

Networked Leadership: How Technology Impacts Leadership

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Would the CEO of the Internet please stand up? Could we even identify a single person with the knowledge and power necessary to order a sudden or drastic change in what is quickly developing into one of the most powerful communication tools in the history of human civilization? There is no such person to be found. What if the Internet, governed loosely by a broad range of persons, is a harbinger of organizations and institutions to come? Can current models of leadership work with a network of people, linked by technology, which inherently cannot be managed? What does leadership look like in a networked world?

A major shift is occurring in the world and is having a significant effect on how we work together, influence change and lead our organizations. The shift is from a world of fragmentation to one of connectivity and integrated networks. This shift is fueled by the trend toward a global economy and by the increased use of technology and mass communications in our everyday lives.

This piece will describe the significance of a networked world and introduce how networked dynamics require new ways of relating and influencing change in organizations. The first section describes six dynamics that are typical of a networked world. The final section introduces two new ways of working needed to adapt to functioning in a networked organization.

The Dynamics of Networks

A networked world operates differently than one built on hierarchies and fragmentation. The Internet is a wonderful example of a network. It represents some of the paradoxes of networks as well as some of the ways in which networks maintain order.

The Internet has a basic structure within which individuals and organizations can create and operate. Its structure consists of nodes and links. Each node is a center for a web of connections and each of these nodes has web-like connections with other nodes. This structure is simple, yet allows for great flexibility and evolution in the design and content of the World Wide Web. Individuals who are connected to the web can initiate change from anywhere within the system. A person can easily set up a new website to become a part of the Internet or subscribe to an Internet service like America On-Line and have immediate access to a wealth of information. They can enter topical chat rooms or initiate conversations on new topics. The ease with which new websites can be created can be seen in these statistics. When Clinton was elected President in 1992 there were 50 websites in America. By the time he left office, there were 50 billion websites in America.

The dynamics of the Internet are highly mobile. New websites, individual participants, and content are constantly changing. Within this basic structure, the opportunities for individual initiative and creation are endless. In fact, the locus of intelligence in a network shifts to the active participants of the system (Negroponte, 1995). The active participants are the ones who shape the system, gradually and in an ongoing manner, based on their own knowledge and interests.

Networked organizations have different dynamics than the characteristics that exist in fragmented hierarchical organizations. These dynamics do not replace hierarchical structures, but rather overlay and interact with processes and functions of the hierarchy. While networks all have hierarchical aspects (for example search engines on the Internet provide a higher level of order than do web pages, or an individual email addresses). They significantly increase the amount of linkages that traditional hierarchies do not have. Fragmented, parts-oriented hierarchies that protect their internal and external boundaries do not facilitate linkages. A networked world blurs organizational boundaries, creates connections and influences the way we work.

A network generates the following dynamics in organizations. First, *networks can only be understood from the perspective of the whole system* (Bennis, Parikh, & Lessem, 1994; Capra, 1996, 2002). Because networks are thick webs of intersecting connections, they cannot be understood by breaking them down into each individual connection. Instead, understanding of the system and its dynamics is visible only from a distance of time or space. Therefore, we metaphorically need to remove ourselves from the dance floor and go up to the balcony in order to see the dynamics of the web of activity. Networked systems are always more than the sum of their parts.

If we de-constructed the Internet, we would find a series of electronic connections and nodes. They would not reflect tangible parts with distinct boundaries like the parts of a car. When these electronic connections come together within an operating structure, they synergistically emerge into the entity we call the Internet. Human groups and organizations operate in a similar way. When five members of a basketball team work together and transcend their individual skills, we know that an effective team has been developed. This team is the synergistic result of the unique composition of each member as well as their ability to work together and heighten each other's play.

Second, due to their high degree of connectivity, *networks create blurred boundaries in organizations*. Something has been happening in our organizational culture that has blurred the boundary between our personal lives and work. Many of us check email away from the office or access our work computers from home adding to the complexity and connectivity of our work environment. This is a personal way we have experienced blurred boundaries.

Links and connections span traditional boundaries and make it challenging to hold distinct boundaries even when it might be appropriate to do so. For example, when consulting arms of accounting firms influence accounting practices, a traditional boundary has been blurred. Likewise, when investment bankers influence stock analysts, advertising income seeps into program decisions, entertainment and the need for ratings influences news reporting, or special interest money influences voting choices in

politicians traditional boundaries become much more difficult to hold. The paradox is that in a world where boundaries are crossed frequently each day, we also need to know when traditional boundaries are necessary for needed checks and balances.

In business the global economy has influenced the creation of transnational companies that supersedes national boundaries. The Euro has greater implications than just being a standard currency. It has blurred the boundaries between distinctive cultural differences, countries, and business practices. Similarly, email has blurred the traditional norms of who talks to whom and how often. An employee or customer can email others in an organization without going through a secretary or the chain of command.

Third, *networks behave in non-linear ways*. Unlike the linear causality of machines, the vast number of connections creates opportunities for discontinuous change within organizations (Handy, 1989). Discontinuous and non-linear jumps decrease the explanatory power of single causality. This is because the connectivity of the system allows for many variables from both near and far to create ripple effects that influence the whole system. The events of September 11, 2001 clearly demonstrated the connectivity that is already present in our world. The spread of information through cell phones and email created ripple effects on airlines, security, the economy, politics, mass media, and defense industries. This ripple effect amplifies the connectivity that exists today.

As the use of digital forms of communication increases in organizations they, in part, propel the possibility of non-linear change. Much like the 9-11 tragedy created a non-linear jump in the social ecology of America and the World, the connectivity of the global economy, mass communication, and technology combined to trigger a multitude of non-linear change as a result.

