

9 CONSTRAINTS ON THE INTERACTIVE ORGANIZATION AS AN IDEAL TYPE

David Krackhardt

"Some men see things as they are and say, Why; I dream things that never were and say, Why not."

Robert Kennedy, 1968.

Expressed in the theme of this book is a hope, a desire for a better organization than the one we have experienced for generations, the infamous bureaucracy. I am sympathetic with this hope. All of us who have studied organizations have encountered the debilitating effects of bureaucratic forms, whether managed well or not. And progress is made, as the Kennedy quote above suggests, by dreamers who are willing to let go of the way of the past and peer into the neverland of what could be.

Dreams motivate. They liberate us from the institutional constraints of history and social inertia so that we can explore new, unimaginable landscapes. But dreams also conveniently leave out the obstacles and problems that reality so rudely interjects. Thus, dreams do not guarantee success. And although the last two words "Why not" from the above quote are presumably rhetorical, one could take them literally and suggest that dreams should be scrutinized for loopholes. The answer to the question "Why not?" may just be, "Because it won't work."

It is not my purpose here to prejudge the viability of the post-bureaucratic form. But, if it is to succeed, we must explore the obstacles to its evolution, the possible constraints to its existence. If we can anticipate the sources of resistance to its survival, we will have a better chance of nurturing it along until it can predominate among its alternatives.

This chapter is built around two questions: (1) Can the ideal post-bureaucratic form, as posited in this book, exist? and, (2) If it could exist, would we want it to?

Constraints on the Existence of Interactive Forms

The characteristics of interactive forms are described in the Heckscher-Applegate "Introduction" and narrowed down in the Heckscher chapter "Defining the Post-Bureaucratic Type." Although I see differences in the various chapters about what this ideal type might entail, there are characteristics that emerge as dominant in this proposed form.

Foremost among these defining characteristics is the reliance on informal relations, or associations, that cut across, or perhaps replace, formal channels established by the organization. This theme is prominent in the definition of the organic organization (Burns & Stalker, 1961): "The organic form . . . is characterized by . . . a network structure of control, authority, and communication."

In the interactive form, this characteristic is taken one step further: "It is a matter of knowing who to go to for a particular problem or issue" ("Defining the Post-Bureaucratic Type," Chapter 2 in this volume). This theme is localized to the team level, where the definitions and boundaries of teams are adapted to meet the current needs of the organization. Moreover, the interactive relations are extended beyond the organization to include highly mobile personnel, joint ventures, and other forms of collaborations beyond the traditional organizational boundaries.

I would start by noting that there are three "laws" of social systems that are likely to place great constraints on the likelihood that the "ideal" interactive form could exist. These laws are the Law of *N*-Squared, the Law of Propinquity, and the Iron Law of Oligarchy.

The Law of *N*-Squared

The Law of *N*-Squared simply states that the number of possible links in a social system goes up approximately as the square of the number of elements in the system. With 10 people, there are 90 possible links ($=10 \times 9$, assuming asymmetric links are possible); with 20 people there are 380 possible links; 100 people produce 9,900 possible links; 1,000 people produce 999,000 links; and so on.

It is quite easy to extrapolate from these numbers to note that any organization of a moderate size (say, 1,000 employees) has no chance of being a fully connected network (cf., Harrison, in press). At Harvard University, for example, to expect that a every professor's secretary be connected to the Harvard baseball team's assistant batting coach is unreasonable. There are cognitive and time limitations on the employee's part that prevent this from occurring. Not only is this asking too much of the employee, it is asking too much of the organization to ensure that all *n*-squared connections are extant.

In contrast, one could argue that the ideal is simply a lack of barriers to links and not a full set of activated links. That is, if a particular secretary has a task that requires information from the batting coach, then the question is how easily the secretary could access the coach to get the information. In this case, the interactive form would be characterized by many (but not all) temporary connections, presumably randomly distributed throughout the organization.

