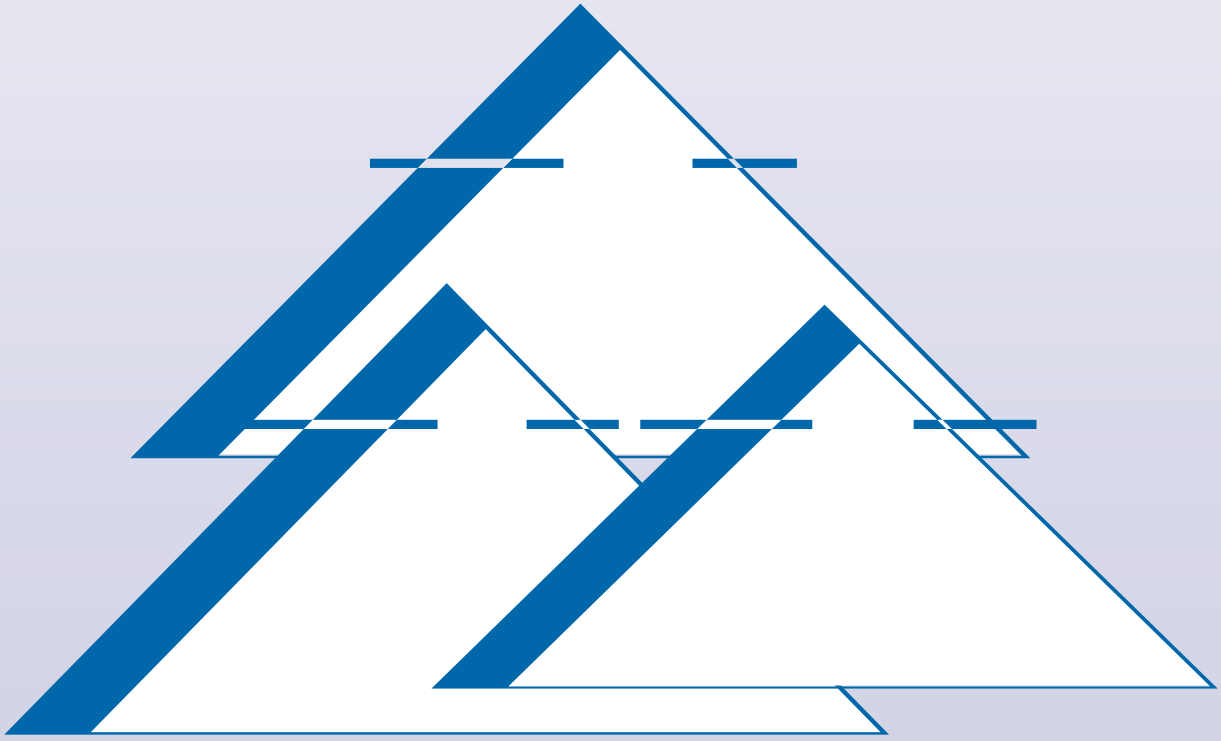
THE CREATIVE FORCES OF SELF-ORGANIZATION



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Introduction

Consider a group of workers. If they act jointly under the direction of a leader to produce a product or service, we consider their behavior organized. If they act as a team without external orders, we would consider them self-organized.

People self-organize all the time. Business associates create partnerships, children invent games, students organize elaborate pranks, and employees take the initiative in handling an unusual problem during a supervisor's absence. In another organization, employees invent a subtle, collective way to resist an unpopular supervisory policy.

We have tried with only moderate success to understand the self-organizing phenomena from the standpoint of behavioral psychology, military science, management science, and even operations research. Recent discoveries in systems theory, however, are giving new, clearer insights into self-organizing, insights that offer both managers and staff powerful new tools to increase productivity. Remarkably, they could implement these with simple additions to currently existing organizational structures.

In this article, we will present a genuinely new method of organizing work and governing organizations and then discuss its principles and some of its methods in more detail. This new method's technical name is sociocracy but in the businesses and organizations that use it, is also known under other names including dynamic governance, nonviolent governance, and green governance. In this paper we will use primarily dynamic governance because it is more familiar than sociocracy and it also refers to a basic concept in systems theory, feedback loops.

This overview will first introduce a few key concepts that include consent decision-making and double-linked hierarchies. Then, after presenting two simulated examples from dynamically governed organizations, we will discuss dynamic governance methods in more detail and contrast them with more familiar forms of management. Finally, we'll summarize some of the mathematical and systems theory concepts related to this innovative management strategy.

Dynamic governance, or sociocracy, is a decision-making and governance method that allows an organization to manage itself as an organic whole. To make this possible, dynamic governance enables every sub-part of the organization to have an authoritative voice in the management of the organization. In contrast, modern corporations are considered to be legal persons with rights equivalent to those of a person, but the exercise of those corporate rights is the sole authority and responsibility of a majority of the board of directors, not the organization as a whole or even the board of directors as a whole. To demonstrate the uniqueness of dynamic governance and the development of the ideas that lead to its development, we will briefly discuss previous efforts to empower workers in the workplace.

Why Empower Workers?

The word "sociocracy" was first used by August Comte, an early nineteenth century French philosopher best known for a system of thought and organization known as Positivism that he hoped would provide the basis for a stable society in the emerging industrial revolution. Comte established the science of sociology that provided the basis for his theory of sociocracy. Although Comte proposed a body of social scientists

to replace the monarchy, the meaning of the word *sociocracy* is literally "rule by the *socios*," people who have a social relationship with each other. In contrast, a democracy is rule by the *demos*, the general mass of people who may have little in common. Comte, however, was unable to suggest a practical structure for sociocracy.

In the 1800's, John Stuart Mill advocated worker cooperatives in which the workers controlled all equity and selected their own management, the beginning of the cooperative movement that has had some limited success. In the 1920's, a pioneering management scientist Mary Parker Follett noted that in the most productive companies workers strongly identified with the organization as *their* company, allowing them to focus without conflicting feelings. She discerned, however, that no structure existed that allowed such identification to be founded on anything other than a difficult-to-maintain illusion. The basis of a new structure emerged with later in the 20th century with the notable thinking of Norbert Wiener, who founded cybernetics; John Forbes Nash, the mathematician whose life was portrayed in the movie A Beautiful Mind; and Ilya Prigogine, the Nobel laureate who did pioneering work in self-organizing systems. Their insights formed the basis for dynamic governance, which supports workers, managers and investors in focusing together on a common aim.

Dynamic governance theory continues to grow by incorporating new scientific insights. For example, 21st Century mathematical modeling of decision-making behavior by flocks of birds and schools of fish, and new observations of bee swarms is of particular interest because some of the underlying concepts such as changes in zone of alignment seem applicable to human self-organizing behavior as well.

Beginning shortly after World War II, American educator and social psychologist, Rensis Likert, integrated empirical social science research into a concept called System 4. His ideas, which both promote upward feedback and recognize the importance of hierarchies, have been very influential in management theory. Highly respected in Japan, a number of recent American plant start-ups, particularly joint ventures with Japanese firms, have been patterned on System 4 concepts. Before he died in 1981, Likert was beginning to articulate ideas for System 5 that vested greater managerial authority in the workers. Professor Robert Ackoff of the Wharton School of Business suggested a similar idea in the early 1980's. He suggested a scheme for the establishment of a corporation's long range planning by using multi-staged majority vote of management and workers.

More recently, futurist John Naisbitt popularized the concepts of participatory corporations, networking as an alternative to traditional hierarchical organizations, and intrapreneurship," acting like an entrepreneur but within a corporation. Naisbitt and other writers seem to reflect a general societal mood that reaffirms basic capitalist values while pushing for a broader base in the management of our businesses and institutions. Legislation passed over the last few decades that promotes employee ownership reflects this mood. In *Leading the Revolution,* Gary Hamel makes a strong case for involving everyone in an organization when developing new business strategies. In mid-2004 American Airlines announced a profitable quarter after teetering on bankruptcy for two years. Why? Their new CEO, Gerard Arpey, found ways to

involve the workers and unions in developing innovative and profitable business strategies.

