Chapter 4: Systems Perspective

CHAPTER OVERVIEW:

• One of most dominant metaphors in org. research and practice
• Living organism or biological system rather than machine
• Focus is on relationships rather than individual parts/people
• Com. viewed as process that creates relationships and meanings
• Borrows concepts from engineering, bio, chemistry, physics, soc.
• Rather than up-down or lateral movements of messages, examines com (inc. feedback, noise, distortion) as organizing locus of org. structures and functions.

So . . . what IS a system?

“A complex set of relationships among interdependent parts or components.”

A system has critical ties to its environment, exists because of the interdependence of its components, utilizes negotiated goals, incorporates feedback as a critical part of its operation, and keeps itself open to reconsidering its options.

1. Environment: Organizations are open systems, which means they do not exist as entities isolated from the rest of the world.

2. Interdependence: This term refers to two aspects at the same time.
   a. Wholeness—or the total workings of the system and its environment.
   b. The interrelationships of individuals within the system.

3. Goals: From an open system perspective, goals are negotiated among interdependent factions in an organization, with a heavy influence from the environment.

4. Feedback: This is a system of “loops” that connects com. & action.
   a. Negative or deviation-counteracting feedback, often referred to as cybernetics, returns attention and efforts to the original, specific goal.
b. Positive, or deviation-amplifying feedback, is designed to find new avenues of growth and development.

5. **Openness, order, and contingency:** A system perspective involves reconsidering each of these.

   a. Organizations are open systems, which means they must work within their environments in order to succeed.
   
   b. There is no ONE best way to organize.
   
   c. Not all ways of organizing are equally effective.

**Think about this in terms of your own body: (biological system)**

1. The parts of a system are interdependent with each other. An efficiently functioning system cannot maximize one independent part without impacting other parts. You heart cannot just decide to pump at 400 beats per minute without *major* consequences to the rest of your body.

2. Organisms are open systems and must interact with their environments. We must breathe air, eat food, consume water, and excrete or we will die. Like bodies, organizations must be open and interact with their environments (input and outputs, such as people and supplies) or they will die.

3. According to systems theory, there is no “one best way” to organize. Organizations are contingent on changing environments. Likewise, different bodies adapt to different climates, cultures, and conditions.

4. And remember the role of feedback in your system. First-order change is based on feedback that brings an organization back on track with its goals. Second-order change is based on feedback that leads an organization to change its goals. A thermostat regulates itself to set temperatures through first-order changes, while changing the thermostat setting reflects second-order change. Your body regulates your normal, resting temperature through your skin and through your breathing. Strenuous exercise can increase your internal body temperature, so your temperature regulating system produce perspiration, which evaporates, returning your to your normal, at-rest temperature.

So . . . the systems approach distinguishes between a collection of parts and a collection of parts that work together to create a functional whole.

- In a system, the whole is greater than the sum of its parts.
- The relationships among the people in a group are what makes the group a system.
With that in mind . . . let’s look at the key historical movements influencing the development of the Systems Approach.

A. The information revolution challenged many fundamental principles in the universe. (Newton to Einstein)
   1. Rather than time-and-motion studies within the limited framework of a specific task, the interpretation of the task was expanded to include how it functioned as part of a dynamic interdependent system.
   2. Communication technologies make McLuhan’s “global village” possible. (Information, in an interconnected world, has no cultural, national boundaries. Time and distance do not exist. Not a mediated system.)

B. Life sciences—particularly biology—contribute to our way of thinking about systems.
   1. A system lives (survives in a healthy manner) through the relationships and interchanges among its components.
   2. The properties of living systems, such as input (information, food, etc.), output (excretion, etc.), boundaries, homeostasis, and equifinality (there is more than one right way to accomplish the same goal—Barometer story), were applied to a wide range of social phenomena.
   3. The ambiguity of language makes the connections or interdependencies between members of a social system “looser” than those in biology or those connecting the parts of a car.

Major players in the theory’s development

A. Katz and Kahn
   1. Organizations are fundamentally open systems in which people are bonded together by symbolic as well as behavioral responses to their environments.
   2. An open system is one which must interact with its environment. Like a cell membrane exchanges food, waste products. In organizations, the flow is usually in the form of information.