If we allow for this milder definition of barriers rather than a complete set of activated connections, we may still refer to the effective barriers produced by lack of knowledge of who the person should be going to for any particular piece of advice. The interactive form has no advantage over the traditional bureaucracy if everyone still only interacts with their supervisor out of ignorance of others as a resource.

But, what if everyone has access to an information technology—a kind of superdirectory—that tells them which person is the best to go to for help or advice. Now, the Law of N -Squared presents a different kind of constraint. As noted in the introduction to this book, such an ideal type may not result in egalitarian interactions, because some people are more expert than others. In this eventuality, what we observe is that the unlucky soul who knows the most, is the best resource, will be inundated with interactions. The constraint, then, is not that people are unable to go to whomever they want; it is that the recipients of these requests will not have the personal resources to handle all the traffic. After all, even the best organizational form cannot squeeze out more than 24 hours in a day.

Thus, the Law of N -Squared, I argue, is an immutable constraint on the interaction capabilities of the organization. But, even if it were not, the organization would still have to face the next two laws of social systems that constrain equal access.

The Law of Propinquity

The Law of Propinquity differs from the preceding law in that it was deduced from consistent empirical findings. This law states that the probability of two people communicating is inversely proportional to the distance between them. In fact, the results often imply a stronger statement. In a study of R&D labs, where intergroup communication is essential to the groups' vitality and productivity, Tom Allen (1977, pp. 236-240) found striking evidence across a set of seven labs: "One might . . . expect [communication frequency] to decay at a more than linear rate [with distance]. It is the actual rate of decay that is surprising. Probability of weekly communication reaches a low asymptotic level within the first twenty-five or thirty meters."

One might expect that such face-to-face communications are affected by distance because of people's unwillingness to transgress the physical

distance necessary to communicate beyond that. What has been surprising is the more recent research results that point to the robustness of this law even with the widespread use of modern communication technology, such as the phone or electronic mail, where physical distance should not create such a firm barrier. As Kraut, Galegher, and Egido (1990) have noted:

Many studies have shown that communication frequency declines sharply, even exponentially, with the distance between the potential communicators, and that this decline is relatively independent of the technology through which the communication is occurring. . . . These findings can be partly explained by the idea that individuals who need to communicate are geographically clustered, and that the association of proximity with communication frequency is an artifact of this clustering. But data indicate that the association between communication frequency and proximity holds even when the need for communication between collaborators is held constant. (pp. 10-11)

I observed an example of this in a major investment bank in New York. As part of a larger reorganization, a group of 24 specialists from different parts of the firm were put together as a team to facilitate communication and reduce response time for problem solving. This group was considered a high-powered team that would lead the way out of the doldrums that the division found itself in.

Because of space constraints, different parts of this team were located in three different nearby buildings and on three floors in each building. The understanding was that the team members, each versatile with computer mail, would all communicate with each other on a regular basis, either by phone, e-mail, or in person (walking between buildings was common).

I asked each member how often they communicated with other members of the team. There was a strong preference to talking to people on the same floor. More than 60% of the communication occurred within the same floor, and most of the rest within the same building.

Moreover, I asked people to list the names of other members of the team whom they do not currently talk to very often, but who would be of help to them in getting their job done if they did talk to them. I call this the "cry for help" question. The first interesting result was that people listed more names in response to this question than they did to the question about who they actually talked to, even though a primary purpose of forming the group was to encourage more communication. Second, the pattern of these "cry for help" nominations was even more strongly related to physical proximity. Only one of these responses was to someone within the same floor of a building; and 86% of the nominations bridged across buildings. That is, although some communication leaked from one building to the next, the barriers to effective

communication access were highly related to physical proximity—despite the formal admonitions to communicate more and the advanced communication technology at their disposal.