The research and experiences of these theorists and business leaders, however, were still lacking a system or structure that would ensure both worker commitment and profitability. Cultivating an environment that consistently maximized the potential of an investor-manager-worker partnership remained in the hands of a few gifted managers. In the late 20th century in his electrical engineering firm in the Netherlands, Gerard Endenburg began developing such a structure. Endenburg had studied with Dutch Quaker and progressive educator Kees Boeke, who had worked internationally to promote peace through education. In 1926, Boeke founded a school in which he developed the practical principles of sociocracy and applied them by having the students and teachers govern the school. Endenburg developed these principles and applied them in his company to prove that a business could not only function with workers assuming responsibility for the policy decisions that affected their work, but that it was more profitable to do so. In 1981, Endenburg began to publish his theories and to apply his method in other businesses. The methods and principles of dynamic governance solve the problem of organizing sustainable and holistic worker empowerment while a the same time ensuring management control and protecting the interests of investors. It has now been used successfully for decades in many organizations in The Netherlands as diverse as an electrical contracting company, a municipal police department, a Buddhist monastery, a nursing home, a chain of hairdressing shops, a local public school system, and numerous others. It is also being used in a variety of organizations in other European countries, Latin America, Australia, and the United States and Canada.

In research studies, organizations using dynamic governance are reporting increased innovation, productivity increases of up 30% and 40%, reduction in the number of meetings, decreases in sick leave, and higher staff commitment to the organization. Both workers and managers like working in dynamically organized companies. Quite simply, businesses and organizations are easier to guide and seem to have an unusual capacity for initiative, self-regeneration, and repair. The method is operating well in organizations of up to 1800 people and substantially larger organizations are applying it on a limited basis.

Although Endenburg developed the dynamic governance methodology without direct knowledge of Likert's work, it has several striking similarities to his System 4 and 5 ideas. These similarities are remarkable if one considers that dynamic governance, based on applied systems theory, relies very little on the social psychology theories used by Likert. Dynamic governance is also quite unlike the management concepts underlying quality circles, socio-technical analysis, organizational development, cooperatives, and employee stock ownership plans. While it applies the best financial and business management practices, it focuses on modifying or rewiring the autocratic power structure that is the backbone of modern organizations, whether profit or nonprofit.

Introduction to the Defining Elements

The dynamic governance method relies on four critical components derived from the science of cybernetics, including systems theory, fractal concepts, and the phenomenon of self-organization. The four defining elements are quite simple, and once understood, are easy to follow. Any company or organization can implement them without changing its existing organizational structure. Once in place they provide a flexible means to develop that structure. Figure 1 lists the defining elements and gives brief definitions.

Dynamic governance provides specific structures and procedures for implementing and maintaining these defining elements, much the same as *Roberts Rules of Order* guides the majority-vote decision processes. We will illustrate these procedures with two detailed examples based on actual companies. The first example focuses on the consent, election, and circle components. The second example illustrates the double-linking component.

The Defining Elements

Consent – The principle of consent governs decision-making. Consent means no argued and paramount objection. In other words, a policy decision can only be made if nobody has a reasoned and paramount objection to it. Day-to-day decisions don't require consent, but there must be consent about the use of other forms of decision-making.

Election of Persons – Election of persons for functions and/or tasks takes place in accordance with the principle of consent and after open argumentation.

Circle – The organization maintains a structure for decision-making, consisting of semi-autonomous circles (i.e., groups of individuals). Each circle has its own aim and organizes the three functions of leading, doing, and measuring/feedback. A circle makes its own policy decisions by consent, maintains its own memory system, and develops itself through research, teaching, and learning that interacts with its aim. A circle makes consent decisions only in specially formatted circle meetings.

Double Linking - A circle is connected to the next higher circle with a double link. This means that at least two persons, one being the functional leader of the circle and at least one representative from the circle, are full members of the next higher circle.

Figure 1: The Defining Elements of Dynamic Governance

First Example: A Hairdressing Shop

Right after closing time, the staff of a hairdressing shop gathered for a circle meeting. The shop was part of a growing, dynamically organized franchise company. Nine of the ten full-time workers and one part-time person were present and ringed the room.

It had been six weeks since the last meeting. Donna, an experienced stylist and regular facilitator of the meeting, followed the dynamic governance format for a circle meeting. (See Figure 2). Starting with an *opening round*, she asked each person in turn to say briefly how they were doing and, if they wished, to make any comments on the agenda. As each person spoke, bringing him or herself into the meeting, there were nods, some good-natured laughter, and a few clucks of sympathy. The opening round complete, Donna dealt with *administrative* matters. She asked if everyone had received a copy of the decisions made in the previous meeting. Susan, an apprentice, said she'd forgotten hers, and Charles, a stylist and secretary of the circle meetings, handed her an extra copy.

The circle was experienced in consent decision-making and handled its proceedings with deceptive informality. Donna watched them scan the list of decisions and after seeing several nods said, "Since no one seems to have a problem with the minutes, let's go on to the agenda. As all of you know, I'm getting a promotion and will be managing the new shop opening over by the lake (some good natured cheers erupt); so, we need to elect a new circle chair. Second, several of you mentioned that you're concerned about our competitor's salon that's opening in the other wing of this shopping center. The only other agenda item I have is Mildred's request to talk about coverage of our shop on Sundays."

The Order of a Dynamically Governed Meeting

A. Opening round – a time to attune – like an orchestra just before the concert.

B. Administrative concerns such as announcements, time available for the meeting, consent to minutes of last meeting, date of next meeting, acceptance of the agenda.

C. Content
Agenda item
Second agenda item
Etc.

D. Closing round – a time to measure the meeting process – e.g., use of time, did the facilitator maintain equivalence, how could the decision-making could have been more efficient, did everyone arrive prepared. Also, this is a time to mention agenda items that should be on the agenda for the next meeting.

Figure 2: Format of a Dynamic governance Circle Meeting

Mildred, the manager, supervised the shop and presided over routine weekly staff meetings, but, by the circle's choice, she did not chair the circle meetings.

Again, no one voiced any objections, and Donna started into the *content* part of the meeting. She introduced the first agenda item by saying, "Now then, let's proceed with

selecting a new circle facilitator to replace me." She then proceeded to follow the template for conducting dynamic governance elections. Figure 3 is of the process for elections.

Dynamic Governance Elections Process

1. **Review Role**: Describe responsibilities, qualifications, and term.
2. **Nomination forms**: Fill out nomination forms giving your name and the name of the person you nominate and give to election leader.
3. **Explanations round**: Each person says why they made their nomination.
4. **Change round**: Election leader asks each person if they want to change their nomination based on the arguments they heard in the previous round.
5. **Consent round**: Election leader proposes the candidate with the strongest arguments and asks each person if he or she has a paramount objection to the proposed candidate, asking the proposed candidate last. If there is an objection, the election leader leads the group in resolving the objection and initiates another consent round.

Figure 3: Template for Dynamic governance Elections

Addressing the first step, *Review Role*, she said, "We'll be electing the person for a one-year term. The duties are to prepare for and lead our circle meetings." As everyone seemed satisfied with this short description of the job, she continued to the second step. "Charles, would you please hand out the *Ballots*?" Figure 4 shows a typical dynamic governance ballot.

I, _____

(Your Name)

NOMINATE:

_____

(Name of Candidate)

Figure 4: Dynamic governance Ballot

Each member of the circle took a few moments to fill out his or her ballot and then handed it to Donna. Proceeding with the third step, Donna picked up the first ballot from the stack and reading it said, "Linda, you nominated John. Would you give your reasons for choosing him?" Linda gave a short explanation. Donna asked the next person and continued reading the ballots until everyone had presented his or her nominee and reasons for the nominations. Some gave arguments for John and others spoke in favor of Mildred, Joyce, or Charles. This *Explanations Round* highlighted the positive qualities of each nominee.

After everyone had given an initial opinion without discussion, Donna asked if anyone wanted to *Change* their vote based on what they'd heard, the fourth step. Two people said that they liked the reasons given for Charles, including a person who had objected to him in an earlier election based on his inexperience. (This self-organized movement toward Charles occurs frequently in dynamic governance elections.)

