Cybernetic Ethics

The world can be conceived of as a self-contained, self-sustaining system. Picture in this respect a small self-contained ecosystem of ferns and mosses enclosed in a glass vessel, admitting only sunlight from the outside world. Proceed from this example to the conceptualization of a self-contained world of actions and consequent reactions. The moral world might be part of this world.

Organisms, animals, and humans share a common cybernetic environment. As organic life has evolved over billions of years, an intricate system of relationships and dependencies between biological systems has developed. Among these are relationships between individuals, groups of individuals, and between humans and other life forms in the environment. Theoretically, every living system has some influence on every other system in large or small ways. If the emergence of ethical systems can be reasonably linked to these relationships, the resulting moral theory will be extraordinarily complex. But no matter how complex it may seem, if the evolution of ethical systems is in fact based upon cybernetic principles, it can be reduced by mathematics to understandable proportions.

Cybernetic ethics is a way of viewing the evolution of ethical systems in terms of the informational feedback certain human actions

generate. Feedback can arise from the consequences of specific actions that are easily observable, or from a change in a "state of affairs" that has slowly evolved as a result of the accumulation of formerly unseen problems. Examples of what might cause this might be seen in the excesses of human immaturity and selfishness. Although it could be said that these causes are the result of some earlier cause or neglect, for purposes of illustration they are cited here as immediate causes.

People have observed the behavior of other people for thousands of years. When certain negative effects that accompany particular behaviors repeatedly manifest themselves, those behaviors become prominent memories firmly implanted in the societal memory. As this memory becomes enlarged, it sets in motion a counterforce to contain behaviors that consistently cause social problems. Much of morality in this respect is parental in nature because the impetus for creating restrictions tends to come from more mature and experienced people. Some of this parental urge comes from the observation that time appears irreversible. You cannot put the bullet that killed someone back in the gun, nor wish away an automobile accident as though it had not happened. But tragic circumstances sometimes reconcile themselves in the good they inspire in the behavior of civilized people. The recurrence of a similar tragedy is many times prevented by the constructive

remembrance of specific behaviors that led to trouble and those that did not. This conscious process of civilization building can be seen in the proliferation of many types of formal and informal rule systems. Counted among these are moral, manner, legal, and customary rule systems.

Human beings are born immature and thus cannot be expected to know morally proper behavior without guidance. With immaturity comes expressions of selfishness that are a natural part of life. But the aggressive nature of selfishness and immaturity would soon undo all the refinements and achievements of civilization if there were not some counterforce to thwart it. People more or less define themselves by an intricate web of relationships. Security and success often depend on a support system of interpersonal relationships. If excesses of immaturity and selfishness arise, these otherwise harmonious relationships can fall into conflict or even deadly violence. Mature adults are sensitized by the prevailing moral sentiments, education, and laws to recognize selfishness that has crossed over the line of propriety. These sentiments represent complex abstractions of what constitutes fair play given certain established boundaries of behavior. They are not defined in a book; rather they are learned and accepted through experience.

Selfishness is contained by the continued societal memory of it in each generation. When a person repeatedly crosses over boundaries of acceptable behavior, he or she generates feedback that can be detected by others. For instance, a person can easily cheat another in a business transaction, but if that sort of exaggerated selfishness continues, he or she acquires a reputation that arises as a function of feedback that slows the person's ability to continue to defraud people endlessly.

Reference points and boundaries guide human development as mechanisms of the cybernetic process. Some reference points are more important than others, given time and circumstances. A superordinate reference point might be viewed as the collective or individual urge of human beings to survive. This paramount concern sets the conditions by which smaller concerns evolve. Whether they are subordinate or superordinate in nature, they all appear to exist to maximize survival, minimize human harm, and avoid extinction.

In conventional ethics, reference points are not described as such; rather, they are expressed in terms of values. These values represent models of behavior, whether they are economic, educational, moral, or social. But here ethics is being placed into a context of cybernetics. Thus, the idea of morals evolving as reference points

must be addressed in order to efficiently convey an understanding of ethical evolution. To illustrate the importance of reference points in a cybernetic system, one need only look at the operation of an autopilot that guides an aircraft without the pilot's intervention. Planes ordinarily lift off with a specific destination in mind. The desired destination is translated into a set of coordinates and downloaded into the autopilot's memory. These mathematical coordinates thus become superordinate reference points by which all subsequent behaviors of the aircraft's control systems are evaluated and acted upon. The coordinates defining the destination can be changed, but until they are, any deviation in the flight path of the aircraft will generate electronic feedback forcibly keeping the flight path in correspondence with the programmed coordinates.

Autopilots can be designed to be more sophisticated than this. For instance, a plane may not be able to fly directly to its destination because such a path would violate some nation's airspace. Thus, secondary coordinates in this autopilot system could be set to conform to a pattern of behavior causing the airplane to avoid a boundary the plane cannot cross over. By this construction in reasoning, reference points and boundaries are seen as determinants of the right and wrong behavior of the airplane's control system. In the same way, the important values of a culture contribute greatly to the perception of

behavioral right and wrong.

