Chapter 5 Applied Systems Theory

Chapter Outline

I. Introduction
   A. Systems theory is presented as a theoretical perspective (not paradigm)

II. Related Dialects, Associated Schools of Thought
   A. Cybernetics – the study of guidance and self-regulating systems in machines and organisms
   B. General systems theory – an overall framework for organizing knowledge from all disciplines about living systems (Bertalanffy)
   C. Structural functionalism – developed by Talcott Parsons, examines how each system is characterized by structure and function
      1. each system is structured, orderly
      2. each system functions for the whole, and the parts of a system contribute to the adaptation of the whole system
   D. Chaos theory and complexity theory – order emerges from seemingly chaotic conditions but the emergent patterns are hard to predict (for example, Jurassic Park)

III. Applied Systems Theory: Exemplary Models
   A. Ludwig von Bertalanffy – regretted split of science into numerous disciplines, formulated theory of open systems and dynamic, holistic conception of human activity, socially engaged citizen
   B. Talcott Parsons – hoped to create "grand theory" integrating all HBSE knowledge, elaborated on structural functionalism, assisted U.S. government during Great Depression and World War II
   C. Gordon Hearn – social work theorist, who introduced systems theory to the profession, wrote books and article and organized seminars to spread systems ideas

IV. Applied Systems Theory: Root Metaphors
   A. The social environment is a whole (machine, body, species)
      1. Mechanistic tradition – society like a machine (car, washing machine): integration of parts, control mechanisms, energy use, ideally operates efficiently
      2. Organic tradition – society like a body: parts of the body, subsystems, are essential to life, each subsystem has a function, body and society has structure (society structured by gender, power, and status), both have control processes (such as police for society) and response to deviation, body and society face serious problems if important parts are removed, damaged or diseased, and there is a reverberation of impact from any internal change
      3. Open system tradition – societies are more complex than machine or body; societies are complex adaptive systems, like a species, generate new structures, invent new ways of adapting to changing environments
         a. example of social work agency
   B. The person is a part (part of a machine, body, species)
      1. Mechanistic tradition – like a machine part, essential to machine's operation
      2. Organic tradition – like a body part, not independent of body, vital to health
      3. Open system tradition – like a member of a species, in complex adaptive relation to the environment, responding to environmental contingencies in ways that affect survival of whole species

C. The social worker is a parts/whole specialist (mechanic, doctor, systems analyst)
   1. Mechanistic tradition – like a mechanic isolates broken parts, repair or replace them; like engineer trying to design smoothly operating societies; like a feedback mechanism indicating that society has gone off course or is on course
   2. Organic tradition – like a healer diagnosing pathology or part reducing body's functioning, operates or medicates to deal with dysfunctional part and restore system to equilibrium
   3. Open system tradition – like a systems analyst studying how parts contribute to adaptation of whole, and facilitating creative processes of system to enhance its development and survival
D. The general systems theory is a skeleton or framework – other theories are attached to this frame to constitute an interdisciplinary, comprehensive knowledge base for HBSE

V. Core Assumptions of Applied Systems Theory
   A. The realm of the living is characterized by isomorphism
      1. there is common order to world and all living systems
      2. similarities across systems of different sizes and types: goal-directed, organized, have parts, process energy, manage boundaries
   B. Applied systems theorists believe in emergence – new properties emerge from the dynamic interaction of system components (for example, family traditions)
      1. nonsummativity – whole greater than sum of the parts, and the achievements of the whole can not be explained solely by reference to characteristics of parts
   C. Applied systems theorists assume a dynamic orientation
      1. constant interaction of parts; active system processes
         a. organization as structure in motion
      2. two types of processes
         a. morphostasis – structure preserving actions (family with violent father accommodates his behavior)
         b. morphogenesis – structure changing actions (family challenges father and creates new hierarchy of authority)
   D. The social universe is governed by a cybernetic hierarchy
      1. ladder of systems by size (levels) and degree of control
      2. higher systems on ladder constrain and govern lower systems
         a. Parsons levels
            1. culture, language and values
            2. institutional and organizational codes of conduct and norms
            3. social interaction and choice of role performances
            (more freedom for system to vary the further from the top)
      3. lower systems are embedded in higher systems
   E. A part/whole approach is the preferred scientific method
      1. holon – each living system is both a part and a whole like concept of focal system
      2. part implies the whole and whole implies the part
      3. social worker should shift perspective repeatedly from part to whole
   F. Causation is reverberative not linear – like echo through cave
      1. small changes are amplified through systemic interactions with unpredictable effects on all parts and whole system
      2. there are causal chains with feedback loops (continual adjustment by tests of course and the match of feedback to desired trajectory)

