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The cybernetic institution: Toward an integration of governance theories

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Abstract. This paper presents a new conceptual approach to institutional governance, management, and leadership based upon a cybernetic model of organizations. The cybernetic paradigm integrates existing models by suggesting how bureaucratic, collegial, political, and anarchical subsystems function simultaneously in colleges and universities of all kinds to create self-correcting institutions. The cybernetic paradigm posits that organization control systems can be described in terms of sensing mechanisms and negative feedback loops that collectively monitor changes from acceptable levels of functioning and that activate forces that return institutions to their previous stable state. These self correcting (cybernetic) processes function as institutional "thermostats". Administrators can function effectively by adopting leadership and management approaches that are consistent with cybernetic principles. These principles suggest that administrators should complicate themselves and use multiple frames to develop richer behavioral repertoires, increase the sensitivity of institutional monitoring systems, and focus attention on important issues through systems that report data and create forums for interaction.

The major function of the cybernetic administrator is to coordinate and balance the various systems within the institution to move towards optimizing the administrator's values. This can be done by making incremental adjustments to administrative processes and procedures, by enunciating goals that establish constraints, and by emphasizing selected elements of organizational life.

Four major models of institutional governance have been prominent in the evolving literature of higher education. They have included the university as a bureaucracy (Corson, 1960; Stroup, 1966; Blau, 1973), collegial system (Goodman, 1962; Millet, 1962; Clark, 1972), political system (Baldridge, 1971; Walker, 1979), and organized anarchy (Cohen and March, 1974; March and Olsen, 1979). The sequential appearance of these models in higher education theory has paralleled (albeit with considerable time lag) the development of four different schools of thought analyzing organizations from structural, human resource, political, and symbolic perspectives.

The higher education models may appear to be competing, but in fact they are complementary. Each model illuminates certain aspects of an organization while obscuring others. Each of the models is "right," but each is incomplete. There are no colleges or universities that consistently reflect the "pure form" of any of the models; some elements of each are revealed in institutional

functioning in some ways, at some times, in some parts of all colleges and universities.

Colleges and universities are inventions that arise through the interactions of non-linear, dynamic systems of social norms, hierarchical structures, contending preferences, and cognitive biases and limits. Institutions are defined by the elements that compose these systems, and by the patterns in which these elements are loosely or tightly coupled. This paper suggests that cybernetic principles can be used to understand how the often conflicting processes of these dynamic systems are coordinated. I will introduce a fictional and generic institution, Huxley College, in illustration.

A campus visitor spending a week at Huxley would observe a buzz of conflicting activities, argumentation over priorities, and shifting alliances. An observer might be tempted to believe that chaos was everywhere, and that the only "given" was that participants saw what they wished and did what they pleased. Mathematicians know there is order even in chaos, and viewing the campus through the conceptual lenses provided by different organizational frames (Bolman and Deal, 1984; Birnbaum, 1988) a sophisticated observer would be able to see many patterns and signals where a less experienced one might see only noise and confusion. But the patterns would appear to operate at cross-purposes, and to be too complex to be fully understood or controlled. How can such a confused organization survive, much less be effective? And yet Huxley has not just survived, but has prospered. Students arrive every year, are educated, and graduate. Research is conducted, the results of scholarship are published, community service is performed. Supplies and equipment are purchased, bills are paid, ceremonies are held. And despite the apparent disarray, there is incredible regularity and stability in many aspects of organizational life.

What is responsible for coordinating this large and complex social system? One common response is to suggest that it is Huxley's president, Quincey Wagstaff, who has integrated the work of the various institutional components. But it is virtually impossible to follow the trail of presidential influence through the myriad of actions, interpretations, structures, and decisions that characterize the everyday life of Huxley. Wagstaff is involved in many important activities, to be sure, but he is more often responding than initiating them. While it is obvious that Huxley College has some direction, it appears to have been accomplished in the absence of a director. Somehow, something has brought a reasonable degree of stability and order to a system so complex that outcomes cannot be predicted even by the most powerful computers.

