provides a way of arriving at explanation and prediction about a phenomenon where there may be little or no information, literature, or formal studies available.
 - This implies reading widely and being constantly on the alert for new and profitable analogies.
 - In addition, the theorist must be thoroughly familiar with the literature and current thinking about his or her particular area of interest.
 - The uses of theory derivation are to provide structure when only concepts are available, to provide concepts when only structure is available, or to provide both concepts and structure as an efficient way to begin theory development.
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SUMMARY

- Theory derivation is an excellent way of obtaining rapid theory development in a new field because it uses analogy to obtain explanations or predictions about a phenomenon in one field from explanations or predictions in another field.
- Both concepts and structure can be moved. Familiar with the topic of interest; read widely; select a parent theory identify what content and/or structure from the parent theory is to be used; modify or redefine.
- If carefully done and carefully tested, derived theories could play an immediate role in the development of scientific knowledge in nursing.



THEORY ANALYSIS

○ Definition and description

- Theory analysis is the systematic examination of the theory for meaning, logical adequacy, usefulness, generality, parsimony, and testability.

○ Purpose and uses

- Understanding is the main aim of analysis.
- To truly understand something we must put aside our own values and biases and look objectively at the object of analysis.
- Evaluation of theory should only be done after a thorough analysis is made.



SIX STEPS IN THEORY ANALYSIS

- identify the origins of the theory
 - its initial development
- examine the meaning of the theory
 - the theory's concepts and how they relate to each other.
 - Careful examination of the specific language used by the original theorist.
- analyze the logical adequacy of the theory
 - the logical structure of the concepts and statements independent of their meaning
- determine the usefulness of the theory
 - how practical and helpful the theory is to the discipline in providing a sense of understanding or predictable outcomes.
- define the degree of generalizability and the parsimony of the theory
 - how simply and briefly a theory can be stated while still being complete in its explanation of the phenomenon in question
- determine the testability of the theory.
 - whether the theory can be supported by empirical data



MEANING

- **Identify concepts**
- **Examine definitions and Use**
 - A theoretical definition, an operational definition, a descriptive definition, and no definition.
- **Identify statements**
- **Examine relationships**
 - Causal relationships
 - Associational
 - Linearity
- Determine what boundaries are present for the theory.
- Determine if the statements are used consistently.
- Assess the empirical support for the statements.
 - Supporting evidence for a statement must be evaluated quantitatively as well as qualitatively.
 - The validity of the research.: If one sound study is good as support for a statement, 4 or even 10 sound studies are that much better.

LOGICAL ADEQUACY

○ Predictions independent of content

- Are the predictions that can be made from those relationships.

○ Agreement of scientists

○ Making sense

- for a theory to make sense, it must provide insights or understanding about a phenomenon.

○ Logical fallacies

- if all the premises are true and the deduction is valid,
- this usually involves a brief review of literature and an evaluation of any supporting evidence to determine the truth of the premise.
- Three possible problems with an inductive theory: (1) the premises are correct, but the conclusion is incorrect; (2) the premises are incorrect, but the conclusion is correct; or (3) both premises and conclusion are incorrect (toulmin, 1985)
- Inductive theory is always logically inconclusive



USEFULNESS

- if the theory provides new insights into a phenomenon
 - if it helps the scientist explain the phenomenon better or differently, or
 - if it helps the scientist make better predictions, then it is a useful theory.
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 - The analyst must consider three issues in determining usefulness:
 - (1) how much research has the theory generated (Reynolds, 1971)?
 - (2) to what clinical problem is the theory relevant (Barnum, 2000)?
 - (3) does the theory have the potential to influence nursing practice, education, administration, or research (Meleis, 1990)
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