Based on the strength of the arguments for Charles, Donna proposed him for the job and she initiated a *Consent Round*, asking each person in turn, "Do you have any objection to Charles as the new chair?" She asked Charles last. As no one objected, she announced that the circle had selected Charles. Donna paused for a moment, as everyone in the room seemed to experience a moment of quiet satisfaction at the completed election.

Charles suggested that Donna chair the rest of the meeting, and she moved on to the next topic on the agenda. Following the template for making policy decisions by consent, Figure 5, Donna asked Michele to give her report. (Step 1) In the previous meeting, circle members had been very concerned about a competitor's new styling shop that would be opening in another part of the shopping center It had asked Michele, a stylist and the shop's elected representative to their franchising company, to investigate and propose (Step 2) what they should do to handle the new competition. Michele said she'd spoken with the franchising company's main office and to a number of other people and it seemed that the competition was coming in because their own shop had so many customers. The new shop would try to take their customers by offering manicures, and other extra services free, at least for the

Decision-Making Process

1. **Consent to the issue(s)** to be decided (What's the picture?)
2. **Generate a proposal** (What's our approach?) Often a person or persons may be asked to prepare a draft proposal and circulate it for comment and revision before the next meeting.
3. **Consent to the proposal** (What's our decision?)
   a. **Present proposal**
   b. **Clarifying round** – clarifying questions only
   c. **Quick reaction round** – quick feedback about the proposal; as appropriate, tune proposal based on the quick reactions.
   d. **Consent round** – if objections, record on a flip chart without dialog until the round is completed; if necessary, amend proposal and repeat consent round. (If amendments are not obvious, a dialog may be initiated until potential amendments begin to emerge.)

Figure 5: Template for Making Policy Decisions by Consent.

time being. She proposed (Step 3a) that their shop offer special promotions for the first few months after the other store opened and that they talk with their customers about what new services they might like to have. After some clarifying questions (Step 3b), Donna asked for quick reactions (Step 3c) to Michele's proposal. Most felt it was a good idea, and some asked how much the special sales promotions would cost. Donna asked Michele if she wanted to amend her proposal based on the quick reactions.

Michele thought for a moment and said, "I imagine the advertising and specials will be pretty expensive, and I'm not sure how expensive. But, it is really important that we keep as many customers as we can during the other store's big opening extravaganza. So, I will add to my proposal that we authorize Mildred to spend up to 20% of our expected profits over the next three months on advertising and special promotions. She can tell us if she needs even more money than that." Michele glanced at Mildred, the shop manager, to try to gauge her reaction. The others were quiet a moment as they considered the effect on their own monthly profit-sharing payments.

Donna broke the silence saying, "Alright let's see if we have consent for Michele's proposal." She did a consent round (Step 3d), asking each person in turn whether they had any paramount objection to Michele's proposal. To Michele's surprise, no one had an objection to the money part of her proposal, but Charles objected because he felt it wouldn't give them enough information about the services of the other shop, what they were really offering and their quality, and a way to react quickly if there was some new gimmick. In a way it left them blind, that was why his objection was paramount. Donna summarized Charles' objection on a flip chart and continued the round without further discussion.

In the end, Charles had the only objection. Donna initiated a dialog focused on Charles' objection by asking Charles if wanted to elaborate further. "Well," he said, "We don't have any way to research or learn from them. What are they doing better? What are they not doing as well."

Several other people made comments. After a bit, Donna saw that a strategy was starting to take shape (self-organizing). She cut off the dialog and said, "So, we're saying that in addition to Michele's proposal, we want Mildred to organize an on-going effort to check out the other shop. Each of us will take turns going to the other shop as customers to make our professional assessments of what they are doing. Mildred will get other people to go, too, who will talk to their other customers to find out what they think and why they are going there rather than here. We'll get training or change our advertising depending what we find." Donna did another consent round, and this time no one had any objections. The decision was made.

Donna then moved to the third topic, coverage of the shop on Sunday afternoons – an unpopular time to work. In its previous meeting the circle had created a new assignment schedule after intense dialog. Mildred reported that she had received no complaints so far except her own: namely, the new schedule was difficult for her to manage. To keep dissension at a minimum, the circle had closely limited her authority to modify the schedule unilaterally. She said she now objected to those tight reins because the schedule was unworkable without more

latitude. She described the changes she wanted. As no one seemed against the idea of giving more flexibility or inclined to discuss it extensively, Donna skipped the steps of asking for questions and quick reactions and simply asked for consent. There were no objections.

Donna concluded the meeting with a closing round (Figure 2, Step D) in which she asked each person for a short evaluation of the meeting without discussion. The meeting then broke up after running for an hour and fifteen minutes.

This hairdressing shop example illustrates the dynamic circle meeting format and the consent decision-making processes for electing people and for making policy decisions. It also alludes to the fourth defining element, double linking, when it mentions Michele's role as representative to the franchise's regional general management circle. Double-linking (Figure 1) in particular sets dynamic governance apart from other management strategies. It allows organizations larger than a single circle to use consent decision-making holistically, greatly improving upward feedback and facilitating managerial delegation.

What the example doesn't illustrate is the dynamic engineering of the shop's work. There are other templates that help a circle articulate its own aim; organize itself using the three functions of leading, doing, and measuring/feedback; maintain its own memory system; and develop itself through integral research, teaching, and learning." (Figure 1) Dynamic engineering is a bit like industrial engineering except that, unlike traditional industrial engineering, control of the work process is in everyone's hands. The result is that every person has the chance to be an entrepreneur in his or her own domain of responsibility.

The second example, based on a real-life event, illustrates the defining element of double linking.

Second Example: An Alternate Idea in a Crisis

Gloom reigned among the more than one hundred members of a company that manufactures and installs heavy-duty electrical equipment. A local shipyard had suddenly shut down, unable to keep up with foreign competition. The shipyard accounted for almost all of the Boat Department's business.

Figure 6 shows the Boat Department's place in the company's day-to-day functional structure, simplified for illustration. In this figure, each department box represents a single manager in the management structure with the exception of the Board, which contains several people.

Fortunately, however, the company was a governed dynamically. Every four to six weeks all the departments meet in the policy decision-making structure shown in Figure 7 to adjust the policies that govern their work. Unlike the boxes in Figure 6, that represent the day–to–day operational structure, the triangles in the bottom row of Figure 7 include the department supervisor *plus* everyone reporting directly to that supervisor.

Triangles are used in the diagram to represent the three functions, leading–doing–measuring, that create the dynamic circular process. The groups of people and their meetings are referred to as circles and circle meetings because they are implementing this circular process.

The General Circle in Figure 7 includes the CEO plus the four supervisors reporting to the CEO plus a representative elected by each department, nine people in all. The left hash mark at the top of each triangle represents an elected representative and the right hash mark represents the functional supervisor. The hash marks at the top of the Board Circle represent board members who are outside experts. Because each circle connects to the next higher circle through two people, the supervisor and an elected representative, the circles are double-linked. This feature is

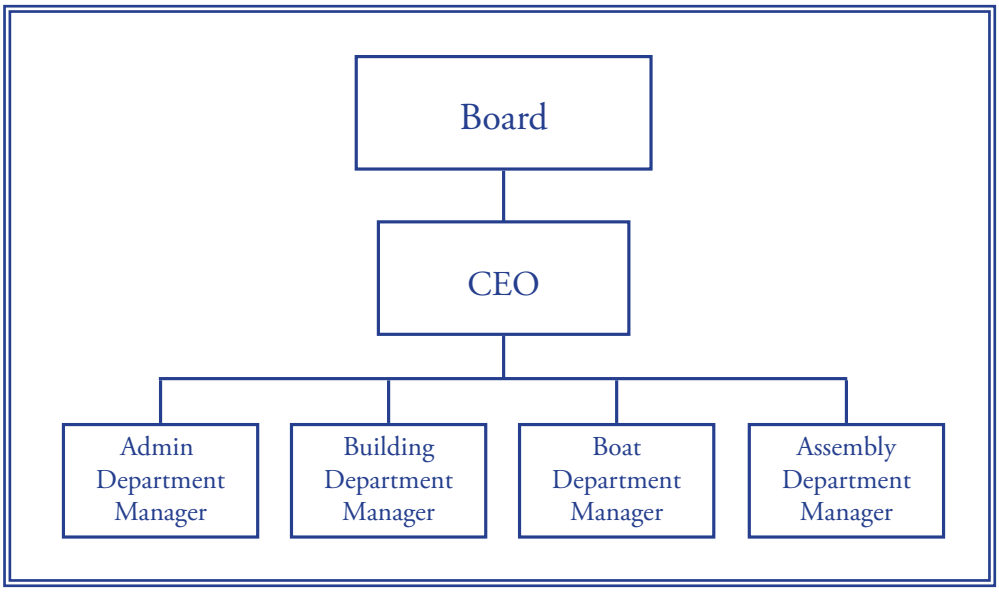

Figure 6: Electrical Company's Functional Structure

unique to the dynamic governance method and creates a circular feedback process between the two circles, the functional leader reporting down and the representative up.