I suggest that this is accomplished through cybernetic controls – that is, through self-correcting mechanisms that monitor organizational functions and provide attention cues, or negative feedback, to participants when things are not going well. Systems of negative feedback detect and correct errors so that

when something happens at Huxley that moves the college in an undesirable direction, something else automatically happens to bring it back on course (Morgan, 1986). Thus coordination is not provided by one omniscient and rational agent, but by the spontaneous corrective action of the college's parts.

The characteristics of cybernetic systems

Huxley College is a system whose functions are controlled by feedback loops created and reinforced by the institution's structure and its social system. Political and symbolic processes lead to loose coupling between some loops, and tight coupling between others. These patterns of loops and couplings uniquely describe Huxley College, although they resemble in many ways the patterns of comparable institutions.

In a cybernetic system (Ashby, 1956; 1960; Lindblom, 1959; Cyert and March; March and Simon, 1968; Allison, 1971; Steinbruner, 1974), organization subsystems respond to a limited number of *inputs* to monitor their operation and make corrections and adjustments as necessary; organizational responses are *not* based upon measuring or improving their output. That means that, for example, nothing is likely to happen at Huxley if its graduates learn less (a measure of output), but that the college is likely to respond when alumni complain (an input) that they have not been well-prepared for their careers. Emphasizing the importance of inputs rather than outputs makes it possible to understand how Huxley functions even though it may not have elaborate systems for rational calculation, or clear institutional goals or purpose. It does this by creating feedback loops that tell it when things are going wrong.

Thermostats and feedback loops. A thermostat is an example of a self-correcting, cybernetic control system with a feedback loop. It turns the furnace on when the environment's temperature falls below a pre-set limit (say, 70°), and turns it off when the temperature returns to the desired level. This keeps the temperature within an acceptable range. In the same way, Huxley has a number of goals whose achievement must fall within an area of acceptability. If any of them fall outside that range, the energies of individuals or groups at the college are activated in an attempt to return Huxley to the desired level. The "goals" of Huxley are therefore really the resultant of the behaviors of different people who take action of some kind when something goes wrong with some particular aspect of the college in which they have an interest.

Activities at Huxley College are regulated by control systems that function as "organizational thermostats." Explicit controls are manifested in organizational rules, regulations, and structures. Implicit controls develop through

interaction which leads to shared attitudes and concern for group cohesion. Political and symbolic processes influence how these control systems are connected under different circumstances, and which controls are given precedence when there is conflict between them.

Explicit and implicit controls are organizational feedback loops that do two things. First, they make minor adjustments in ongoing organizational processes as necessary to keep them functioning within acceptable limits. Second, if these minor adjustments are not successful in keeping the factor being monitored within acceptable limits, they initiate action to alter the organizational processes themselves. These negative feedback loops provide information that something is wrong. They allow interested people at Huxley to sense when some important variable is outside its acceptable limits, and to engage in adaptive behavior that creates a reasonably stable institution (Ashby, 1960).

Goals and subunits. Huxley College has a number of publicly enunciated goals that are worded in general terms, but that provide little operational guidance and are often conflicting. The achievement of these goals constitutes the essential problems of the college, and it respond to these problems by establishing specialized subunits that focus attention upon one or another of the organizational "goals" as a sub-problem (Simon, 1964).

One such goal at Huxley College has been identified as "moving towards academic excellence." Although people agree on the goal, they do not understand the full range of behavior that would be required to implement it, they cannot measure it in all its complexity, and they therefore cannot know when they have achieved it. Decision makers at Huxley must simplify complexity in order to make tolerable the cognitive requirements to understand their problems. Huxley College deals with the issue of ultimate organizational objectives by avoiding them. Instead, it simplifies to limit uncertainty.