3. hard to pinpoint beginning or end of a causal sequence (can be artificially punctuated)
G. Systems principles define the social worker role and relationship
1. social worker forms action intersystem in relation to agency, environment, and client
2. work to influence system dynamics

VI. The Systems Model of Human and Family Development
A. Exemplar: Talcott Parsons
B. Assumptions of the systems model of development
C. Conception of Progression across Life Span
1. Human society is possible because members share norms and values
2. Socialization is the method ensuring that the transmission of a common culture across generations
3. Certain institutions have primary responsibility for socialization including the family, kinship system, religion, and education
4. There are two major types of socialization
    a. primary socialization – occurs during childhood and induces children to adopt community norms and values as transmitted through the family
    b. secondary socialization – provision of socializing experiences necessary for members of society to perform roles in particular social systems such as the military, the workplace, or marriage
5. Parsons assumed person is passive recipient and socialized to obey all social dictates; norms are internalized and behavior is monitored by a powerful superego. Critics disagree.
6. Family systems theorists assume also that family systems develop over time, and this development is influenced by external forces and by within-group processes
D. Root metaphors of the systems model of development
1. The core metaphor is of socialization and when socialization fails, resocialization processes are activated
    a. socialization occurs in various socializing systems
    b. socializing agents are instruments of socialization
    c. members are recipients of socialization experiences
2. Family systems theorists build on imagery and ideas associated with "family as a system moving through time"
    a. family system and members changing continually in response to somewhat predictable developmental challenges
    b. pattern of family development are fairly universal
    c. socialization cycle
    d. example of family (or Catholic School)
    e. primary socialization and secondary socialization
E. The systems model of development
    a. Key concepts and illustration by successful socialization within a family
    b. Family theorists – focus on family developmental tasks, family life cycle, family stages
2. Family developmental approach
F. Critical comments
1. Parson's conception of social harmony and consensus is questionable

2. Parson's passive conception of member is unquestionable: unlikely that humans are fully socialized because of socialization instabilities
   a. person can choose reference group and its values and norms (and reject other groups) and use it during inner deliberations
   b. person can join any number of real groups; each with distinctive and different cultures
   c. the person's socialization experience depend on the historical events common to the parent's generation and such events differ greatly across historical periods
G. Application of the systems model of development
   1. Infrequent use of Parson's model in social work practice but social workers have made frequent use of family systems approach to human and family development

VII. Mapping Applied Systems Theory
A. Figure 5.1: Eco-Map: The Applied Systems Theory Version
B. Applied systems theory translations
   1. How are connections conceptualized?
      a. energy exchanges (information as energy)
      b. Information use – goal direction, input, conversion operations, output, feedback about cycle
   2. How is the quality of connections differentiated?
      a. feedback
         1. positive connections - on course feedback
         2. negative connections - off course feedback
         3. tenuous connections – noise, informational feedback that can not be interpreted
      b. functionality
         1. positive connections are functional for larger system – contributed to AGIL: adaptation, goal attainment, integration, latency or pattern maintenance
         2. negative connections are dysfunctional
         3. tenuous connections are nonfunctional
   3. What is the typical unit of attention or focal system?
      a. multiple lens: focus on client system and related larger social systems and subsystems
      b. Hartman identified family most typical focal system for social workers
      c. helping – change agent system, client system, action system, target system
   4. How is the environment conceptualized?
      a. the total set of social systems relevant to the focal system
      b. Pincus and Minahan characterize environment from social work perspective as change agent system, client system, action system, target system
   5. Is particular emphasis given to any systems?
      a. levels
         1. Bronfenbrenner – micro, meso, macro, exo levels
         2. Parsons – personality, cultural, social systems
      b. variation in embeddness of a particular system
      c. variations in degree of systemness (organization and structure from loose to high)
   6. How are resources and their flow conceptualized?

