

THE LINKAGE BETWEEN SYSTEMS THINKING AND ETHICS

William F. Roth

In order to understand the linkages between systems thinking and ethics it is important to first understand the five systems domains that together configure our reality. We work to do so by using science to identify their characteristics. The first and by far the largest of these domains includes what we will call non-living natural systems such as the universe, our solar system, ocean currents, weather, the changing seasons. The challenge addressed by science is to understanding these natural systems by breaking each down in order to define its parts and the interactions of these parts as well as the interactions between the system as a whole with the larger system of which it is a part.

The second domain includes technological systems created by scientists, engineers and others to improve quality of life. A systemic approach to learning about technology again begins with questions like “How does it work?” How does it produce motion or an x-ray or a shoe or data or information or a new drug or a spaceship? How will it be useful? Again, we generate answers by dissecting it and studying the parts, the interactions between the parts, and by defining its role in terms of the larger system of which it is a part.

The purpose and characteristics of systems in this second domain are designed into them and cannot be changed unless the designer changes them. Thus, they are called “purposive” systems. Systems in this domain can be designed to interact with each other and support each other. At a school, for example, the lighting, heating and air conditioning units, water fountains, CD projectors and laptops all work together to make classes more comfortable and interesting.

Systems in the technological domain are not alive. Systems in the third domain, the organic domain, however, are. The latter encompasses two categories. The first category includes plants and animals that also have their characteristics designed into them, usually through their genes. The genes tell what plant seeds will grow into, what animals like ants and honey bees will spend their lives doing. Thus, they are also “purposive” systems. These “lower level” plants and animals also interact, supporting and depending on each other

The second category of systems in the organic domain includes no plants but only “higher level” animals including human beings that can decide what they want to do and how they want to do it. More importantly, they can change their mind concerning what they want to do and/or how they want to do it. These organic systems are also directed to a large degree by genes. But they possess the power to overrule their genes, to modify their direction and behavior. Thus, rather than “purposive” systems they are called “purposeful” systems. An example of this inherent talent would be a student deciding what profession he or she wants to pursue then changing his or her mind.

The fourth domain where systems are important is that of societies composed of organisms that support each other in some way. Lower level organisms can create societies where the members interact, support and depend on each other. Many animals feed on plants. But plants also feed on the bodies of dead animals. Some animals feed on other types of animals. Some plants grow on other types of plants. And on it goes, an endless cycle of interdependencies. The activities of

such lower level societies composed of lower level organisms, however, are again dictated by genes so that they are again purposive.

Upper level organisms such as elephants, baboons, porpoise and humans create upper level societies that are purposeful in that members can decide the values and activities of the society and can change those values and activities when such change is desirable. Such change usually occurs as a result of change in the environment, be it the natural environment, the economic environment or the social environment. It usually begins as an individual thing. When enough individuals agree that the change is necessary or desirable, the evolution snowballs until the resulting “new” values and activities become embodied in the society replacing the “old.”

The fifth domain is that of organizations. Organizations are groups of humans that come together in a society to use their expertise, usually aided by technology, in order to achieve a common objective. That objective is the generation of a material product or of a service that will in some way benefit the organization. In the fifth domain the purposive instruments of the technology domain and the purposeful humans of the organic domain integrate activities. Organizations are found in every area of human society at every level. They must also interact with each other either directly or indirectly as well as with the larger environment of which they are a part in order to produce the desired societal results.

Traditional systems thinking deals with the characteristics of a system’s parts and their interactions, both with each other and with the larger system of which they are a part. When we are talking about humans as an upper level organism, human societies, and organizations, however, we must include another element important to their “purposeful” perspective. The most important force driving human activity after survival is the desire to improve one’s quality of life as an individual, as a family member, as a member of society, as a member of an organization.

Our purposefulness given us the flexibility necessary to do so. But human as individuals, society members and organization members need a frame of reference to guide their efforts. Thus, the field of ethics has evolved and become critical to individual human, societal and organizational development. Throughout history philosophers in this field have worked to come up with a standard that serves the necessary role. Four major schools of thought have evolved.

One is utilitarianism. Those who support this approach believe that the most ethical answer in any situation is that which provides the greatest good for the greatest number. But how do we define the “greatest good?” For example, should we think short term or long term? Should foreign cities, economies and populations be destroyed in order to increase our immediate security or should we take into consideration what might happen in those regions once they have been destroyed, what the long term costs might be? The best vehicle adopted thus far for defining the “greatest good” in a society or organization is the democratic practice of voting. But what about the needs and desires of minorities that are frequently not taken into account once votes have been tallied?

Another weakness of utilitarianism is, “How do we define the greatest number?” The United States and other developed societies in order to improve the quality of life for our “greatest number,” in order to make things cheaper, might be exploiting “the greatest number” of workers earning poor wages in third world countries where the products are manufactured.

A second school of thought is egoism which is diametrically opposed to utilitarianism. Egoists believe that the most ethical answer to any challenge is that which benefits the individual making the decision the most with no consideration for others. Ego is important. It is one of the forces driving us to do our best, to continue improving ourselves and our situation. When out of control, however, the individual egos can hinder a society's or an organization's effort to achieve overall, continuous improvement. Examples of out of control egos and the damage they have done are found throughout history.

Pure laissez faire economic theory is built largely around the concept of egoism. Adam Smith, credited with reintroducing it to modern western society, proclaimed that the greatest good would come to the greatest number if each individual was encouraged to pursue his or her own self-interest whole heartedly. When asked what would prevent egoists from taking advantage of the public, he said, "man's inherent good" coupled with the law of supply and demand. This, of course, was not the way things worked out. During the late nineteenth and early twentieth centuries a small group of "robber barons" in the U.S. gained control of the entire economy and milked it to their own benefit with little consideration for the vast majority of workers whose lives were not improving. The government eventually had to step in and introduce regulation.