The goal of "academic excellence," could be implemented in many ways, and after examining only a few of the potential alternatives Huxley has chosen several means, one of which is its Honors Program. The Honors Program in turn has identified high scores on the required entrance examination as one of a small number of indicators of program success. The problem faced by the college in selecting from among an indefinite number of possible programs those that would have the highest probability of maximizing an unclear number of undefinable goals has thus been significantly simplified; the college has identified one variable in one program as a measure of one goal. When the college administration is called upon to respond to its progress in moving towards academic excellence, it is likely to cite as an indicator the entrance test scores in the Honors Program. The decision makers in the cybernetic institution are now able to focus their attention on a small number of incoming

variables without having to spend time comprehensively analyzing probable outcomes (Steinbruner, 1974).

Responding to feedback. There are an infinite number of matters that might concern the Honors Program, but because of bounded rationality (March and Simon, 1958; Simon, 1961) the program is able to attend to only a relatively small number. Two of the factors which it emphasizes are the quality of the program and the morale of the program faculty, and feedback loops have evolved to sense and correct undesirable changes in both of them.

The entrance examination scores of new students are considered by the trustees, President Wagstaff, and program faculty at Huxley to be one of the most important measures of the quality and therefore the success of the Honors Program. Of course, the relationship between test scores and program quality is not a matter of "fact," but the organizational culture has made high test scores part of an institutionalized myth (Meyer and Rowan, 1983) that is part of the symbolic system that defines Huxley's "reality." Because test scores are considered to be so important, the calculation and reporting of these scores to the program is standard operating procedure. When small fluctuations in test scores are observed, the program makes minor adjustments in an attempt to correct them. But if scores were to drop and minor adjustments no longer sufficed to correct them, Program Director Linda Laud would attempt to make significant changes in admissions procedures in an attempt to return the scores to their previous acceptable state. For example, such a serious decline in the past led to the development of a new high school relations program offering college courses to advanced high school juniors and seniors; within two years entrance test scores returned to their "proper" level.

Faculty morale in the Honors Program is also part of a feedback loop, but it is not linked to regularized reports or standard procedures. In this case it is a social control rather than a structural one. Director Laud is exceptionally sensitive to faculty morale. The program is small, and the faculty and director interact regularly. Laud has always considered faculty griping to be a negative indicator of morale. She responds to gripes with good-natured banter that usually satisfies her colleagues, and program life doesn't change much as griping fluctuates within a limited range. But when the level of complaints rises to an unacceptable level, Laud begins to alter program processes (for example, instituting a faculty development program) in an effort to bring it back on course.

Changing behavior. The structural and social feedback controls in the Honors Program permit participants to assess the status of important input variables such as test scores or faculty gripes. Minor deviations have no consequences. But when the variables fall outside an acceptable range, the result is a change

of "state" – that is, a change in program behavior. When test scores decline too far, program participants begin searching for ways to increase them. When griping becomes unacceptable, Laud begins to think about new approaches to increase faculty satisfaction.

In both cases, there are an exceptionally large number of ways in which program behaviors might be changed to lead to the desired outcomes. If Huxley was a completely rational organisation, it would be expected that Director Laud would respond to a perceived problem by assessing all the alternatives, calculating the costs and benefits of each, and selecting the alternative providing the best solution to the problem. But as part of a cybernetic organization, Laud responds differently. Instead of searching for all the alternatives and calculating their effects (an impossible task), she begins examining a much more limited set of behaviors that have been found in the past to be effective. When test scores of Honor Program applicants drop, for example, immediate attention is given to a small number of possible solutions, most of them focussed upon marketing techniques that have previously been used for recruitment in other programs.