B. Farace, Monge, and Russell
   1. Only through communication can organizations come into being and continue to exist. (Communication IS the process of organizing.)
or, put another way:

2. Communication is not inside, outside, or tangential to the organization: It is the organization.

C. **Wheatley**
   1. Brought the principles of “new science” to management (a combination of quantum physics, self-organizing systems theory, and chaos theory).
   
   2. Relies heavily on Prigogine’s work which views disorder as a necessary element in the search for order. (p. 102 of textbook)
      
      a. There are no “things” in themselves, not people, not organizations, but rather all are part of a network of interactions.
      
      b. Information, not matter, is the creative energy of the universe.
      
      c. All living things are naturally engaged in self-renewal, and organizations do this by making creative use of their environments. (boundary spanners reach into communities, customer support reports, etc.)
      
      d. Top-down, machine-like control from management is counterproductive to the goals of the organization and the individual.
      
      e. What we would call “disorder” is a part of the natural process of order making. (Encouraging disorder . . . thinking outside the box, trying unusual solutions to problems, etc., allow the organization to remain open to change and innovation.)
      
      f. The desire to make meaning (which she calls “strange attractor”) keeps us in a constant tendency toward self-organization. (Making meaning, determining shared beliefs.)

D. **Senge** and the Learning Organization
   1. Five Principles of a Learning Organization
      
      a. Systems Thinking: For any one member to succeed, all members must succeed.
      
      b. Personal Mastery: All members have a deep commitment to learning and the person reflection this requires.
      
      c. Mental Models: Our mental models, like a mental map of a city or a perception of a particular type of person based on observable characteristics, shape and limit our interpretation of events and our responses/actions related to those events. For
models to be flexible—necessary in a turbulent business climate—members must engage in self-reflection, which allows them to understand and then change the mental models that guide their thinking.

d. Shared Vision: Members act in concert because they share a common organizational vision and understand how their own work helps build on that shared vision. Elon is a perfect example of this, as our management has endeavored to inform and shape our shared vision of the institution and our individual (and group) roles in it.

e. Team Learning: Team members communicate in ways that lead them to smart, informed decisions . . . with an emphasis on dialogue.

Dialogue starts with a willingness to challenge our own thinking, to recognize that any certainty we have is, at best, a hypothesis about the world. Dialogue progresses through offering and exposing our ideas to tough scrutiny by others. You must have a willingness to distance yourself from your ideas and opinions for dialogue to work.

E. Weick and the Sense-Making Model
1. Organizations exist in highly complex and unpredictable environments.

2. The job of organizing involves making sense of the uncertainties in the environments through interactions.
   a. Enactment is the process by which organization members create their environments through their actions and patterns of attention (to the world around them).

   The process can be redefined, as when a company includes additional stakeholders as part of its list of publics.

   b. Selection is collective sense-making and is accomplished through communication. Participants select from a number of possible interpretations the best explanation of the environment’s meaning.

   c. Retention, the final stage, allows developed interpretations to be used in the future.

3. Major underlying assumption: Decision-making is largely retrospective—people act first and then later examine their actions so they can explain (or assign) possible meanings of what they did.
4. Another major assumption: Communication connections between people in organizations vary in intensity and are often very loose or weak. Looser connections can be advantageous for a company:
   a. The multiple goals of an organization can be coordinated without extensive communication or consensus.
   b. Loosely coupled systems are better able to withstand jolts from the environment. (Like a lot of space between the front bumper and the engine of your car.)

5. Finally, Weick uses what he calls “partial inclusion” to explain why some theories of motivation and employee behavior seem to not work.
   a. “Partial behavior” or “partial inclusion” is like the General Semantics principle of Completeness: That there is much more to the person than you see in this one context. (Also like the previous case study.)
   b. Theories that do not take into consideration the employee’s roles, activities, interests, and responsibilities outside the workplace will fail.


In practice, the systems approach helps an employee better understand the overall operation of the organization, be connected to others within the organization, and “buy into” the goals of the organization. In organizations that produce complex products or provide complex services, systems theory helps in discussion of work-flow analysis, internal customers, cross-functional work groups, control charts, and process maps.

However, it is still possible to implement systems theory in such a way as to dehumanize the individual, losing them in the corporate goal.