Returning to the crisis, when word came of the shipyard closure, the Board Circle held an emergency meeting and decided to begin a layoff of most of the Boat Department. When the Board announced its decision, Max, one of the electricians in the Assembly Department, asked Henry, the Assembly Circle secretary, to call a special meeting of the Assembly Department Circle. The layoff did not immediately affect him, but he had an idea about another solution. Henry arranged a meeting and when everyone had gathered, Max explained his idea.

"It seems to me," Max said, "that we'd do a lot better if we shifted everyone who would be laid off to a marketing effort. There has to be more business out there. I'm sure the guys in Boats would rather not knock on doors with a suit and tie on, but I'll bet they'll do it if it means keeping their jobs. If they succeed, we'll all get bigger long-term incentive checks and no one will lose their jobs."

When it was his turn, Marvin, an apprentice electrician, commented skeptically, "It's a nice idea, but I couldn't see myself doing it, and I can't see those guys in Boats doing it either."

George, the circle's non-management representative to the General Circle, continued, "I like Max's idea. I think the Boat guys would rather stand on a carpet than in the unemployment line. What's more, we have been doing some work for Boats making special electrical cabinets. If they don't bring in more work, we could be next for a layoff."

The dialog continued for several more minutes as the circle fell in behind Max's idea. Gene, the circle's facilitator then summarized their thinking by making a proposal for a decision. "Ok, it sounds like this is what we want to do: We designate Max as a temporary

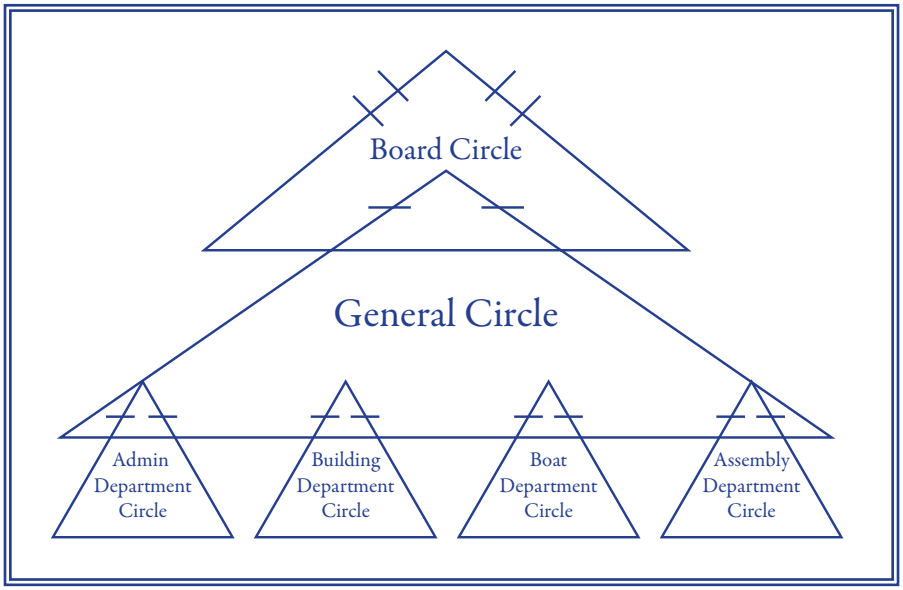

Figure 7: Electrical Company's Dynamic "Circle" Structure

second circle representative to the General Management Circle. He will propose that we delay the layoff for one month while the Boats Department and anyone else who can be spared concentrates on marketing. The regular marketers will have to give some fast marketing and sales training. Max and I will get Administration to help us calculate how much of the company reserve we'd have to spend to delay the layoff."

Gene glanced at Henry who was scribbling Gene's words in the official circle notebook. Henry nodded to indicate that he did not need Gene to repeat the proposed decision. "Ok," Gene continued, "let's go around the circle to see if anyone has objections." No one did. As the meeting broke up, Alex, the supervisor of the Assembly Department, said he'd report the decision to the company's general manager at once and ask the General Management Circle's secretary to call an emergency meeting for the next afternoon.

After initial reservations were resolved in the General Circle meeting, the circle decided to support the idea of temporarily reassigning the Boat workers to Marketing. Because the circle was limited in their authority to authorize expenditures from the reserve. What they did do was elect Max as a temporary second representative to the company's Board Circle (Board of Directors). In a special meeting, after heated debate, the Board gave its approval to a slightly modified plan, and the General Circle put the plan into action. It worked. Within three weeks, there were enough new customer commitments that the layoff never occurred, and the company is stronger today with a more diversified customer base.

In this second example, the fourth defining element of dynamic governance, double-linking, facilitated upward communication of an idea all the way to top management. The double-link process catapulted Max to a temporary position on the Board of the company. The self-organizing process identified the real leader of the moment and put him in the right position.

New Corporate Structure

The next section explains how the four defining elements are applied in the larger organizational context by analyzing conventional corporate models of governance and comparing them with the dynamic governance model shown in Figure 7.

Conventional businesses almost universally rely on a combination of majority vote and autocratic decision-making. Figure 8 expands Figure 6 to illustrate that a majority of the Board members select the CEO who, acting for the Board, functions as an autocratic decision-maker.

By autocratic we don't mean that the CEO is dictatorial; that's only one autocratic style. In fact, CEO's and their managers may employ a wide range of autocratic styles including telling or giving direct orders, selling, participative, and joined styles. With the joined or participative style, mangers try to follow the consensus of their staff or peers, reserving final decisions to themselves only when necessary. These are all autocratic styles because, regardless of collaborative appearances, the *auto*, a single person, retains the power to ignore all other voices when making decisions. Each of these autocratic styles has positive and negative qualities and depending on the circumstances none is inherently more desirable.

In contrast, it is important to understand that dynamic governance is not a method of participative or joined management. It is not a management style. Rather it modifies the basic structure of power that supports whatever day-to-day style of management seems most effective in a given context. Dynamic governance makes leading, regardless of a manager's personal style, easier.

The evolution of business organizations has tended toward greater equivalency of everyone in a company. One stage in that evolution was the development of unions. Figure 9 adds a union feedback loop to the corporate model depicted in Figure 6.

By law employers who are displeased with employees statements can reprimand or fire them. The law, however, protects employees if they speak as a representative of the company's union. Many brave and dedicated persons struggled for decades to win for workers the power to negotiate with management from a position of collective equality. From a systems viewpoint, unions can potentially perform a valuable feedback service. Since union representatives have protection, feedback from them may be more accurate than from individual employees. Unfortunately, unions are also subject to the politics created by majority vote that tends to distort that feedback.