The cybernetic college is unlikely to try and rationally calculate in advance the probable outcomes of the new activities it selects. For example, Laud does not attempt to quantify the extent to which the proposed change is likely to increase test scores. Rather, she implements a proposed solution and then monitors the test scores. If the desired changes do not occur, another proposed solution is tried, and then another, The search ends when the test score indicators return to acceptable levels. The cybernetic college satisfices (March and Simon, 1958). It is important to note that it is not necessary in this model for Director Laud to understand the internal interactions that lead to the desired outcomes. *Why* the new behaviors had the observed consequences is not important, and even random activities may suffice.

Collecting data. Cybernetic systems can respond only to stimuli to which they are sensitive. The thermostat, for example, is sensitive to changes in temperature and is indifferent to other changes in the environment. Even though organizational cybernetic systems are much more flexible than mechanical or electronic ones, they too are limited, This has implications both for the kinds of changes in the environment to which they will respond, and for the assessment of outcomes of changed behavior. At Huxley, Program Director Laud only sees data that come through well-developed feedback channels. Data for which no channels exist do not come to her attention, and therefore cannot be part of her decision process (Steinbruner, 1974).

Both the test scores and faculty gripes are part of highly focused feedback channels in the Honors Program. There is a mechanism in the college for monitoring these outcomes, for comparing them to some desired state, and

for taking action to restore the organization to the desired state if minimum criteria are not being met. This cycle is repeated until the variable has returned to the acceptable range. But other potentially important data, which have no focussed feedback channels, are not observed at all. For example, although program faculty have frequently discussed their interest in moral development as a desirable outcome of the Honors Program (among many other desirable outcomes), there is no established process by which data related to moral development are sensed. Decisions about the Program will be affected by changes in test scores, but not by changes that may happen to occur in the moral development of students. Moreover, when the program changes its behavior in order to affect test scores, the potential effects of these changes upon moral development will not be considered.

Such decisions may usually work out well because many organizational processes are only loosely coupled (Weick, 1976). There may in fact be no connection between test scores and moral development at Huxley College such that raising one will have unanticipated and negative consequences for the other. But while college programs may be only loosely coupled most of the time, they are not so all of the time. Decisions to increase test scores in the Honors program at Huxley may in fact have an impact upon other things – for example, the enrollment of minority students in the program. If appropriate focused feedback loops responding to the ethnic distribution of students in the program are not present, such consequences, even if they occur, will not be noticed!

The Honors Program, and all other subsystems in a cybernetic institution such as Huxley, is therefore sensitive to only a limited number of stimuli from a relatively small number of sources, does not observe all potentially important data, and has no way of assessing the outcomes of its behavior except in those specific areas in which focused feedback loops exist.

The subunit-organizational hierarchy: Goals and controls. Commitment to specific sub-goals means the Director of the Honors Program will act to maximize the program's limited objectives with little concern for the effect of these behaviors on the other subunits of Huxley College. This parochial concern for limited goals is not necessarily disadvantageous to the college since loose coupling means that many changes in that program are unlikely to affect others. In addition, Huxley is complex enough so that some other part of the college is likely to be charged with the responsibility of sensing such undesirable developments and their sources when they exist, and of bringing them to the attention of the upper levels of the organization.

Higher levels of administration at Huxley are subject to the same problems of uncertainty, attention, and sensitivity as are lower levels. To reduce the uncertainty of the effects of decisions on such vague goals such as "liberal

education" President Wagstaff and other senior administrators do what the subunits must also do – they select a small number of variables whose values are accepted as reflecting the degree of achieving the goal itself. Rather than initiate their own agendas, senior administrators at Huxley are likely to monitor the achievement of "goals" by assessing the extent to which the Honors Program and the other subunits responsible for these goals are in fact functioning within acceptable limits. College executives therefore do not have to pay attention to everything all the time. Once systems are in place that satisfy the criteria of the constraint set, they do not ordinarily require the attention of senior administrators. Administrators deal with exceptions.