What implications does this law have for the ideal interactive form? At a minimum, this law underscores a difficulty organizations will have in establishing unrestricted communication access, since the laws of physics prohibit everyone crowding into a sufficiently small space. It is quite likely that, no matter what the social, cultural, and formal norms are about being a “completely connected network,” communication patterns will localize geographically.

The Law of N -Squared is a mathematical law with biological limitations. The Law of Propinquity exposes physical limitations. But perhaps the most intractable laws are those that deal with the inherent way humans relate and respond to each other: the social laws. The past 100 years of social science has produced precious few such laws, because of the ubiquitous inconsistency and creativity in human behavior. But the Iron Law of Oligarchy has been so named because it seems to recur despite the best efforts of good-willed participants to suppress it. I now turn to this third constraint on the viability of the interactive form.

The Iron Law of Oligarchy

The term *oligarchy* is literally translated from the Greek to mean “rule by the few.” It is this inequality in power that the interactive form attempts to squelch. Yet some social theorists, including Michels and Pareto, have observed that groups, even devoutly democratic ones, seem to evolve into an oligarchical structure, with power relinquished by the majority to a small handful of “leaders.”

Pareto (1942, vol. 1, p. 62) argued that democratic socialism led to a new “elite” class of leaders, called the “political class.” He lauded the leaders who were able to stand up to the masses and their criticisms of their rule; such was a display of courage and demonstrated that the leader deserved his or her status. But Pareto’s view was that this elite class, in a democratic socialist state, would be fluid, and this fluidity would keep the rulers from straying far from the interests of the nonruling class.

Michels (1915/1949) went further. In a carefully documented historical account of democratic socialist experiments, he noted that differential interests develop within any social system:

By a universally applicable social law, every organ of the collectivity, brought into existence through the need for the division of labor, creates for itself, as soon as it becomes consolidated, interests peculiar to itself. The existence of these special interests involves a necessary conflict with the interests of the collectivity.

Nay, more, social strata fulfilling peculiar functions tend to become isolated, to produce organs fitted for the defence of their own peculiar interests. In the long run they tend to undergo transformation into distinct classes. (p. 389)

His sympathies were with the democratic socialists. But he begrudgingly concluded after reviewing the evidence of many well-intended attempts at true egalitarian reform: "Thus, the majority of human beings, in a condition of eternal tutelage, are predestined by tragic necessity to submit to the dominion of a small minority, and must be content to constitute the pedestal of an oligarchy" (p. 390).

Michels's pessimistic theory comes only after a volume of detailed observations of conditions that lead him to his inevitable conclusion. He noted that cooperative effort through organization (i.e., division of labor) is more efficient than individuals in accomplishing complex goals. He outlined the technical infeasibility of all the members of the cooperative being aware of and making decisions regarding all matters of concern to everyone. He also noted the psychological advantages to having a political leader: People like a leader who can inspire them, organize them to accomplish more than they could otherwise. And finally, he noted that these same leaders, once virtuous and selfless, become addicted to their power and engage in behaviors that perpetuate it rather than benefit the followers who thrust them into power in the first place.

The modern question for us as organization theorists, then, is whether these preconditions and forces, psychological and sociological, still operate today. Certainly, we would not deny that organized cooperative effort is more efficient. Nor would we argue, I think, that it makes sense for everyone in a collective of any reasonable size to have all information contained in the whole system and to collectively discuss and participate in every decision.

What about Michels's claim that people like to abdicate their power to leaders? This may be a point of contention. But I know of no evidence to suggest that it is not true. Although clearly people do not like the feeling of being "controlled" (Langer, 1983), they do like being inspired by the Martin Luther Kings and John Kennedys of the world. That is, although they will not abdicate their power to just anyone, once they find someone whom they can trust (and depend on), they gladly abdicate.

