Chapter 3 Tools for Practical Theorizing: Theoretical Maps and Ecosystem Maps

Chapter Outline

I. Introduction
   A. Understanding theoretical languages requires universal translators
      1. Theoretical maps identify and display all the major components of a scientific
         theory and the paths connecting these components
      2. The eco-map is a graphing tool that social workers use to display visually
         important information about the relation of the client system to the
         environment

II. Mapping
   A. Maps – useful tools displaying information visually
      1. Theorists are mapmakers, and use visual aids to represent theories and
         theoretical models
   B. Theoretical maps and directions maps
      1. Similarities –
         a. both aim to document and describe some aspect of reality
         b. both can vary in scope and detail
         c. both are designed according to mapping conventions
      2. Differences
         a. Cartographers map physical spaces while theoreticians map concepts and
            their connections
      3. Cautions for directional and theoretical map users
         a. Some of the details may be wrong
         b. Maps only represent selected aspects of realities
         c. The accuracy of maps must be tested
         d. Maps must be changed continually as knowledge increases

III. Theoretical mapping: Architectonic analysis of a theory’s structure
   A. Introduction
      1. Definition of architectonic – the structure of a theory or theoretical tradition;
         identification of the structure facilitates discourse among theory users
   B. Theoretical mapping: The building blocks of theoretical constructions
      1. Other names for theoretical mapping include
         a. Theoretical formalization – a way to extract an explicit statement (or set of
            statements) and a diagram of a theory from written or verbal descriptions
         b. Analytic theorizing – identifying how concepts, propositions, and theoretical
            models are connected in overarching schemes for explanatory purposes
      2. Elements of a theoretical map
         a. Root metaphors – comparative statements or images that express the
            similarity of the theory or an aspect of the theory (philosophical
            assumptions, methodological preferences) to everyday life
         b. Assumptions and axioms
            1. Assumptions - statements about the theorist’s subject matter that are
               not supported by empirical evidence
            2. Axiom - a particular kind of assumption; the assumption that a given
               trait or characteristic is common to all members of a particular category.
Axioms are regarded as being established or self-evidently true; for example, economic exchange is governed by laws of supply and demand.

c. Concepts – ideas about experience derived and expressed through symbols
   1. Nominal – the use of words to define other words
   2. Operational the precise specification of the definition and rules for a concept’s use including the empirical indicators of the concept and the measurement procedures used to detect variation.
   3. Constructs – very abstract or general concept; a concept containing other conceptual elements such as “healthy family functioning”
   4. Key words – concepts that have significance in a culture or a theoretical tradition

d. Explanations – sense-making statements or sets of statements
   1. Deductive explanations – the logical reasoning process of starting with general statements or propositions and deducing specific manifestations or patterns from the general statement
   2. Inductive explanations – the logical reasoning process of starting with specific observations or manifestations and then inducing the more general proposition or statement that explains the relationships among observations
   3. Empirical laws – a general proposition demonstrated to describe patterns across ecological settings and/or historical periods

e. Theoretical models – see chapter 2
   1. Guiding conception – a type of theoretical model; the composite conceptual system organizing the observations, information, ideas, and insights developed by a practitioner in relation to a particular case

f. Theoretical boundary statements – statements about the scope and relevance of a theory

C. Theoretical mapping: Parsing and diagramming a theory’s structure
   1. Parsing – the act of analyzing the grammatical arrangement of words in a sentence; Theoretical parsing is the act of identifying the concepts, definitions, and propositions that make up a theory and the arrangement of these elements
   2. Elements or components of theoretical structure include
      a. Theoretical assumptions
      b. Theoretical concepts and their nominal definitions
      c. Theoretical propositions and their linkages
         1. Proposition one
         2. Proposition two
         3. Proposition three
         4. Additional propositions
      d. Empirically verifiable statements
         1. Theoretical concepts converted to variables with operational definitions
         2. Propositions converted to hypotheses
   3. Steps in theoretical mapping
      a. Identify assumptions
      b. Identify concepts and definitions
         1. including jargon – specialized terminology used by members of a theoretical community
      c. Identify theoretical propositions
         1. statements about the existence of a relationship
         2. statements about the direction of a relationship
3. statements about the strength of a relationship
4. if-then statements indicating the expected relationship between a condition or an event and a consequence
d. Identify and diagram theoretical linkages – patterns or arrangements characterizing the elements of a theory expressed
1. By logical form – deductive, inductive, or deductive and inductive
2. By mathematical equation
3. By a path or series of actions
4. By a hierarchical order
e. Judge the viability of a theory’s design
1. Identifying variables including independent and dependent variables
2. Identifying hypotheses
3. Validate operationalization of variables and test predictive value of the hypotheses