Senior administrators at Huxley respond to subunit problems sequentially, and not in an integrated fashion. That is, they attempt to solve problems presented by subunits without trying to understand the effect of that solution for the performance of other subunits or for the achievement of organization "goals." Allocating the achievement of specific goals to loosely-coupled subunits is what permits Huxley to respond to its many ill-defined and often conflicting purposes, and at the same time provides the simplification required for administrative action. "Organizations resolve conflict among goals, in part, by attending to different goals at different times... The resulting time buffer between goals permits the organization to solve one problem at a time, attending to one goal at a time" (Cyert and March, 1963, p. 118).

The problem of organizational coordination does not end when a variable returns to an acceptable state, however. Actions taken to restore one subsystem to equilibrium often have unforeseen consequences that may negatively affect other subsystems. The processes of adjustment themselves create other imbalances (Blau, 1964), and actions that solve one problem create others. The nonlinear nature of the subsystems, and the fact that the output of each subsystem is part of the input for the others, makes unforseen consequences inevitable. Unpredictability is predictable, and institutional monitoring and correction is a continuing process.

Loose coupling in cybernetic systems

Institutional goals can be thought of as a series of widely shared value premises that set constraints defining effective institutional functioning. Sometimes one constraint (for example, an emphasis on liberal education) is given special prominence and is arbitrarily thought of as "the institutional goal," but other values (such as "minimize employee accidents") may be equally important and exert just as powerful an influence on how people behave (Simon, 1964). The goals defined by the constraint set of an institution are multiple and often

conflicting. The maximum achievement of one can only come at the cost of a lesser achievement of others.

Complex organizations deal with the problem of multiple and conflicting goals by assigning responsibility for these goals to different subunits. Huxley College, for example, has a number of different goals, among which are "excellence" and "access." It has responded to the goal of excellence by creating a subunit called the Honors Program, and to the goal of providing access to poor and underprepared students by creating another subunit called the Academic Opportunity Program. Both of these subsystems are themselves relatively stable, but they are only loosely coupled to each other. Indeed, the entire college can be thought of as composed of building blocks of subsystems, most of which can be added or removed from the college without affecting the other subsystems (Simon, 1969). The linkages *within* most subsystems at Huxley are stronger than the linkage *between* most subsystems, and in the short run what happens in one such subsystem has little to do with what happens in another. The most obvious example in higher education is the multiversity in which "many parts can be added or subtracted with little effect on the whole" (Kerr, 1963, p. 20). But the principle applies to a greater or lesser extent in other institutional types as well.

The Academic Opportunity Program and the Honors Program function as stable, but loosely coupled, building blocks. Both units have reasonable autonomy, but that does *not* mean that they can do anything they please. In fact, there are a number of potent control mechanisms affecting each unit that increase the probability that certain activities will occur, and that other activities will not. Huxley, like every other organization, has a culture that establishes expectations and limits of behavior. Staff in both units understand that culture because of their involvement in the national educational system, the culture of the profession, and the culture of institution. In addition, they share the constraint sets, or institutional goals, of Huxley.

But within those limits, the roles of individuals, and the extent to which they are coupled to structural or social controls, affects the values that each program wishes to optimize. These values are quite different in the two units. And as participants within each unit recruit colleagues like themselves, spend more time with each other, and see less of those in the other unit, they come to share attitudes and behaviors within their unit, and to be different from people in the other unit.

Each unit is bound by Huxley's rules and regulations made at higher organizational levels, but these are usually general enough to permit varying interpretations at lower levels. Operating within the cultural framework provided by the institution, the two units have developed different bureaucratic and collegial control mechanisms that limit the discretion of unit members, that regularize and stabilize their operations, and that support the optimization

of one of the college's values (Cyert and March, 1963). At the same time, both units have simplified their worlds by developing cognitive biases and filters that permit them to deal with only a small number of variables that they consider to be important. They can usually ignore the possible effects of their program on the program of the other, but when their interests are seen as being in conflict their representatives can meet to negotiate in an effort to change the other's perceptions or values.