I am reminded of the work of McClelland (1987; McClelland & Burnham, 1976). He made a career out of developing people's "need for achievement," a sense of fulfillment derived from facing a challenge and accomplishing a task by yourself. Yet, to his surprise (and dismay, I think), he found that achievement motives did not contribute to the success of the large organization manager. Rather, he found that the key to success was a high need for power. More striking, he found that managers who exhibited a high need for

power (and who used it judiciously) had the most satisfied subordinates. He concluded that having a powerful superior enabled the employees to be more effective themselves, giving them a stronger sense of accomplishment.

McCarthy (1987), in a study of worker participation in a high-tech manufacturing firm, found that programs designed to increase participation in the workplace were regularly resisted by the very people who were to supposedly benefit from these programs. Although she found several reasons for this resistance, one that dominated was that employees did not want the increased responsibility of participating in more decisions than they already had to make. They had work to do, and these additional responsibilities were not part of the psychological contract in their job.

Finally, there was the experiment by the grand master of participation, Douglas McGregor, author of Theory Y management. It may be recalled that he spent several years as president of Antioch College implementing his Theory Y participative management philosophy. Antioch is a progressive liberal arts school, a prime candidate for such an experiment. If it could succeed anywhere, it should succeed there with a highly self-motivated, achievement-oriented, intellectual student body and faculty. But, as McGregor was to later admit, his attempt at creating a Theory Y culture and organization failed, and he returned to his post at MIT as a professor.

What about Michels's last condition, that is, the inevitable psychological "metamorphosis" that leaders undergo when they become ensconced in their position of power? Again, I know of no systematic evidence to refute this suggestion. However, stories abound about failures. For example, Rath Meat Packing was a company bought out by the employees. Employees sat on the board of directors, and the former union president became president of the company. Within 3 years, the president became a bitterly distrusted leader who returned to the hated practices of the previous management, including the practice of laying employees off in order to make the firm more efficient and preserve his job (Hammer & Stern, 1984).

Michels was writing about social movements and governments. But the forces behind his Iron Law of Oligarchy are equally applicable to organizations of all types, including business organizations. Whether his law is immutable or only represents a formidable challenge to the formation of a true interactive form is a question we cannot answer. But it is at least a formidable challenge.

Although these three "laws" are compelling in themselves, I will offer a fourth barrier to the emergence of the ideal interactive form. This argument does not constitute a law, as provided in the prior three examples, but it does constitute a credible objection. The objection stems from what we know about networks in organizations.

The Property of the Emergent Organization

An inherent principle of the interactive form is that networks of relations span across the entire organization, unimpeded by preordained formal structures and fluid enough to adapt to immediate technological demands. These relations can be multiple and complex. But one characteristic they share is that they *emerge* in the organization, they are not preplanned.

I propose that we must first agree on the fundamental process by which these networks emerge before we can agree on what effect they might have. To clarify this point, I will outline a model network formation based on a three-dimensional model of relation types. I will characterize these relational dimensions as dependence, intensity, and affect.

By *dependence* I mean the degree that one person is dependent on another in the performance of his or her task or work assignment. A relation that characterizes a high degree of dependence indicates that the relation is critical to the person in order for the person to effectively do their job. Low dependence indicates a relation that may be incidental to the accomplishment of their work.

Such dependence may change from one time to the next. And dependency does not guarantee interaction. That is, one could be dependent on another for information but the former does not have access to the latter.

Intensity is the extent to which the two parties interact with each other, both in frequency and duration. Strong intensity would be characteristic of coworkers who work side-by-side each day, collaborating in their work. If such collaboration facilitated their respective work performance, then such links would also be highly dependent. If their interactions were merely social, and their work performance is not enhanced by these interactions, then their relation would be characterized by strong intensity but low dependence.

As Granovetter (1973) has so well articulated, low intensity ties, or weak ties, are not necessarily dysfunctional for the firm. First, they are relatively low cost to the individuals to maintain. Second, weak ties, relative to strong ties, tend to form between distal parts of the organization. And finally, two people with a strong tie tend to have access to the same information and the same sources of information, making their tie redundant. By contrast, weak ties often provide sources of relatively new, different, even contradictory information. This richness allows weak ties frequently to be the source of creative, innovative, and adaptive exchanges.