IV. Ecosystems mapping: Translating theories into a common language
A. Introduction – the eco-map is a shorthand communication device for characterizing the person’s behavior in the ecosystem
B. The eco-map
1. Derived from ecosystems paradigm
2. Compares social work assessment to mapping process
C. Central theoretical terms used in eco-map are conceptual universals
1. Conceptual universals are like Esperanto, an artificial language designed to help members of European nations and English-speaking nations communicate in a common language
2. Conceptual universals are concepts with meanings that are common across language communities such as “friend”
D. Mapping conventions for the eco-map
Figure 3.1: The Traditional Eco-Map
1. Circle in the center – represents the focal client system, the unit of attention
2. Entire sheet of paper – represents the environment
3. Circles surrounding the center circle – represent the major social systems in client’s environment
4. Lines – indicate connections between systems
   a. thick line indicates a positive connection
   b. dashed line indicates a tenuous connection
   c. line with slashes indicates a stressful connection
5. Arrows – indicate the direction of flow of resources;
6. Date – indicates the temporal focus of the eco-map (past, present, or future)
7. Brief descriptors are used to name the client system, the social systems, the subsystems, the resources
8. The line tracing a system’s circumference indicates its boundary
E. Theoretical propositions and ecosystems practice
1. Basic propositions
   a. The greater the quality of the positive connections, the better the client adaptation
   b. The greater the number of stressful connections, the more difficulties the client faces when adapting
2. Verbal summaries supplement the eco-map display
3. Actual (current conditions and processes) and ideal (desired conditions and processes) eco-map can be drawn

F. The eco-map as universal translator
   1. Transactionalism – assumes that all theories of human behavior must address the interplay of personal processes and ecological processes
   2. Eco-map avoids mistakes of downward and upward reductionism
      a. downward reductionism – explanations are reduced to individual factors and processes
      b. upward reductionism – explanations are reduced to large-scale societal and structural factors and processes
   3. Eco-map displays are at a high level of abstraction, and each theoretical tradition adds specificity and particular referents to the eco-map concepts such as “resource”

   Table 3.1: Key Eco-Map Questions for Translating Theoretical Languages

V. Social Work Language and Universal Standards for Theory Evaluation
   A. General standards for theory evaluation – criteria shared by theory developers and users
      1. parsimony – is the theory stated as simply as possible?
      2. testability – is the theory stated in a form that can be verified empirically?
      3. explanatory power – does the theory explain important topics in social life?
      4. predictive power – does the theory help practitioners make accurate predictions?
      5. large scope – does the theory aim to explain many topics and systems?
      6. accumulation of improvements – does the theory build on new evidence?
      7. formally stated – have elements of the theory been explicitly identified and diagrammed?
      8. generates ideas – does the theory stimulate innovative thinking by theory users?
      9. easily communicated – can theory users talk about the theory and its elements clearly?
     10. suitable for scientific use and testing – has the theory been developed so concepts are operationalized, hypotheses have been articulated, and empirical evidence collected in support of theoretical statements?

   B. Social work standards for theory evaluation are related to our profession’s values and interests
      1. Strengths perspective – does the theory emphasize human health, potential, and strength (or disease, pathology, and weakness)/
      2. Commitment to justice and appreciation for diversity – does the theory contribute to the fight for social, economic, and political justice and does the theory appreciate human diversity?
      3. Ethical integrity – does the theory suggest applications consistent with social work ethical standards?
      4. Holism – does the theory explain all interrelated dimensions of the human experience: biological, psychological, sociological, and spiritual?
      5. Attuned to various system sizes and life stages – is the theory useful in understanding social systems of various sizes and human development at various life stages?
6. Empirical support – have theory developers and users accumulated evidence supporting the theory’s basic tenets and demonstrating the effectiveness of theory application?

C. Applying standards during theory evaluation – social work theory users can use the universal social work standards to appraise, select, and improve theories.