

Communication and The New Science: The Case of Leader/ Follower Interaction

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INTRODUCTION

This is an exploratory article intended to contribute to the ongoing movement toward the behavioral sciences becoming more informed by developments in the New Science. While the topic relates to communication in organizations, the focus is on how new conceptions of the leader/follower relationship and associated communication might help researchers to see it in a more holistic way. Justification for this comes from developments in the New Science and the possibility of using these developments as direct applications or metaphors for theory development in the behavioral sciences. In the process, the author coins the expression “leader/follower event” in an attempt to better capture the essence of the New Science contribution to this specific area.

COMMUNICATION AND THE NEW SCIENCE

Human communication is generally studied from the perspective of the behavioral sciences. However, the New Science refers to the post-Newtonian era that has emerged from such diverse disciplines as physics, chemistry, and biology, and from associated theories that span several disciplines, including astronomy. It would seem that they have little in common. However, there have been numerous attempts to combine scientific approaches with behavioral theories ever since the origins of the behavioral sciences. One such attempt is evident in the Scientific Management movement.

Early this century, this movement sought to develop a prescription for the efficient management of organizations (Hasenfeld, 1983). This was based on principles of scientific management that drew on scientific analyses, experiments and measurements of efficiency. The use of such objective data for decisions, that often affected the lives of people very deeply, sometimes led to social and ethical implications that outweighed the significance or importance of efficiency. Clearly, its theoretical basis—borrowed from approaches to research and information development in the physical world—was not broad enough to deal with the social aspects of organizations, and its popularity has subsequently declined.

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Indeed, the very attempt to model behavioral science research on a physical science approach has virtually run its course. While the goal of the physical sciences has often been to discover the objective universal laws that govern matter, the behavioral sciences have had to settle for degrees of probability instead (Wallace, 1998, p. 161). For many behavioral researchers, the rational empirical approach to knowledge in this field is limited at best, and often quite inappropriate and inadequate. This has led many such researchers to embrace, with a good measure of success, the kinds of ethnographic approaches adopted by such fields as anthropology, where the focus was less on generalized understanding and more on particularized information.

Thus, it would appear that the behavioral sciences and the physical sciences are slowly but steadily moving apart in terms of approaches to the discovery of new knowledge, and the development of theoretical underpinnings. However, discoveries in quantum studies have begun to show that perhaps in new and different ways, they might actually have more in common than previously thought. As far back as 1930, James Jeans, the astronomer, declared that "The universe begins to look more like a giant thought than like a great machine" (in Capra, 1983, p. 86). Only now, as research in quantum physics begins to show how little support there is for the notion that any real solid matter actually exists, is the full weight of his foresight becoming apparent.

Perhaps the appearance of this new approach to science that began to question the orderliness that Newtonian science predicted, became most apparent with the work of Niels Bohr and Werner Heisenberg and the uncertainty principle that would come to bear the latter's name. Their biggest struggles in delving into atomic experiments were in overcoming their previous conceptions of reality which led them to see only paradoxes. According to Capra (1983):

Even after the mathematical formulation of quantum theory was completed, its conceptual framework was by no means easy to accept. Its effect on the physicists' view of reality was truly shattering. The new physics necessitated profound changes in concepts of space, time, matter, object, and cause and effect; and because these concepts are so fundamental to our way of experiencing the world, their transformation came as a great shock. To quote Heisenberg: "The violent reaction to the recent development of modern physics can only be understood when one realizes that here the foundations of physics have started moving; and that this motion has caused the feeling that the ground would be cut from science." (p. 76-77)

In short, progress in the New Science has been made through an approach that has less to do with the effort to discover immutable, objective, universal laws and more to do with discovering probabilities associated with potentialities. Attempting to maintain a purely objective viewpoint has proven futile. The very act of observation alters what is observed. Light transforms itself in order to conform to the mode of observation. If the observer is an

integral part of the observation, then clearly the subjective aspects of the observer become relevant to what is observed, because it provides insight into how the observation takes place. The mutuality and complementarity of both subjective and objective viewpoints is one of the fundamental assumptions that this paper is based upon. While this approach is mirrored in developments in behavioral science approaches, as outlined above, the parallel is not often made. It is the contention of this article that just as behavioral scientists may benefit from the conceptual developments made by their physical science cousins, the opposite is just as true too.