Three superordinate reference points that guide human behavior can be thought of as: 1. Concern for individual survival. 2. Concern for the survival of the entire culture. 3. Abstract or transcendent concerns that enhance the quality of life. This last concern adds meaning to existence that might not otherwise occur, further strengthening the cultural or individual will to survive and thrive. Tension arises between important values such as these, which ultimately determines which values will prevail, when they will prevail, and under what circumstances. Human experience is a living situation and so are the dynamics of the values that guide them. The evolution of formal morals, manners, laws, and customs is essentially an end product of centuries of human effort to find a tolerable balance among all of the demands of living. This never-ending process of cultural refinement reconciles the clash of many values, while still trying to hold onto the most important ones.

In order that the maximum number of important values be retained in the life of a person (or that person's culture), there must be some organizing protocol. This is ordinarily done by prioritizing one's activities and setting reasonable goals. The more dependable the routines are that can be incorporated into such a strategy, the more likely the goals are to be

achieved because of a built-in systemic efficiency. To illustrate this, one might look at the lives of young students attempting to enter the highly competitive world of professional medicine. Here they are under tremendous pressure to meet the demands of their course load. Unless they are extraordinarily talented, or possess tremendous physical and emotional energy, they must find an effective, simplifying algorithm of behavior to achieve their ends. When time, energy, and income are in short supply for the average person, it is necessary to be extremely efficient if that person is to compete with gifted people. Thus for many medical school applicants, excessive party-going and substance abuse would be deleterious to reaching their goal.

The end result of this type of planning creates in effect a secondary set of moral rules by which students begin to guide their lives. If excessive party-going severely impinges upon their ability to successfully compete, a violation of their commitment to reach a goal will be felt from the feedback of increasing failure in school. Thus, every moment of time they invest in leisure activities questions the sensibleness of that investment based on a model of behavior they have previously established.

There are many reliable moral, professional, and educational models to choose from, replete with their own internal values. Since human

experience spans thousands of years, many varieties of moral models and lifestyles have already been tested for their inherent moral worth. What comes with the adoption of tested and reliable ways are behaviors that work around destructive feedback, and so help people attain their goals.

Ethical rules evolve from dynamic circumstances. In theory, these situations can be quantified (or can approach reasonable quantification) in the same way that an engineer reduces natural phenomena in electrical or mechanical engineering to workable principles. Quantification in the moral realm essentially comes down to making the most reasonable choices under a given set of circumstances. Some choices are better than others if certain fundamental values can be agreed upon. Thus, choices can be evaluated as to their inherent worth in a systematic way.

The situation of the premedical students illustrates a simple moral dynamic. But human experience is more complex and fast-moving than this simple illustration allows. Decisions people have made in the past affect social conditions in the present. Many marginal choices made over years can create an ever-escalating array of obstacles to overcome. For instance, if a person gains a reputation for exploiting other people and businesses for money, such behavior eventually

leads to a poor credit record. A poor credit report in turn leaves that person at a disadvantage when he or she genuinely needs money in an emergency. Thus, the reputation a person builds today can impair his or her ability to move forward in society tomorrow.

Some categories of decisions have a more profound affect on people's lives than others. Human situations involving sex, wealth, status, and power can, and many times do, lead to high emotions. When several emotionally charged situations converge at the same time, a person can be driven to emotional instability. Since, in theory, all of human experience can be broken down into separate but interlocking systems, destructive emotional oscillations in one system can affect the stability of other systems.

To illustrate the systemic nature of human experience, it is easy to visualize the difference between the human physiological system and a marital system. Physiological problems can lead to instability in a person's marital situation or vice versa. The human body has informational feedback loops that sustain it, and so does a healthy, growing family. High emotions can interfere with the perception of needed informational feedback in all interlocking systems. Thus, an emotionally charged situation can undermine the stability and tranquility of other systems such as family life, professional

life, or the many delicate systems of the body that comprise human physiology.

Ordinary human experience can be defined by a complex matrix of interrelated systems working together in synchronization. Each system is sustained by a cybernetic process that can be destroyed by the intrusive nature of extreme stress and emotions. Given the possibility that this may be true, it is easy to see why centuries of observation have repeatedly affirmed the moral view that sex, wealth, and power are forces in human affairs that require wariness.

Inverting established values leads to conflicts between human systems that ordinarily work in harmony. If a student bound for a prestigious university really is intent on being accepted, why would he place hedonistic pleasures before the business of studying? People tend to invert their values when they think they are getting something for nothing. An aggressive male who is simply out for a night's fun may think at the time he is getting away with something by taking advantage of a naive woman. But his exploitative intents may inspire a counterforce of powerful emotions from a woman incensed by the affair. What the man might have thought he was getting was some easy sexual pleasure, but instead he has become involved in an emotional struggle that ultimately impairs his ability to concentrate on his studies.

In sum, there is a logic to the way that mature people organize their lives that lends a priority to certain activities. These ways of living become known and respected for what they produce. Behaviors such as these that have endured for centuries eventually become part of the foundation of the cultural morality. Since so many problems revolve around the strong passions that sex, wealth, and power produce, the presence of passion in the actions of immature people is a highly predictable phenomenon. The systemic feedback these situations produce are some of the most powerful experienced by human beings. Their predictability throughout centuries of human experience inspires the notion that there is a sense of mathematics to it all, which shows people how to behave and what the consequences will be for such behaviors.