Fourth, *networks are always in dynamic flux*. When many highly connected variables are in play, high speeds and high degrees of movement are a natural dynamic of the system. We experience this movement in the way problems seem to mutate or the increase in the number of novel problems that appear at work. The dynamic flux of

networks also creates a shorter shelf life for the organizational rules that used to give us a sense of predictability. As the number of variables in the system increase, we experience an accelerating sense of speed and movement in the system. This experience of speed is a symptom of the frequency of movement within the system. In fact we have all experienced a shift in our perception of time with the onset of networked computer systems, email, voice mail, cellular phones and fax machines. As the methods and ease to reach us increase, we experience a heightened sense of urgency and speed, which in turn creates a sense of living in a world of constant movement.

Fifth, *network systems have complex complexity*. Complexity is defined as a network of intertwined strands (Capra, 2002). Complex complexity occurs when variables and unknowns geometrically multiply. This creates a serious challenge to the way we handle strategic planning and decision-making. A networked system is never closed from outside influences. It is always affected by variables that exist outside the boundaries of our departments and organizations. This makes it impossible to completely understand all of the variables when we make decisions or solve problems, so we are constantly learning to adapt to these challenges (Heifetz, 1994).

Complex complexity also challenges micro management. Micro managing becomes dysfunctional in a world that is intertwined and interwoven. To focus on the parts denies the complexity of a networked system. When conditions of complex complexity exist, we have to focus on the relationships between variables and keep an eye on the whole system. If seeing the system is like standing on the balcony watching the dancers on the floor below, micro managing is like being on the floor, telling people how to dance. When you are on the floor, you can't see the system patterns and tweaking the dancers don't have impact on the overall outcome of the system. Complex complexity means that we will need to become comfortable with ambiguity and probabilities instead of certainty. There will always be missing information in our decision-making or problem analysis and the need for continual learning - it is a result of the dynamics of a networked system (Vaill, 1996).

Sixth, *networks can be influenced but they cannot be controlled*. In a 1998 obituary for Internet pioneer Jon Postel, the Financial Times noted that Postel helped influence the development of the Internet realizing that no single person or entity could "control" it: *"The Internet works because computer scientists all over the world are prepared to reach agreement on the best standards to adopt. The process of reaching that agreement is managed by a relatively small number of people, of whom Postel was one. Their power stems not from official status or governmental nomination, but from their ability to create a consensus.* [Italics added.] The consensus, in turn, stems from a shared purpose" (p. 20). Were one person to try to force his or her will on the overall Internet - even a giant such as a Bill Gates - he or she would surely fail. Due to the dynamic movement and high degree of connectivity, networks do not respond to force - in fact they naturally resist it. Wet sand is composed of silicone and saline and performs in a way similar to a network. It resists the imprint of our foot when we slap our foot down on the wet sand; however, when we place our foot on it and wait, the wet sand allows our foot to sink into it. Many supervisors have been called upon to drive change through an organization. This forceful "make it happen at all costs" often results in more resistance. Networks respond to nudging and influencing using relationship networks.

These dynamics of networks have become increasingly familiar to us. Over the last decade, we have felt the increased rapidity of change and the lessening effectiveness of control strategies. We have experienced more people who have opinions about how we do our jobs and the blurred boundaries between our daily work and the outside community. Global, economic, political, and societal issues affect our organizations, our work, and the dynamics within our organizations. Effectiveness used to be measured in part by a person's ability to be autonomous and protect his or her boundaries. Now, effectiveness is dependent on a person's ability to develop and maintain cross boundary relationships and see the whole system, not just his or her own part. New rules have replaced old rules. The old rule that said "everything will become clear when I grow up" has been replaced by the need for constant learning and unlearning, and letting go of the old ways of thinking and doing.

Implications for Leadership

New Ways of Relating and Influencing Change

Networked organizations require us to develop and practice two new ways of working (Allen & Cherrey, 2000). The first is **new ways of relating**. *New ways of relating involves the capacity to build and maintain effective cooperative relationships across the boundaries of an organization and between the organization and the community.* In a networked world, one's value is measured by one's connection to it. Our relationships need to model and keep pace with the nature of the system. If the system is full of connections, then we need to be in connection as well. *New ways of relating also involves the need to think relationally.* Since networks have many variables in play, and linear causality does not work in open systems, a new way of thinking is needed. This new way of thinking involves learning how different variables relate to and affect each other. Relational thinking is similar to thinking systemically. Not only must we see the whole instead of one part, we must also develop the capacity to understand how variables will affect each other over time (Dorner, 1996). *New ways of relating also involves the development of emotional intelligence on both individual and group levels* (Goleman et. al., 2002; Goleman, 1997 & 1995). Emotional intelligence requires developing a personal emotional competence in the areas of self-awareness, self-regulation, and motivation.

It also encompasses social emotional competence including empathy and social skills. The reason why emotional intelligence becomes more important in a networked world is that the flow of emotions as well as information is increased within a networked system. If the members of a networked organization have low emotional intelligence, rumor, fear, and amplification of all emotions will occur. This results in an organizational drain of energy and resources as staff members respond to the emotional content of communications instead of the informational content.

Networked organizations also require us to develop and practice **new ways of influencing change**. *New ways of influencing change involves more organic strategies that take into account the non-linear dynamics of the connected systems and its response to force*. Networks resist force but hierarchies traditionally use force and power to move people. If we continue to use traditional change strategies in a networked world, we can hinder our success. *New ways of influencing change also involves developing an understanding of how the dynamics of a network operate and where the key points of leverage are within the system*. When we learn to spot these points of influence, we can use the dynamics of the system to bring it to health.

There are obviously some interesting implications and challenges for leadership that result from this expansion of networks. While human networks have always existed, the development of technology, the Internet, and the increased use of email has extended the connection between people and within organizations and have fundamentally changed the way we lead.

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