Moving From Ethics to Cybernetics

The foundation of ethics ultimately rests on actions and their consequent reactions. This extends to inactions that themselves inspire reactions and the political and social forces that shape the world and influence the human spirit to produce and prosper.

In the previous chapters, some examples were given, showing how conflicts are overcome by the evolution of social rules. Since people generally value human life, they learn from past experiences to avoid pain, suffering, and death by instituting changes in their morals, manners, customs, and laws. While this presents an oversimplified view of how morality arises in cultures, it does underscore the fundamental importance that human survival has on the development of moral and legal thought. To move from a simplified explanation to a more comprehensive one requires departing from traditional philosophical approaches and turning instead to science for a broader understanding of human morality.

It is in science that we find mathematically based field of cybernetics, which is most appropriate for describing the intricacies of ethical evolution. Using cybernetic theory to describe human actions is not a new idea. Norbert Weiner in his books, *Cybernetics: Of Control and Communication in the Animal and the Machine* and *The Human Use of Human Beings: Cybernetics and Society,* make the seminal linkage between cybernetics, culture, and human behavior. But very little of the work in cybernetics that has followed has centered on the application of cybernetics to human behavior. Instead, it has focused on technological advances in electronic and mechanical engineering.

Cybernetics can be thought of as the study of the complex relationships involving informational feedback in dynamic, self-organizing systems. The creation of stars, planets, and biological systems, as well as social systems, can all be considered to be part of a self-organizing universe, guided by cybernetic principles. Cybernetically inspired feedback would be useless information if it were not related to a change in the environment initiated by some action or event. For a person to sense environmental change there must be some reference point in her thinking, sensing, or perception which is addressed and then compared with some newer sensory information. Learning, and therefore adapting to the environment, is wholly dependent on an ongoing cybernetic process that provides informational feedback to a person. The evolution of moral systems is an integral part of this process.

Cybernetics in Human Societies

When ethics is merged with human behavior, the first outline of a moral science emerges. When cybernetics is added to the mix, the outline becomes more certain. There is a natural progression of reason that results from such a combination that moves the classical view of morality toward science.

When human morality is conceived of in scientific terms, it can produce an understanding of ethical principles where traditional approaches have failed. For instance, there is the philosophical problem of first principles and ethical relativism. The two ideas used in the same context seem to defy a logical outcome. If some moral beliefs can be shown to be relative to time and geographic place, how can there simultaneously be universal principles of human action?

When cybernetic and biological concepts are added to ethical reasoning, a solution to this perplexing problem is more easily realized. What one observes in biological systems is a tendency to compartmentalize. Compartmentalization is the logical outcome of systems that survive by utilizing feedback to define and contain forces that have the potential to overwhelm and destroy them. If there is a defect in one part of an organic subsystem that is compartmentalized, it does not lead to the destruction of the entire organic system.

It is the cybernetic principles that underlie the evolution of morality that in theory can be universalized, rather than any specific moral view or belief. Conventional ethics tends

to embody the idea that one universal moral system might be desirable, yet the physical construction of biological systems shows that universalization is not always desirable. Thus, the fundamental problem with past ethical theories is twofold. First, they present ideas of the mind not connected to the real world. Yet, quite evidently, real-world demands inspire the evolution of rules that define moral right and wrong. Second, past ethical theories have not been broad enough in their scope to resolve the complexities of the problems with which they are confronted. Therefore, the solution to many perplexing ethical problems seems to require a radical departure in thinking. One such radical change would be toward a new science that merges biology, cybernetics, and ethics into one unified discipline.

In order to appreciate the dynamics of such a science, it is necessary to conceive of a world where everything that is alive has a potential effect on every other thing. An example of this might be highway driving. Every action of every driver on the highway has an effect, however small, on the driving of every other driver. Under ordinary conditions, the effect one car has on another is imperceptible, although any given car can potentially disrupt the flow of traffic in significant ways. If one car goes out of control in a congested area, other vehicles may be idled for hours. People will be late for their appointments. Consequently, time and money will be lost in the disruption of the local economy that depends on a predictable flow of goods and services.

Many cars moving together manifest a state of systemic equilibrium from which other drivers sense subtle feedback, allowing them to speed up, slow down, or use extra caution in their driving. The way each individual driver synchronizes his movements in traffic has a direct bearing on how the traffic itself is moving. Everything on the road contributes to its ambient state. Written laws define in broad strokes a system of rules that coordinates the driving habits of many drivers who simultaneously use the highways. The ambient state influences peoples' driving sufficiently to fine-tune those rules. Thus, the prevailing sense of order on an enormously large system of roadways has the dynamic capacity to adjust to changes not anticipated in the actual traffic laws.

In theory, this same process operates on a much larger scale when thought of as the earth's ecosystem. Here, there are thousands of organic systems interacting simultaneously in ways that must be coordinated and synchronized to maximize systemic growth and survival of the entire planet. If one organic system modifies its behavior radically, it can trigger changes in other biological systems that in turn inspire multiple responses affecting the behavior of an even wider spectrum of organic systems. Since many biological systems are constantly acting and reacting to environmental changes, this activity develops oscillatory characteristics. These oscillations can also be visualized as a resonance, an environmental ambience, or a field from which all living things extract useful information to aid in their adaptation and survival.