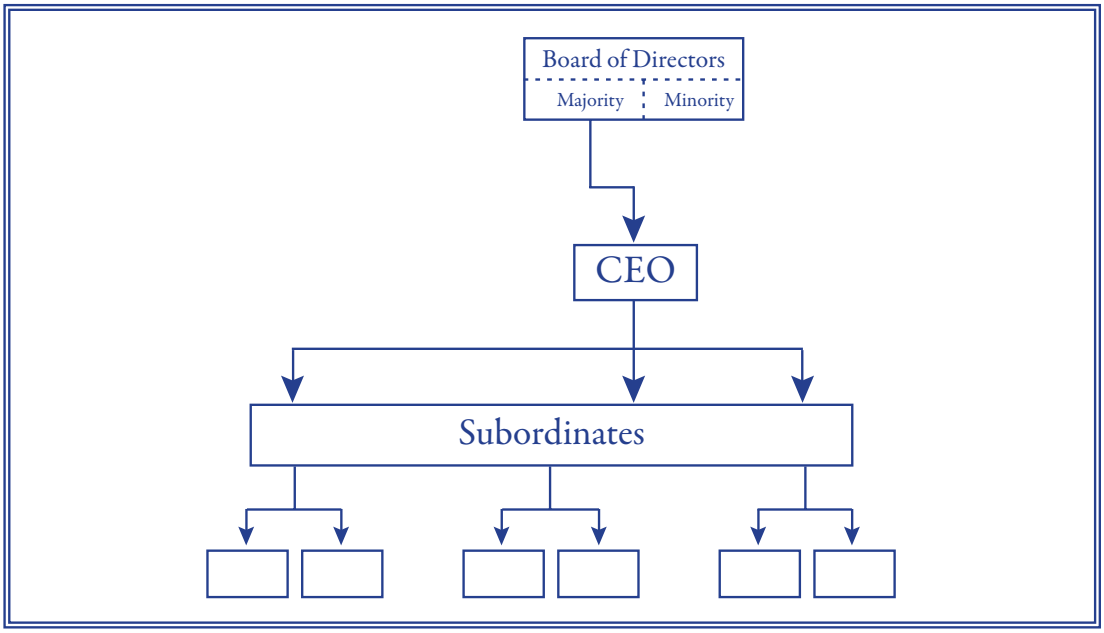

Figure 8: The Classic Corporate Model Uses Majority Vote and Autocratic Decision-making

These politics, plus the fact that the union stands outside the functional structure of the company, make the union feedback loop effective only in reflecting matters of broad and general concern. The feedback reflects the opinions of the majority, not the minority, and is thus only partial feedback. Furthermore, unions derive much of their strength from their right to strike or to require arbitration of disputes. Arbitration and strikes inhibit rather than promote communication with management, often making it strained, legalistic, and "us versus them." Strikes especially can lead to bitterness and are rife with distorting and troublesome mass emotions.

A more recent development in the evolution of the corporate form of organization is employee stock ownership plans. Figure 10 slightly modifies Figure 9 to depict the systems configuration created by such schemes. It replaces the Union with Employee Stockholders and redirects the feedback loop to go directly to the stockholders rather than to the president. Since the employee stockholders feedback loop is even further than the union feedback loop from the day-to-day worker-supervisor communications and decision-making, it is even more ineffective. Its only values are to provide a general positive incentive to the workers who as stockholders benefit overall performance and to protect against hostile takeovers.

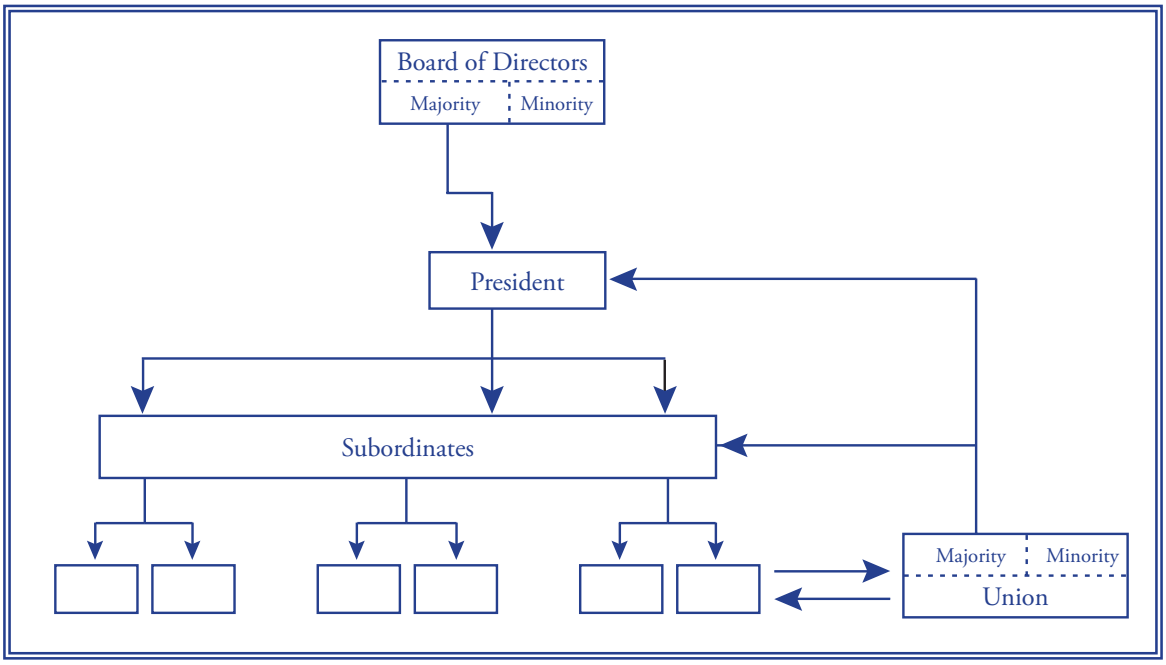

Figure 9: The Classic Corporate Model with Union Feedback

Contrast Figures 8, 9 and 10 with Figure 7, which depicts the dynamic governance power structure. Because of the double-linking principle, Figure 7 includes a feedback loop at each level in the hierarchy, including the Board, creating a wholly dynamic structure in which feedback is direct and ensured.

Figure 11 illustrates that the circles in Figure 7 are drawn as triangles both for ease of illustration and to symbolize the circular systems concept of dynamic steering: the leading, doing, and measuring that follow each other in a circular fashion. The triangle apex represents the leading, the right corner represents doing, and the left corner represents measuring.

Circles operate organically. For example, a person riding a bicycle from point A to point B is a dynamic system. The leg muscles push the pedals and the hands steer, the doing. The senses, the measuring component, such as the eyes and inner ear give feedback to the brain, the *leading* component. The brain assesses the feedback and issues new guidance to the muscles. If we remove any one of the three components, we no longer have a system that can be steered dynamically. Without dynamic steering, the odds that the cyclist will reach point B efficiently, or at all, are very low. Dynamic governance places great emphasis on making both work processes and overall corporate guidance dynamically steerable. Thus, a circle of people is one whose work processes and power structure respond