Yet, it is not the purpose of this paper to offer a comprehensive analysis of the New Science. That has been more than adequately done elsewhere (Bateson, 1980; Capra, 1983; Gleick, 1987; Prigogine & Stengers, 1984; Zohar, 1990). However, a working knowledge of basic concepts—in particular the role of relationships in quantum theory and the role of the strange attractor in chaos theory—is assumed. The purpose of this article is, rather, to offer an example of how New Science ideas can help shape and conceptualize approaches in behavioral sciences. Specifically, this article looks at the leader/follower relationship as an appropriate place to apply such ideas. The connection between the New Science and the role of leader/follower relations in organizations is made through the all but ubiquitous activity of communication. According to Putnam, Phillips and Chapman (1997) “Perhaps no other construct pervades organizational studies more than the term *communication*.” (p. 375). And within organizations, perhaps no activity is more central to the organization than the communication that takes place between leaders and followers. Based on ideas that have emerged from the New Sciences, this article suggests a new approach to research in this area that centers on what this author has coined the “leader/follower event.”

THE LEADER/FOLLOWER EVENT

Joel Barker (1993) defines a leader as “a person you will follow to a place you wouldn’t go by yourself” (p. 163). This definition is helpful for several reasons. For one thing, it is simple and elegant and captures the essence of what is at the core of leadership. It contains two central focal issues of leadership. The first has to do with the goal or destination that the leader is leading towards. If there is no place to go to, to use Barker’s terminology, then there is no need for a leader. The second has to do with the nature of the relationship between the leader and the followers. Without followers, a leader goes alone.

These two focal points, or dimensions have been at the core of much leadership theory and are often referred to as task and relationship (Northouse, 1997). This view of leadership has been referred to as the two-factor theory and appears to have fallen somewhat into disrepute of late (Owens, 1998, p. 204). However, this does not detract from the fact that leaders have two essential areas of focus in terms of the place they intend to go and their relationships with those who choose to follow them.

However, perhaps what is most attractive about this definition is its suggestion that it also

makes sense to think of leadership as an event. Indeed, the event would probably be better described as a leader/follower event. The definition Barker (1997) uses is described from the point of view of the follower. The “you” in the definition is obviously the follower. It implies that it is the followers who decide who will be the leader through their choosing who to follow. Of course, without the leader’s consent to lead there would not be a leader/follower event either. However, recognition of the mutuality of the role of the follower and the leader in the event is somewhat addressed by this definition.

However, the real importance of that is not so much to recognize the often overlooked role and importance of the follower, but rather to highlight the relationship between leaders and followers. Indeed, it is primarily through the development of this relationship that leaders become leaders, followers become followers, and such relationship-determined roles may not make much sense if the attempt is made to try and isolate them from the context of the relationship. Thus, in describing a person as a leader, and in describing his or her leadership, it probably makes little sense to separate that role from the specific relationship that gave rise to the role. In fact, it probably only makes sense to describe the specific leader/follower event as a whole—with individual activities seen within that context.

This emphasis on the relationship between the follower and the leader mirrors the emphasis that quantum theory places on relationships as perhaps the fundamental aspect of existence. In the quantum world, reality is more or less defined by relationships. Elementary particles are “in essence, a set of relationships that reach outward to other things” (Capra, 1983, p. 81). Essentially, elementary particles come into existence through their relationships. If we were to apply this notion to organizations, it shouldn’t be restricted to only the leader/follower relationship, of course, but should be the reason for seeking many relationships with those around us.

In a similar vein, one of the most important ideas to emerge from chaos theory that suggests a direction for behavioral science in general and the leader/follower relationship in particular, is the role of the strange attractor in the way that order emerges from chaos, and how a chaotic system is bounded. Let us add this notion, to the former discussion on the centrality of relationships.