A third school of thought includes the deontologists. Supporters of this approach try to establish a code of proper conduct based on the rights of the individual. Unlike advocates of utilitarianism and egoism they are not focused on whom we should pay attention to when making decisions including an ethical component. Rather, they focus on what frame of reference we should use. They believe that every individual possesses inalienable rights that must be respected and try to spell these rights out. Thus, we have the Ten Commandments from Biblical days that center on respecting the rights of others and offer a series of "Thou shall nots" to guide our actions. Thus, we have the more modern U.S. Bill of Rights that focuses on the protection of individual rights and spells out what the individual should legally expect in a democracy.

One problem with deontology is, of course, "Who gets to define our individual rights?" An example would be today's well publicized difference in the economic philosophies of the two major U.S. political parties. For Republicans the right to preserve individual independence in economic matters is primary. For Democrats emphasis is increasingly on encouraging social stability, even at the cost of some individual independence, every citizen possessing the right to a decent job and a decent quality of life.

Another problem arises when the rights of two individuals conflict. One deontological model that has evolved is called the "political model." It guarantees freedom to follow one's conscience when defining right and wrong. It also guarantees the right to freedom of speech. But what happens when your right to freedom of speech, your right to say what you want goes against my right to follow my conscience, to act in a manner that I believe to be ethical, in a manner that contradicts what you are saying? Who's right is the most right? How is that decided?

The fourth school of thought is relativism which is diametrically opposed to deontology. Relativists believe that ethical decisions must be made subjectively according to the individual situation. This means that the same challenge might elicit a different decision under different circumstances. When disagreement arises, participants in the decision making process must work to reach an acceptable compromise. Relativism, therefore, offers the flexibility that deontology

lacks. But this same flexibility is the approach's major weakness. On an individual level personality and mood can play a major role in decisions made. On a group level there might be serious disagreement, even conflict. How does a "winner" evolve? Should we follow the person who seems the wisest or the person who is most persuasive?

So, each of the four schools of traditional thought has serious weaknesses as well as strengths. As a means of eliminating the weaknesses and taking advantage of the strengths philosophers have combined the two sets of opposites. In terms of utilitarianism and egoism they have come up with "enlightened self-interest." Followers of this approach focus on satisfying their own interests but, at the same time, take into account those of others affected. In terms of combining the strengths of deontology and relativism, "the Golden Rule" school of thought has resulted. In all situations decision makers must treat others the way they would want others to treat them if others were making the decision.

The two schools of thought resulting from these combinations are obviously similar except that in the first the individual is making the decision while in the second a model is sought or created by society. Both could serve as the desired ethical standard when discussing the unique aspect of the upper level purposeful human organism, of societies and organizations composed of these organisms and how to make them the most productive in terms of improving our quality of life. Also appropriate and similar to both is Immanuel Kant's Categorical Imperative which he proposed as the sought for standard and which says, basically, not to make decisions that can't be rationally universalized, that won't be sound in all instances, that you and others affected cannot live with in the long term. He also said to treat people as though they are ends in themselves rather than means, as though they have their own motives and needs.

All of these alternatives, however, can be traced historically back to Aristotle's pronouncements which eventually came to be called The Development Ethic. Aristotle said that life has three primary dimensions in terms of development – making, doing, and knowing. "Making" concerns the production of material goods and services necessary to survival as well as things we simply want in order to improve our quality of life. "Doing," according to Aristotle has to do with the quest for moral virtue. He defined "happiness" as the essence of moral virtue and said that the quest for it is a selfish one but that man realizes he cannot succeed in his individual quest for happiness without taking into account the happiness of others. "Knowing" involves the quest for the three types of requisite knowledge – that required to make things; that required to reach appropriate moral decisions in our quest for happiness; and that concerning the nature and process of knowing.

Aristotle said that four basic categories of societal input are necessary to healthy development. The first he labeled "plenty" which has to do with acquiring requisite amounts of wealth. The second is access to "learning." The third is the stuff of morality and the fourth has to do with satisfying our aesthetic senses. Russell Ackoff, one of the key figures in shaping modern day development theory, relates Aristotle's contribution to our world saying that development is "the process in which an individual increases his or her ability and desire to satisfy his or her own needs and those of others," that the four critical inputs are plenty, truth, good and beauty. He adds that the individual can never be fully developed, that there is always room for improvement.

A further update honed the definition to “the purpose of life is to develop and enjoy ones positive potential to the fullest possible extent then to use that potential to enhance the development of others.” The lingering question with this definition must be, of course, “Who defines ‘positive’ and how?” With Ackoff’s version the word in question is “needs.” Who defines which needs are legitimate? The update also adds “time” to the list of necessary inputs. During Aristotle’s era most people did not work fifty to sixty hours a week. In the modern world employees might have access to all the other required inputs but lack the time necessary to take advantage of them.

It seems that “enlightened self-interest,” “The Golden Rule” school of thought, Kant’s Categorical Imperative, and the development theory espoused by Aristotle, Ackoff, and the update have much in common, are pushing in the right direction if the purpose of systems theory in the realm of purposeful individuals, societies and organizations is to provide an ethical standard that complements the design part and helps enhance our quality of life.

We should be able to combine the strengths of these approaches in that there appears to be no serious disagreement and come up with a standard against which to judge our actions and those of others on all levels from individual to societal. This article suggests that the sought for standard be labeled “The Development Ethic,” not because modern day development theory offers anything that none of the other candidates offer, but because development theory is more familiar. It is a critical part of systems thinking and, therefore, has to be a part of every effort to improve our current reality in a systemic manner.