Affect, the third dimension, captures how a person feels about another in the relationship. Such evaluations can vary from strong (trust, love, hate, reverence) to relatively mild levels, even indifference. Note that the focus here is on the strength of the affect as well as whether it is positive or negative.

Again, the relationship between two people can be characterized by strong or weak feelings with any combination of dependency and intensity.

However, I propose that overall patterns tend to emerge over time as a function of the relationship between these three factors. The process by which these emergent networks form is my next point of departure.

Dependency → Intensity

Task dependence creates a demand, a need for interaction. An employee faced with a need for information, or resources, or permission, will attempt to fill that need by seeking someone who can provide it. If the dependence persists, interaction with that person who fills the need will increase over time.

Intensity → Affect

One of the most enduring findings in social psychology is that prolonged interactions induces affective evaluations, even emotional responses. Two people who interact only sparingly can maintain neutral evaluations of each other. If they are induced to interact frequently, they will tend to form stronger emotional bonds through the experience. Over time, each party learns what to expect from the other, resulting in feelings of trust, respect, even strong friendship.

Sometimes these experiences form negative emotional bonds. One party may "learn" that another is untrustworthy, unreliable, perhaps sinister in intentions, or just unlikable. But, whether the feelings are positive or negative, they tend to grow in strength as the parties interact more frequently.

If the frequent interaction results in stronger positive evaluations of the other person, this will reinforce the connection, inducing more intense (frequent and durable) interactions. It will also tend to reinforce the dependency, especially the perception of dependency, since the employee feels comfortable that the need created by the dependency can be readily filled. Thus, a relationship characterized by positive affect will tend to endure, and that link in the network will be *stabilized*.

Conversely, a negative evaluation will tend to encourage the employee to reduce the frequency and duration of interaction. If the dependency is sufficiently strong, reduced interaction may not be an option. In such a case, the employee will be motivated to reduce the dependency in the relationship (for example, by finding another means of getting the information or resources, or by reducing the perceived need for the information or resources). Thus, negative affect will tend to shorten the life of—or *destabilize*—a link.

In aggregate, then, structures of relations will emerge as a result of this process. Those parts of the structure that are reinforced with positive affect will form a stable core to the overall network. Unstable links will tend to disappear over time and be replaced by others.

What are the implications of this model for the interactive form? It suggests that networks are not particularly fluid over time. In particular, the parts of the network that depend on *trust*, a key to several authors in this book, are particularly stable. Trusting relations take time to form, and then once formed are difficult to break.

There is evidence that the network that people see and recall is the stable part of the network, and not the transitory, low-intensity part. That is, the network that people experience as helping them, or the network they actively draw on to do their work in the organization, is the network of stable, recurring relations.

Given this is true, then the idea of a fluid, truly organic network structure may be difficult to obtain. People as a matter of habit and preference are likely to seek out their old standbys, the people they have grown to trust, the people they always go to and depend on, to deal with new problems, even though they may not be the ones best able to address those problems.

I now turn to the final point I raised at the beginning of this chapter: If we *could* wave a magic wand and create a purely interactive organization, would we want to?

Constraints on the Idea of the Ideal

Simon wrote a small piece in 1962 called "The Architecture of Complexity," in which he proposed that many social, biological, chemical, and physical systems share a tendency to be "hierarchical." By hierarchical he meant that these systems were "nearly decomposable" into subsystems, which in turn were decomposable into smaller subsystems, and so on.

His claim was not based on simple observation, however. He noted that such hierarchical systems were inherently more robust against adverse outside forces. As an example, he described two watchmakers. The first had a process that was very fast but required that all 100 parts in the watch be assembled in one sitting. He could assemble a watch in an hour, if he were not interrupted. The second had a process that was slower (it took 2 hours to assemble the watch), but was based on building 10 subassemblies to the watch that could remain completed as each subassembly was finished. That is, if he were interrupted after half an hour, he might have completed 2 subassemblies that would not be lost as a result of the interruption.