Within the context of this leader/follower event, why would a follower choose to follow a leader, and why would a leader wish to lead a follower? The role of the “place” mentioned in Barker’s (1997) definition of leadership becomes significant here. The follower would not go there without the leader, and indeed, through the leader/follower event is able to get there. The leader is able to go there with sufficient support and assistance from followers. There are two very significant ways of looking at this “place.” The first is external and the second is internal, and here the complementary roles of subjective and objective viewpoints, made earlier, become more apparent. The external has to do with the organizational task. The internal has to do with personal fulfillment. Or, perhaps we could say that the first has to do with organizational goals and the second with personal goals. However, it would be a mistake to equate the former with the task/goal orientation discussed earlier, and the second with the

relationship orientation. Actually, both refer to goals, and for leaders to lead followers to both internal and external goals, they need to be capable of getting there for a start—knowing the way to the goals—and be capable of communicating how to get there—knowing how to maintain relationships with followers along the way.

Let us first look at leaders helping followers reach personal goals—the internal “place” the follower would not go without the leader. One way of looking at this is to capitalize the “p” on “personal,” so we talk about Personal goals, to refer to those species-wide, human goals that transcend the individual, but are still at the very core of each individual’s need for fulfillment—something akin to what Maslow (1970) has outlined in his hierarchy of needs. This would imply that leaders not only need a certain amount of technical knowledge and experience on the goals of their particular organization, but also knowledge and experience on what it means to be actively involved in personal growth and development.

According to Maslow, (1970) we have an inherent, species-wide, hierarchy of needs that is the basis of our motivation and values. Alongside the idea of it being possible to describe what a fully-functioning individual would look like in terms of general behavior, is the notion of the psychological liberation, freedom, and creativity that is acquired in the process. Maslow describes his self-actualizing subjects as being more resistant to enculturation than others. The idea of enhanced free will against a backdrop of human nature having a degree of constant form and structure presents a possible illustration of chaos theory in a human context. Chaos theory has been able to delineate systems where at any particular moment, the future is difficult or perhaps impossible to predict with any degree of certainty. However, the system is also bounded and over the long-term, tends to be ordered. And this ordering appears to take place through the invisible influence of the strange attractor. Whereas Wheatley (1994) tends to see meaning and purpose as playing that role in human behavior, it is also possible to see the inherent hierarchy of needs that forms the basis of human motivation and values playing that role—although there need not be any fundamental difference between these two views.

By acknowledging the values aspect of the strange attractor, it becomes possible to complete the circle between leader and follower. According to Northouse (1997):

Transformational leaders set out to empower followers and nurture them in change... To create change, transformational leaders become strong role models for their followers. They have a highly developed set of moral values and a self-determined sense of identity (Avolio & Gibbons, 1988). They are confident, competent, and articulate, and they express strong ideals. They listen to followers and they are not intolerant of opposing viewpoints. A spirit of cooperation often develops between these leaders and their followers. Followers want to emulate transformational leaders because they learn to trust them and believe in the ideas for which they stand. (p. 142)

If the values that the transformational leader exemplifies are indeed consistent with our human hierarchy of needs, then the desire of followers to follow the example of the leader

takes on very personal significance for the follower. The follower recognizes an example of his or her own human values being embodied in the leader. The key word here is *recognize*, meaning “to cognize again,” or understand again, values that the follower “cognized” for the first time within himself or herself either consciously or unconsciously. Campbell (1988) describes a similar process in discussing how a Native American visionary authenticates his internal vision:

There I would say was a *true* prophet, who knew the difference between his ethnic ideas and the elementary ideas that they enclose, between a metaphor and its connotation, between a tribal myth and its metaphysical import. For when the inner eye is awakened and a revelation arises from inner space to meet impressions brought by the senses from outer space to the mind, the significance of the conjunction is lost unless the outward image opens to receive and embody the elementary idea. (p. 34)

Another way of describing the phenomenon is through an analogy involving the concept of auditory resonance. When two pianos are placed close to each other, and a note is played loudly enough on one, the strings of the corresponding note in the other piano begin to vibrate as well. The leader’s example can resonate with, and perhaps alert the follower to the existence of, corresponding values within himself or herself.