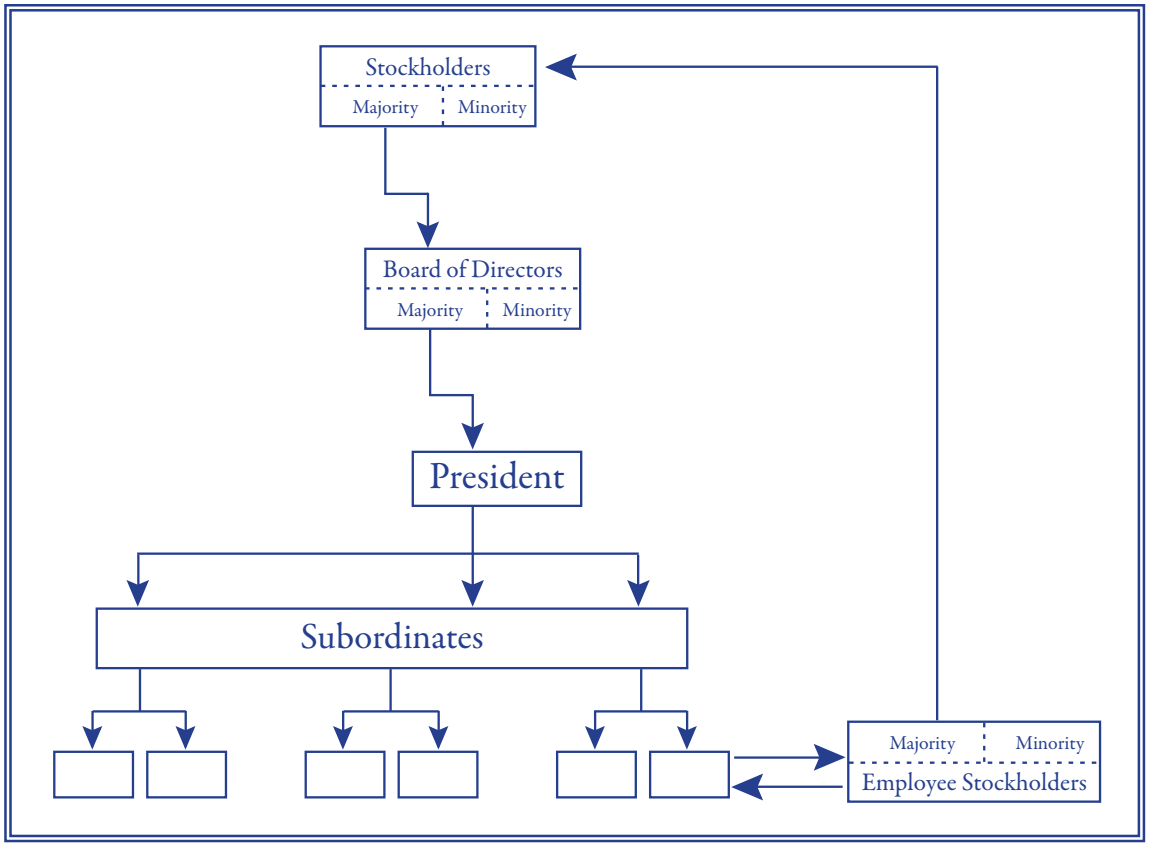

Figure 10: Classic Corporate Model with Employee Stockowner Feedback Loop

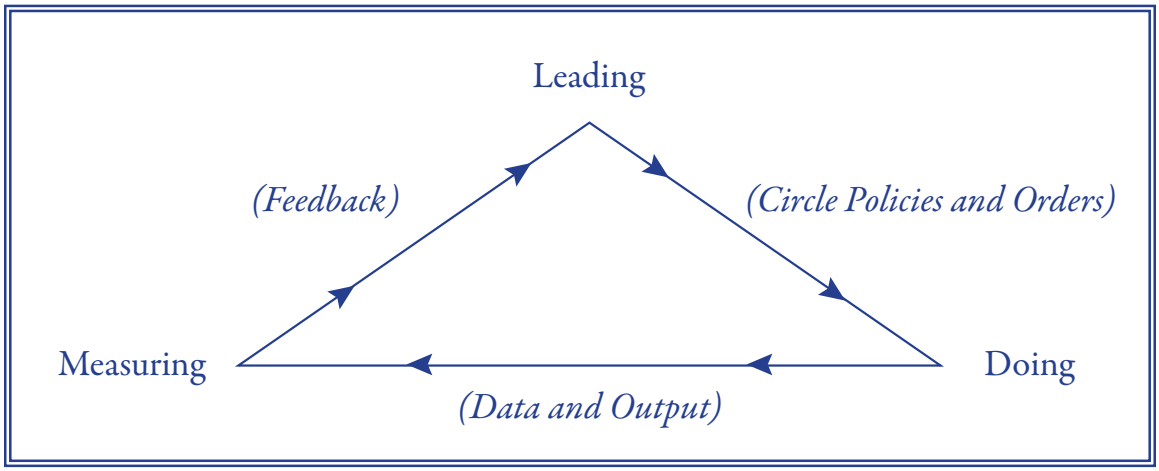

Figure 11: Dynamic governance Circle Functions: Leading-Doing-Measuring

dynamically to both the internal and external environment of the organization.

The consent decision-making process provides the measurement component that is missing or weak in the classic models shown in Figures 8, 9, and 10 because the boss can choose to ignore feedback. In a dynamic governance circle meeting, consent decision-making removes the possibility of ignoring. Double linking then extends the reach of the feedback, creating an integrated and dynamically steerable organization at every level.

The dynamic governance circle structure overlays the classic structure. In other words, Figure 7 embeds Figure 6: Specifically, the lines that are the right-hand side of each triangle in Figure 7 are identical to the lines in Figure 6. They represent the top down command structure of leader to doer. The remaining part of each triangle is the feedback loop. It represents power going from the bottom upward in a circular relationship with the top-down power. These feedback loops are much more immediate, accurate, and practical than the feedback loops shown in Figures 9 and 10.

Finally, in a dynamically governed corporation, the composition of the Board changes. The hash marks at the upper side of the Board Circle in Figure 7 reflect participation by outsiders. One of these outsiders represents the stockholders. The other outsiders include an expert in the company's business area, an expert in the local government, and an expert in management methods. Including a wide range of expertise keeps the organization in intimate touch with changes in the company's environment.

Implementation

Top management should lead the implementation of dynamic governance to ensure that it proceeds holistically. Attempts by factions to implement it from the bottom or middle of their organizations can lead to considerable friction. Some people mistakenly perceive dynamic governance as a revolutionary tool to use against management, to get rid of the boss. It's not. The boss stays put. The logic of dynamic governance sets aside the either/or logic of workers versus management. Dynamic governance logic is often expressed in both/and statements. For example, a dynamically governed business

places control of a company in the hands of *both* stockholders *and* management and in *both* management *and* workers. It typically uses *both* autocratic *and* egalitarian decision-making. It provides *both* a security assurance *and* a creative stimulus. It is concerned with *both* profit *and* human values.

By combining seemingly incompatible concepts, both/and thinking stimulates creative thinking and causes that seemingly chaotic thinking to self-organize into very practical solutions.

Since the implementation process is both emancipating and motivating, conflicting feelings of caution, elation, frustration, relief, fear, and appreciation may arise during implementation. Careful planning can minimize this discomfort and avoid disruption of the ongoing work process.

Implementation begins in the imagination of those in currently in charge, the owners or the board. They have to see dynamic governance as a possible strategy for achieving their values and vision for the business or organization. Gaining this insight is the first step in implementation. They are likely to say they are looking for better communications, more creativity in order to stay ahead of competition, a more stable labor force, or simply more profit. These are all valid reasons, but it is more effective if those in control can articulate their dream for the company, their vision. Having a clear vision helps integrate dynamic governance into other strategies for realizing this vision.

The first step in implementation is for top management to make a clear decision to try out dynamic governance for a specific period of time, to evaluate their experience after that period, and to plan next steps based on that evaluation.

The second step is usually to form an Implementation Circle consisting of the CEO, other selected top managers, and persons from other levels of the organization. The Implementation Circle receives training in dynamic governance and deepens its learning by applying the training to its own operations. The Implementation Circle's job is to plan, guide, and evaluate a series of implementation steps, for example, implementing dynamic governance in one department and measuring the results. If successful, the Implementation Circle would probably expand the method to more departments. The second step ends once the whole organization has a double-linked circle structure and in-house trainers are able to train current and new staff.

The third step, that can partially overlap the second step, is to install dynamic engineering methods. These methods organize all work processes on a dynamic basis and create a structure to guide the organization's own evolution. Once these methods are in place, the organization will likely be ready for ISO 9000 quality certification. The quality methods will feel integral to the normal work processes and not imposed from outside, as is so often the case when traditionally structured and managed companies seek ISO 9000 certification.

The fourth step in implementation focuses on the Board Circle, or Top Circle, that determines the budget for the organization. In a dynamically governed organization this includes setting formulas for the part of each staff member's compensation that depends on the profits or losses of their department and the company as a whole. This variable

compensation based on profits and losses ensures that each staff member, investor, circle, and the company as a whole has explicit financial feedback about their performance. The formulas include a regular payment for investors and salaries for management, and staff, plus short- and long-term incentive payments.

In addition to a new financial compensation structure, the Board Circle may wish to revise its Incorporation and Bylaws structure to make consent the legal basis of decision-making. The corporation retains its ability to raise money through sale of stock, but because the basis of decision-making is consent, not ownership, a hostile takeover becomes impossible. The legal person, the corporation, thus owns itself; just as you, a natural person, own yourself.

One attraction of dynamic governance is the freedom it offers to use it in whole or in part. The implementation process can be paused at any point or only applied to one division. This offers a practical way to gain experience with the model.

Benefits of Self-organization

It is natural to ask, "Why bother to make my company self-organizing? What are the benefits?" The summary answer is that the self-organizing process spurs creative thinking and catalyzes new structures and ideas. Although a circle meeting might be seen as a forum for endless argument and indecisiveness, in practice it is not. It is more reminiscent of a stock market or a folk market place where prices and exchanges emerge spontaneously. Figure 12 summarizes the major advantages and disadvantages of dynamic governance.