That the bureaucratic and collegial systems of both units are not the same is of little consequence because the two units operate essentially independently of each other. People in the Honors Program and the Academic Opportunity Program rarely have to work together, and their students, faculty, and program are different. What happens in one in the short term has little if any effect on the other. Focusing attention only on the limited interests of subunits enormously simplifies rationality and makes organizational life manageable.

Effective leadership in cybernetic systems

Coordination at Huxley does not for the most part require a director, at least not the kind of goal-focussed, decision-making, rational director that is commonly associated with the concept of leadership. Cybernetic institutions tend to run themselves, and upper level participants tend to respond to disruptions of ongoing activities rather than attempt to change those activities. President Wagstaff has relatively little influence on the college's performance, but this is a sign of institutional strength rather than of leader weakness. As March (1984) has pointed out, an organization probably isn't functioning very well if its outcomes are strongly affected by leaders.

This does not mean that leaders are unnecessary to the system, or that they have no effect upon it, but rather that their effectiveness depends upon functioning according to specific cybernetic principles. They can influence which organizational constraints get optimized, but ordinarily they will have little control over how units function within those constraints. Their task is to keep the institution's "lawlessness within reasonable bounds" (Kerr, 1963, p. 35).

Management by exception. Cybernetic leaders pay attention to what is wrong. They are concerned with identifying and eliminating weakness and problems, and much of their time is taken up with responding to disturbances in the structure (Mintzberg, 1979). The administrative aphorism that the squeaky wheel gets the grease is not all wrong at Huxley. The squeak is an attention cue. It is the leaders' responsibility to assess the cause of the squeak and to

decide if it is important enough to attend to. The analytic leader might respond to a deficiency by designing a corrective program, but the cybernetic leader knows that appropriate corrective responses are likely already available in ongoing institutional systems. The problem therefore is to activate or deactivate the appropriate loops. Albert H. Bowker, former Chancellor at City University of New York, once described his job as walking around with two cans from which he poured liquid on fires; one can contained water, and the other oil. Cybernetic leaders don't have to start fires; they can usually affect institutional functioning by choosing which can to use on fires that already exist.

Designing systems. Cybernetic systems can only function effectively if environmental disturbances are sensed, and negative feedback is then generated by organizational submits that monitor these data. The cybernetic leader ensures that appropriate monitoring devices are in place, and that information is generated that will be reviewed by these monitors. Leaders can affect the organization as they "increase the number of participants in the monitoring process, making each participant responsible for a limited number of concerns. Doing so increases the number of concerns they must monitor" (Chaffee, 1987, p. 12), and therefore increases the organizations' sensitivity to important changes.

Having identified or established monitors, leaders must then develop the communications systems to ensure their receipt of important signals. If President Wagstaff was concerned about minority enrollments, for example, it would be important for him to design campus reporting systems that clearly identified such enrollment data, and a communications system that ensured that those campus groups sharing the concern (the system monitors) would be aware of them. These groups would then be activated when the numbers fell below acceptable levels, just as a thermostat activates the furnace when the temperature drops.

Directive cybernetic leadership. Much leadership in cybernetic systems consists of carrying out routine tasks when things are going well, and making minor adjustments and subtle changes of emphasis when problems are noticed. But there are at least two situations in which leaders in cybernetic systems must become much more directive and intrusive. One occurs when the institution is exposed to an external shock, for example the sudden loss of resources, creating a crisis. Such an event can create problems for which the system has no response. It may overwhelm the stabilizing tendencies of the system and even threaten institutional survival. This situation requires a direct leadership effort to make major changes. This task is risky and may fail (after all, no one really knows a good way to significantly reduce an operating budget in

mid-year), but active intervention of the leader is often widely supported because of the obvious threat.