Simon then shows how the second "hierarchical" watchmaker would be able to make in order of magnitude more watches in a year than the first, given even a modest interruption rate. Thus, according to Simon's theory, hierarchies are evolutionarily superior to alternative forms of systems. His paper started a minifield in systems theory called *hierarchy theory*. Simon is not

the only proponent of hierarchies as more efficient and fit for environmental competition than nonhierarchical forms. Although I think we all believe that there are dysfunctions to hierarchical forms, there are some efficiencies also. Burns and Stalker (1961) recognized this in their original formulation of the organic versus mechanistic dichotomy.

One approach has been to suggest that organic forms may be more effective in some environments whereas mechanistic and hierarchical forms are better in others. But I suggest a second approach. It is possible that organizations are inherently inefficient in either extreme. Overly bureaucratized organizations are too rigid to deal with the fast-changing world. But overly dense networked firms have inefficiencies of their own. I have found, for example, in a study of a set of bank branches, that the density of communications relations is negatively (although not strongly) related to profitability in the branch. My follow-up interviews in those branches with dense communications also reveal low morale and a good deal of experienced chaos.

Perhaps, then, there is a curvilinear relation between the degree of interaction of an organization and the organization's effectiveness. This would lead us to a new path of research. Perhaps the attributes defining the interactive form have different curvilinear shapes, with each having a different maximum point on the curve. Discovering those maximum points is not as theoretically appealing as holding up an ideal type to which we all aspire. But in the long run it may be the more profitable path.

References

- Allen, T. J. (1977). *Managing the flow of technology: Technology transfer and the dissemination of technology information within the research and development organization*. Cambridge, MA: MIT Press.
- Burns, T., & Stalker, G. M. (1961). *The management of innovation*. London: Tavistock.
- Granovetter, M. (1973). The strength of weak ties. *American Journal of Sociology*, 78, 1360-1380.
- Hammer, T., & Stern, R. (1984). *Labor representation on company boards of directors: Effective worker participation*. Working paper. New York: Cornell University.
- Harrison, B. (in press). *Lean and mean: The changing landscape of corporate power in the age of flexibility*. New York: Basic Books.
- Kennedy, R. (1968, June 9). *New York Times*, p. 56.
- Kraut, R., Galegher J., & Egidio, C. (1990). *Informal communication and scientific work*. Working paper. Pittsburg, PA: Carnegie Mellon University.
- Langer, E. J. (1983). *The psychology of control*. Beverly Hills, CA: Sage.
- McCarthy, S. A. (1987). *Theoretical and empirical perspectives on nonparticipation at work: Levels of nonparticipation in a Company Quality Circle Program*. Ph.D. dissertation. Cornell University, New York.
- McClelland, D. (1987). *Human motivation*. Cambridge, UK: Cambridge University Press.
- McClelland, D. C., & Burnham, D. H. (1976). Power is the great motivator. *Harvard Business Review*, pp. 100-110.

- Michels, R. (1915/1949). *Political parties: A sociological study of the oligarchical tendencies of modern democracy*. Glencoe, IL: The Free Press.
- Pareto, V. (1942). *The mind and society*. New York: Harcourt, Brace.
- Simon, H. A. (1962, December). The architecture of complexity. *Proceedings of the American Philosophical Society*, 106, p. 5.

**THE
POST-
BUREAUCRATIC
ORGANIZATION**

**NEW
PERSPECTIVES
ON
ORGANIZATIONAL
CHANGE**

**CHARLES HECKSCHER
ANNE DONNELLON
EDITORS**



SAGE Publications

International Educational and Professional Publisher
Thousand Oaks London New Delhi

1994.