Systems Theory and Dynamic Engineering

Some readers will be interested in the theoretical background of the four defining elements. Dynamic governance draws on knowledge from many disciplines, particularly systems theory. It has probably emerged only recently because the crucial insights provided by the science of cybernetics were simply not available. Cybernetics is the science of communications and control. Systems theory, closely related to cybernetics, explores the similarities between seemingly unrelated phenomena. By establishing reliable analogies, the insights gained in one area of study can accelerate understanding and discoveries in other fields. The most powerful analogies are mathematical because they are the most precise. For instance, as schoolchildren we learned to think of electrical circuits as being "like" water pipes. That analogy is a very good one because the equations that describe hydrodynamic volume and pressure have the same algebraic form as the equations related to watts and voltage. Finding the social sciences lacking in clear management concepts, Endenburg developed the four defining elements of dynamic governance by making analogies with processes clearly understood in the physical sciences, especially electronics and biology.

English mathematician and computer scientist Alan Turing, Russian Belgian chemist and complexity theorist Ilya Prigogine, and others laid the foundation of systems theory during the 1950's by generalizing the principles of mechanics and thermodynamics to other fields of study. Their initial work led to new disciplines such as operations research and found numerous practical applications in manufacturing and management science. It

was the basis of the design of computers and generated such now familiar tools as PERT charts and flow diagrams. One of the tasks of the systems approach to management is to understand why some organizations are better organized than others and to provide a rigorous methodology for improving organizational design and evaluation.

Prigogine became particularly interested in self-organizing systems. In 1977, Prigogine received the Nobel Prize in Chemistry for his "contributions to non-equilibrium thermodynamics, particularly the theory of dissipative structures." In lay terms, he advanced our understanding of how order can arise from chaos. By mathematical reasoning, he widened the scope of his work from purely physical sciences to ecological and sociological studies. Others have used these ideas to examine such diverse topics as the origin of life on Earth, the dynamic equilibrium of ecosystems, and even the prevention of traffic jams.

Advantages	Disadvantages
• **Promotes creativity and problem solving throughout the organization** • **Supports the interests of investors, management, and staff** • **Speeds adaptation to change** • **Engages and utilizes the energy of every member of the organization** • **Generates high quality products and services** • **Increases staff commitment to and identification with the organization** • **Results in fewer, more satisfying meetings** • **Reduces sick leave** • **Improves safety record** • **Raises awareness of costs** • **Improves client orientation** • **Decreases the odds of burnout** • **Builds program self-discipline** • **Supports leadership among peers**	• **Requires careful implementation planning** • **Necessitates training in new concepts** • **May arouse varying intense emotions during implementation (skepticism, elation, anxiety, excitement)** • **May, at first, be uncomfortable for those not accustomed to sharing the responsibility of difficult decisions**

Figure 12: Summary of Advantages and Disadvantages of Dynamic governance

In 1978, Herman Haken, a professor at the Institute for Theoretical Physics at the University of Stuttgart, extended the mathematics associated with gases in Prigogine's work and used the term *synergetics* to describe the new discipline he founded, that studies self-organizing phenomena. Haken's work showed that self-organizing activities as far apart as lasers, the regular streaks of cirrus clouds, certain rhythmic chemical reactions, patterns in slime mold, regular fluctuations in the number of hare and lynx pelts received by the Hudson's Bay company over a 90 year period, and formation of public opinion are mathematically all one process.

Prigogine and Haken showed that, to be self-organizing, a system must meet two conditions. First, the elements of any self-organizing system must be equivalent, that is, not controlling each other. A system in which the elements do not limit or control each other is without form; it is chaotic. Second, to be self-organizing, a system must have an external source of energy. These conditions are true for all self-organizing systems, whether the system elements are people freely uniting around a common activity or atoms harmonizing to one frequency in a laser.

The four defining elements of dynamic governance create the conditions needed for self-organizing to occur: consent, elections, and double linking establish the first condition, that of "not controlling" each other. For example, in the election process, the procedure in which each person makes his or her nomination privately on a piece of paper intentionally creates a chaotic situation. The circle component provides the required external energy source, viz, the common aim which is assigned by the higher circle. The common aim creates tension: "We must work together to produce a specific product or service, and we must do so in the face of competition."

In contrast, we can see that conventional organizations do not create the conditions needed to release the phenomenon of self-organization. Neither autocratic nor majority-vote decision-making allows the elements, the people, of the system, the company, to be "not controlling each other." For example, if each person on a board of directors has one vote, the majority of votes on any one issue controls the minority. Thus, the majority vote procedure destroys the initial equivalence. Or, for example, managers in a conventional company may try to promote creative thinking by flattening their organization or by adopting a joined autocratic style. The reality, however, is that the manger alone retains the real power. Thus, conventional businesses are organized, but they are not self-organizing. Only a dynamic governance structure, that is, one in which all the members are fundamentally equal, fundamentally not trapped in a boss-servant relationship, supports the natural phenomenon of self-organization.

Conclusion

This article introduced dynamic governance, a new method of decision-making and organizational governance. It included two detailed examples of the decision-making method in day-to-day operation and outlined the governance system. It made brief mention of the discipline of dynamic engineering that develops existing work processes to make them more easily steered.

Dynamically governed businesses, educational institutions and nonprofit organizations are significantly different from their conventional counterparts in many ways, ranging from job satisfaction to overall financial viability. The dynamic governance method is an empty tool, useful where and whenever people are organized.

Still relatively new, dynamic governance is a methodology with tremendous untapped benefits. It lends itself well to partial use or full implementation.

Dynamic governance has considerable unexplored potential for many areas of human endeavor. Those who are able to see the potential gains from dynamic governance will be invaluable to their organizations. These early adopters will be responsible for transforming their associated institutions in ways that enable everyone involved in the organization, as well as the organizations themselves, to achieve their full potential.

Selected Bibliography and Related Resources

Much of the literature on dynamic governance is in Dutch; however, there are magazine articles in other languages, including English, French, German, Spanish, Italian and Arabic. Readers may obtain copies of these articles through the Global Sociocratic Center in Rotterdam, Netherlands via www.sociocracy.biz or from the Center for Sociocratic Governance in Washington, DC, USA via www.sociocracy.info or www.sociocraticgovernance.org. Also available in English is: *We the People: Consenting to a Deeper Democracy* by John Buck and Sharon Villines, available from www.amazon.com, and two books by Gerard Endenburg: *Sociocracy: The Organization of Decision-making*, and the more recent book *Sociocracy as Social Design*.

C. A. Cannegieter's book *The Human Aspects of Economics: A Treatise on Unemployment, Inflation, and World Poverty* (Exposition press, Smithtown, New York 1982, pages 150-184) gives a good overview of various early sociocratic initiatives and contains an extensive bibliography.

Books about dynamic governance are also available in French. We particularly recommend La Democratie se Meurt, Vive la Sociocratie by Gilles Charest, 2007, available from www.sociogest.ca.

While a number of books are available on general systems theory, we particularly suggest *General Systems Theory: Essential Concepts and Applications*, by Anatol Rapoport (Abacus Press, Cambridge, Massachusetts); *Cybernetics, Artificial Intelligence and Ecology: Proceedings of the 4th Annual Symposium of the American Society for Cybernetics*, edited by Herbert W. Robinson and Douglas E. Knight (Spartan Books, New York); and *The Macroscope*, Joel de Rosnay, translated from French by Robert Edwards (Harper & Row, New York).

For more information on the scientific approach to synergetics, we recommend Herman Haken's *Synergetics: Non-equilibrium Phase Transitions and Self-Organization in Physics, Chemistry, Biology, and Sociology,* (2nd Edition, Springer Verlag, New York 1978); and Erich Jantsch's *The Self-Organizing Universe* (Pergamon Press, New York 1979) which discusses Prigogine's work with self-organizing dissipative structures. Jantsch's book does not require facility with mathematics; however, familiarity with calculus and linear algebra are helpful for both of Haken's books. These scientific approaches contrast to more philosophical treatments of synergetics such as Buckminster Fuller's *Synergetics* (MacMillan Publishing Co., New York 1975), which seems less subject to empirical verification and practical application.