The other occurs when the leader believes that the system is operating at an unacceptable level of performance and that there are no existing systems that can be activated to change it. In this case the leader can induce shock by attempting to make major alterations in the ongoing system. The outcomes of such attempts can not be predicted; the result can be institutional renewal, or institutional chaos and leadership replacement. This is the most risky of leadership behaviors in a cybernetic system, because it often is opposed by campus participants who see it, not as a response to an obvious threat, but as a threat to themselves.

The rules in both cases are what one would expect of dynamic, nonlinear, systems: shocks disturb the system, and may have large-scale effects – but the effects themselves cannot be predicted in advance.

Administrative intervention. Good managers are often seen as people who successfully intervene in problematic situations, and equivocal situations are likely to call forth the interventionist responses that good managers are supposed to evidence. But we know that because of the complexity of organizations, attempts to change them can often lead to counter-intuitive outcomes.

As a result, not only do academic managers "often get in the way of activities that have their own self-regulation, form, and self-correction tendencies" (Weick, 1979, p. 8), but by disturbing ongoing control systems their interventions may exacerbate rather than moderate the problem. The greater the extent of the intervention, and the more complex the problem, the more it can be expected that the solution will create additional problems (Hedberg, Nystrom, and Starbuck, 1976).

Administrators are clearly under pressure to act when something appears to be going wrong. A wise response in such situations is sometime to do nothing. In the real world of external audiences, of course, doing nothing may be impossible. But administrators must be careful not to overcorrect (Walker, 1979), and in general disruptive conflict can be minimized by limiting the kinds of responses offered to minor problems. William Rainey Harper's injunction that premature action may be the source of more mistakes than procrastination reflects an understanding of the virtue of ignoring some error. The cybernetic administrator follows the physician's ancient creed; *primum non nocere* (first, do no harm).

The role of analysis. Huxley College does not try to implement complete solutions that take all variables into consideration. Instead it reacts to local short term problems with local short term solutions. When new problems emerge as a consequence, they are dealt with sequentially.

The cybernetic perspective does not argue that analytic approaches have no merit, but rather that since time, effort, information, and political capital (Steinbruner, 1974) are costly and in short supply, they cannot be applied to every problem. However, it may be worth the investment to develop analytic approaches to a small number of critical institutional issues. The benefits may not be so much in terms of alternatives studied, outcomes examined, and cost-benefit calculations made explicit (although these may be of value) as much as in both providing cues that symbolize to the organization the importance of a problem, and developing forums for analysis that bring people together and therefore alter their behaviors and eventually their attitudes.

Principles for the cybernetic leader. Good cybernetic leaders are modest. Recognizing that they preside over black boxes whose internal operations are not fully understood, they adopt three laws of medicine (Konner, 1987, p. 21):

If it's working, keep doing it.
If it's not working, stop doing it.
If you don't know what to do, don't do anything

The human body, like the organization, is a nonlinear system whose many unknowns create opportunities for counterintuitive and fluctuating outcomes. The purpose of the "laws" in medicine is to prevent what physicians refer to as iatrogenic illness, that is, an illness caused by treatment. In higher education, they are meant to prevent what might be called Caesargenic outcomes – that is, institutional problems created by the unnecessary interventions of leaders.

President Wagstaff appreciates the peculiar nature of academic institutions, and he has modest expectations about what he can accomplish. He sees the role of the cybernetic administrator as coordinating and balancing the various systems within the institution to move towards optimizing his own values. He does this by making incremental adjustments to administrative processes and procedures, by enunciating goals that establish constraints, by emphasizing selected elements of organizational life, and by giving attention to the symbolic systems of the institution. He tries to complicate himself by understanding how bureaucratic, collegial, political, and symbolic systems work so that he can develop richer behavioral repertoires and increase understanding. He gives attention to doing simple things exceptionally well. He creates institutional monitoring systems, data reporting systems, and forums for interaction in order to focus the attention of others on matters he considers important. He believes that he can be most effective if he recognizes the constraints within which he functions, and if he uses the cybernetic properties of the institution to move him towards the achievement of his preferred outcomes.

Notes

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