    a. people and social systems are resources
    b. Pincus offers a typology
        1. natural – family, friends, neighbors who offer advice, support, affection, etc
           a. formal – formal organizations provide services, activities, etc
           b. societal – publicly mandated legal services, hospitals, etc
    c. Buckley on types of resources; resource acquisition easier for powerful groups
        1. material resources
        2. human resources
        3. socio-cultural resources
    d. Resource flow is multidirectional, across boundaries / issue of permeability
        1. closed system with impermeable boundaries blocks resource exchange
        2. open system
7. What descriptive words are used?
    a. unusual language of cybernetics, engineering, biology,
    b. terms like input, throughput, output, interface, feedback
8. How is change conceptualized?
    a. change in complexity of system organization
        1. change in organization of parts: differentiation and specialization
        2. change in structure: morphostasis, morphogenesis
        3. degree of change: first order (surface) or second order (basic properties)
    b. systemic assessment: Buckley's framework inquires about goal states, parameters of system's internal state, dominant structural orientation (morphostasis or morphogenesis), commitment of system members to goal achievement, quality of relations of subsystems, nature and quality of feedback, use of feedback by decision centers
    c. systemic intervention: feedback, linkage creation, boundary work, block dysfunctional patterns, support functional patterns
    d. equifinality: the notion that there are many ways to a goal
9. How are actual and ideal eco-maps contrasted?
    a. state of system
        1. equilibrium like machine, closed system that does not make use of external environment's variety
        2. homeostasis like body, semi-open system that responds to environmental variety but tries to maintain structures and processes within narrow limits
        3. dynamic and steady state, like complex and adaptive open system that thrives on environmental variety and uses disturbances to create new and creative system arrangements
    b. use of energy
        1. entropy, tendency of system to decrease in usable energy, wear out or decompose
        2. negative entropy, tendency of system to increase available energy and complexity
           a. synergy – heightened interaction among system elements resulting in increasingly available energy
    c. Buckley on ideal system as democracy: optimal way for organizing structures and processes of a social system;
        1. diffusion of information to maximize awareness of the system's state

2. provision of feedback to decision centers from susbsystems
10. How are issues of diversity, color and shading addressed?
    a. Values environmental diversity as resource to systems
    b. conception of diversity as a pool of behavior patterns, role relationships, and models of social organization available to any social system trying to further its self regulation and adaptation
    c. diversity-related troubles – whole not accepting certain parts, certain parts not integrated into whole, boundary battles between different subsystems
11. What would be added or deleted?
    a. dashed line for systems as degree of permeability
    b. large scale systems or suprasystems like the economy, the polity, and religious institutions

VIII. The Limits of Applied Systems Theory: A Social Work Appraisal
  A. unusual language
  B. question idea of holism; analysis is critical and parts can be separated from wholes when assessing
  C. problem with functionalist explanations because they use circular reasoning; ignore probability that part performs multiple functions
     1. manifest functions – intended and readily recognized for contribution to system adaptation
     2. latent functions – not intended or easily recognized
  D. assume systems harmony as good / conservative
  E. system determinism and minimal emphasis on human agency despite system constraints
  F. strengths too – as comprehensive framework for HBSE knowledge, as way to avoid blaming the victim, and as tool for generalist practice

IX. Olson's Circumplex Typology: A Model for Understanding
  A. The problem: military families and family functioning. Life cycle pressures and situational stressors affected by and affect negatively
     1. family cohesion
     2. family adaptability
     3. family communication with particular vulnerabilities at particular stages of the family life cycle
  B. The assessment – FACES (Family Adaptability and Cohesion Evaluation Scale), appraisal of relation of individual members, dyadic systems, and whole family in response to environmental challenges
  C. The intervention – move family to optimal functioning by helping family cooperate to achieve improvements in cohesion and in adaptability; tailoring interventions to specifics of family stage