The ambient field facilitates the synchronization of the activities of many systems in its capacity as the prime coordinator, without there actually being a conscious entity facilitating the coordination. Consciousness in this respect is the sum total of the conscious minds linked in heightened awareness, each deriving energy and instructions from the field. This coordination, in theory, is aided by a phenomenon similar to the interlocking tendencies of two sine waves whose frequencies are close, but not exactly the same. When this occurs the two will begin to oscillate at a single frequency. An example of this phenomenon in the social world might be seen in political uprisings where many peoples' emotions suddenly fall into synchronization to achieve a common goal. Another way to illustrate this is to visualize a highly coordinated swarm of bees flying very close to each other, yet rarely colliding.

To be alive is to sense change in the environment, as well as to be a part of those changes. Every single living thing exerts a force, however slight, to a matrix of forces that establishes a balance point or points of dynamic equilibrium from which subsequent action can be consciously sensed.

In the same respect that the larger world ecosystem maintains a certain state of dynamic balance, so do the smaller subsystems, all the way down to the smallest organic environment. Included in organic subsystems that make up the larger world ecosystem are human societies. The way in which people behave can be reasonably said to be an extension, in part, of their biological constituency. For instance, a large office of

workers comprises a social system that in its own way establishes a balance point or state of dynamic equilibrium that sets the tone for office behaviors. There are basic rules that govern each person's behavior. But beyond that, the fine categories of distinction that define right and wrong behavior evolve under ambient conditions. From this ambient state, individuals can gauge the appropriateness of their actions. The longer people work together, the more refined this sense of balance becomes.

When the balance is upset, there are disruptions in this ambient field that are noticeable to those who participate in it. Right and wrong behavior, to some extent, is derived from a dynamic process of feedback that establishes an ambient state. When a person is out of tune, it is quite obvious. An employee, who suddenly begins to sing just as his boss is trying to close an important transaction, will likely feel a subtle change in the ambient state of affairs in the workplace as tensions begin to rise because the customer is distracted, making it difficult for the sale to be closed.

From this example, it might be seen that the idea of moral right and wrong can be the end product of behaviors that disrupt the flow of socializing and commerce. They are behaviors that are so disruptive as to compel a society to set time and place constraints on certain human activities. Over many generations of socializing experience, there is a natural evolution of morals, manners, customs, and laws that govern every imaginable form of human activity. It is a self-organizing process that appears to maximize systemic growth, whether

it involves defining international politics or relationships in the workplace.

When a social system gets out of balance, it manifests a state of environmental stress. Like the infliction of physical pain to the body, the sensation of stress can move people to action. Stress can be an equalizing mechanism redistributing tensions in the social environment. Aside from its negative aspects, it is essentially a communicative process, even though those communications may sometimes operate at the subliminal level of sensory apprehension.

Stress is feedback in process inspired by conflict. Overlaid on the negative characteristics of the conflicts themselves, are subtle forms of communication that can equalize tensions by raising people's thinking to implement more creative ways of behaving. Since stress is so evident in fast-moving dynamic social systems, the cultural morality invariably subsumes rules of behavior that deal with its reduction. The evolution of formal manners is one example of a stress-reducing mechanism active in civilized societies.

There are very few forms of universal communication. Emotions and body language are two of these. They may not always be very refined and delicate in their conveyance, but emotions can get a message across when other forms of communication fail. In a world of many people who fundamentally do not understand each other, there will be unavoidable conflicts. These conflicts do not always arise from predatory intents; rather they are expressions of miscommunication and

frustration in attempting to understand what is going on in the social field. Emotions are the predecessor to reason, yet they helped evolve a more rational world. Reason perhaps evolved to facilitate the long-term survival of humans. It has done so by evolving mechanisms of restraint to break the vicious circles of conflicts due to misunderstanding. While the miscommunications may inherently contain moral characteristics, the excess of passion that emotion-based language can inspire may send people out of control, provoking them to commit nonmoral acts of retribution.

In a civilized climate, people tend to hold their emotions back enough to try to work through conflicts. But there is a price for civilized restraint: necessarily enduring stress or finding creative ways to work around it. An example of this might be experienced in the workplace. The workers have certain emotional habits and quirks that they do not have time to sit down and discuss with their fellow employees. Instead, people discover the limits of other peoples' needs and emotions in the process of interacting with them. Teamwork, for instance, is something people learn on the job. When a member of the team no longer carries her weight, expecting others to do her duties, she inspires certain emotions from her fellow workers that put her under stress until she learns the merits of teamwork. When words do not sufficiently inspire people to action, conflict sometimes seems to do the job. And in a world where few people really understand each other, confrontation and eliciting stress is sometimes the only method to make things happen.

Since so much of ordinary life operates on an emotional level that may be highly unstable, certain regulatory mechanisms must be present to keep society operating smoothly. Morals, manners, customs, and laws have naturally evolved from the positive and negative effects manifest in certain behaviors. Thus, an understanding of cybernetics is essential to the understanding of human behavior and the laws and morals people invent to regulate themselves.