Dynamic governance carries the modern drift toward power equalization in employment to its logical conclusion. The power equalization milieu can be seen from a number of perspectives, and the following list is a selection of various viewpoints: *Introduction to Management Science* by Thomas M. Cook and Robert A. Russell (Prentice-Hall Inc., New Jersey 1977); *Megatrends: Ten New Directions Transforming Our Lives* by John Naisbitt (Warner books, inc., New York 1982); *The Social Science of Organizations – Four Perspectives* by Henry A. Latane, David Mechanic, George Strauss, and George B. Strother (Prentice-Hall Inc. New Jersey, 1963); *In Search of Excellence* by Thomas J. Peters and Robert H. Waterman, Jr. (Harper and Row, New York 1982); *Another Way of Life*

by Patricia Baum (G.P. Putnam's Sons, New York 1973); *Utopian Thought in the Western World* by Frank E. Manuel and Fritzie P. Manuel (The Belknap Press of the Harvard University Press, Cambridge 1979); *What do Unions Do?* By Richard B. Freeman and James L. Medoff (Basic Books, Inc., New York 1984); *The North Will Rise Again* by Jeremy Riflin and Randy Barber (Beacon Press, Boston 1978); *A Piece of the Action* by Stuart M. Speiser (Van Nostrand Reinhold company, New Yo9rk, 1977); *Creating the Corporate Future* by Russell Ackoff (John Wiley and Sons, New York 1981); *Beyond Majority Rule: Voteless Decisions in the Religious Society of Friends* by Michael J. Sheeran (Philadelphia Yearly Meeting of the Religious Society of Friends, Philadelphia 1983); and *Dynamic Administration: the Collected Papers of Mary Parker Follett* edited by E. Fox and L. Urwick (Pitman Publishing, New York 1973). Finally, there is the pioneering work of Rensis Likert. One can follow the development of his thought in three books: *New Patterns of Management* (McGraw-Hill, New York 1961); *The Human Organization* (McGraw-Hill, New York 1976) and *New Ways of Managing Conflict* (McGraw-Hill, New York 1976). Likert and Associates, Inc., of Ann Arbor, Michigan, are continuing Likert's work.

More recent publications of interest include: *Quest for Prosperity* by Konosuke Matsushita (PHP Institute, Kyoto, Japan, 1988), *The Rise and Fall of Strategic Planning* by Henry Mintzberg (Free Press, New York, 1994) and *Built to Last* by James Collins and Jerry Porras (Harper Business, New York, 1994) for a discussion of a broader vision for businesses; *Planning for Quality* by Joseph M. Juran (Free Press, New York, 1988) for a discussion of quality concepts with a human face; *The Fifth Discipline* by Peter Senge (Doubleday, New York, 1990) for insights into systems thinking applied to a business environment; *Managing on the Edge* by Richard Pascale (Viking Books, New York, 1990) and *Leading the Revolution* by Gary Hamel (Harvard Business School Press, Boston, 2002) for descriptions of the need for dynamic steering and development to cope with constantly changing environments; *Complexity* by Mitchell Waldrop (Simon & Shuster, New York, 1992) and *Competing for the Future* by Gary Hamel and C.K. Prahalad (Harvard Business School Press, Boston, 1994) for a review of concepts of chaos, complexity, and self-organization, and strategic thinking as they apply to business; *Reengineering the Corporation* by James Champy and Michael Hammer (Harper Business, New York, 1993) for techniques that are related in part to dynamic engineering; *Emotional Intelligence* by Daniel Goleman (Bantam, New York, 1997) and *The Living Company: Habits for Survival in a Turbulent Business Environment* by Arie de Geus (Harvard Business School Press, Boston, 1997) for an in-depth analysis of the importance of human-to-human skills – a strong rationale for using dynamic governance to govern.

A recent journal article of note is: Romme, A. Georges and Endenburg, Gerard, "Construction Principles and Design Rules in the Case of Circular Design, *Organization Science: a Journal of the Institute of Management Sciences. 17 (2):287.* Interesting mathematical exploration of self-organization is described in Klarreich, Erica. 2006. "The Mind of the Swarm." Science News,170:347. Also, Millius, Susan, Swarm Savvy, "How bees, ants and other animals avoid dumb collective decisions," May 9th, 2009; Vol. 175 #10 (p. 16). Finally, look for Tom Seeley's book, *Honeybee Democracy,* due out in 2010.

About the Authors

Gerard Endenburg

A citizen of The Netherlands, Gerard Endenburg received his high school education at De Werkplaats, in Bilthoven, an innovative and influential school. The school, founded by educational and social theorist Kees Boeke, operated under a consensus decision-making system derived after the Quaker model for use in a secular setting. On completion of his college studies in electrical engineering and radar technology and his mandatory military service, Gerard worked for a while for Philips Electronics where he was instrumental in obtaining a patent for the flat speakers now used in many personal electronic devices including cell phones. He then joined Endenburg Elektrotechniek, Inc., the electrical engineering company headed by his father. His parents established the company shortly after World War II as a practical laboratory to try out their ideas about management and industrial reform. Gerard became general manager in 1968, a position he held for 30 years. He remained on the board circle of the company until 2007.

Inspired by Boeke's ideas, his engineering training in systems theory, and work in the field of synergetics, Gerard developed a system of decision-making based on the principle of consent, which could be added to the existing functional structure of any organization, regardless of its size or objective: dynamic governance, known in the Netherlands as the sociocratic circle-organization method. In 1970, Gerard started to introduce this model into the factory. The first reports on the dynamic governance experiment appeared in the prestigious Dutch daily newspaper "NRC-Handelsblad" in 1974. A year later, he published his first book, *Sociocratie, een redelijk ideal (Sociocracy, a Reasonable Ideal).*

He helped found the Sociocratisch Centrum in 1977 to coordinate and to encourage the growing number of Dutch organizations that were adopting dynamic governance and to support the interest expressed from countries throughout the world. The Center now organizes lectures, seminars and training courses on dynamic governance and has overseen its implementation in numerous organizations.

In 1981 Gerard published his second book, *Sociocratie, de Organisatie van de Besluitvorming (Sociocracy, the Organization of Decision-making).* This book was launched at a press conference attended by Dr. W. Albeda, then Netherlands Minister of Social Affairs. The succeeding Minister of Social Affairs, Dr. J. de Koning, launched Gerard's *Sociocratisch Manifest (Sociocratic Declaration)* at a press conference in 1984. In 1991 Gerard was awarded a PhD for his work with dynamic governance (sociocracy). His thesis is published in *Sociocracy as Social Design.* Today, Gerard remains involved in the activities of the Sociocratisch Centrum and the Global Sociocratic Center from his seat on board circle and teaches in the business school of the University of Maastricht.

John A. Buck

John is a certified dynamic governance consultant. After receiving a BA in English from Brown University, John worked for the Boeing Corporation as a technical writer and then for the U.S. Federal Aviation Administration (FAA) in Washington, D.C., where he earned the Secretary of Department of Transportation's Award for Meritorious Achievement for his pioneering work with information technology. He worked subsequently as a project manager for the Harris Corporation, managing more than 200 people in a global information systems installation and training project for the U.S. Department of State. In this position, John used many dynamic governance systems concepts. The project received ISO 9000 certification and consistently outstanding ratings from it State Department clients. He earned a Masters Degree from The George Washington University in 1999 in Quantitative Sociology. His thesis examined several dynamically governed organizations in the Netherlands. It demonstrated statistically that the staff of those companies had a significantly higher commitment to their organizations than typical Dutch workers. His publications include numerous professional articles about aspects of personnel management and automation, including techniques for establishing upward mobility programs, new concepts for human resource program evaluation, and strategies for designing and implementing new technology systems.

John established GovernanceAlive LLC in 2006 from which he and others now train and consult full time on dynamic governance. In 2009 Sharon Villines, Greg Rouillard, and he established the Center for Sociocratic Governance, a nonprofit located in Washington, DC, USA whose mission is to increase public awareness and develop the ability of individuals and organizations to apply the principles and methods of sociocratic governance. It currently offers discussion lists and publications, sponsors conferences, and facilitates access to training courses. For more information about the Center, see: www.sociocraticgovernance.org.

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