Resonance is also a useful concept for explaining the role of motivation in the leader/follower event. While we often read and hear of leaders “motivating” followers, this would seem to be a distortion of reality. Motivation, by definition, can only take place within individuals—not between them (Glasser, 1992). When a leader is motivated by higher order needs, for those who are ready and open to recognize that happening, they can find themselves becoming more aware of the same needs within themselves and becoming motivated in a similar way. Indeed leaders can be even more directive by creating the kinds of situations and circumstances for followers to become more motivated by higher order needs as well. Leaders can encourage, inspire, influence followers to be motivated in a likewise fashion by internal factors.

The feedback that the leader gets from followers in terms of confirmation from the follower that they understand the motivation and values that the leader is operating from, can assure the leader that he or she is on the right track. Indeed, where followers experience their leaders being open to disapproving feedback and being able to adjust accordingly—if it is warranted—rather than create doubts in the follower, this can generate even greater trust.

This also raises an interesting point over the nature of the internal “place” that the leader leads followers toward. It would seem that it is certainly not a place that the follower is incapable of going on his or her own—after all, it is not “new” or alien to any individual. However, through the leader/follower relationship a means is created to go there. And thus, perhaps it makes little sense to talk about individuals going there alone. Our human values reveal themselves at the intersection of our individual fulfillment and our corresponding social

interaction. They are at the core of our being, and they guide us in our relationships with others. This can be seen in terms of both discovering the values that are at the core of our human existence, and embodying them in our human relationships. For DePree, (1992) ethics and leadership intersect in terms of the leader becoming congruent with justice, while for Covey (1996), this is what he describes as principle-centered leadership. Here, leaders:

have come to realize that we're all subject to natural laws or governing principles, which operate regardless of our awareness of them or our obedience to them. Our effectiveness is predicated upon alignment with these inviolable principles—natural laws in the human dimension that are just as real, just as unchanging as laws such as gravity are in the physical dimension. These principles are woven into the fabric of every civilized society and constitute the roots of every organization that has endured.
(p. 151)

The internal aspects of leadership are well noted by Leider (1996) too, who points out that ultimately when it comes to change, the only change we are capable of effecting is self-change. This mirrors the idea expressed above that we are only able to motivate ourselves—not other people. The degree of influence that a leader's personal example can muster depends on the degree of credibility the example inspires, which in turn depends upon the degree to which the leader is capable of genuinely making the inner journey that Campbell (1988) alludes to. It should also be pointed out that Campbell simultaneously alluded to a complementary outer journey as well. The sequence is arbitrary however, for the way to the first is through the second, and the way to the second is through the first. One journey does not take place without the other.

This is not to suggest that the journey is uneventful or conflict-free. Indeed, one of Maslow's (1970) historical examples of self-actualization was Abraham Lincoln. Lincoln's personal commitment to core values played a significant role in the most dramatic internal conflict in the history of the United States. The point here is not so much his commitment to his values, although that is hardly insignificant, but rather that he exemplified some core human values—the results of his inner journey—and this was the complement to his outward journey which embodied those values. And as a result, the world—the terrible violence notwithstanding—became a better place.

Spiritual traditions around the world have their teachers, gurus and guides. It might not be appropriate to draw parallels between the roles of organizational leaders and religious leaders. The principles behind the separation of church and state seem to well provide the freedom from dogma for the strange attractor of human needs to operate. However, the literature on transformational and moral leadership (Owens, 1998, p. 210) certainly creates parallels. Furthermore, as Campbell (1973) has so eloquently pointed out, myths from around the world of the hero figure—the model of leadership in many ways—who emerges from personal transformation to transform society, have a great deal in common—suggesting they

may refer to something archetypal of human nature. And if quantum physics is to teach us anything, it is to not allow our usual ways of thinking about things to obscure us from better ways of seeing things.

In discussing the role of the behavioral example of the leader in helping followers discover higher levels of motivation, it should be pointed out that there is one area of leadership around which there appears to be some confusion—charisma. On the one hand, Northouse (1997) sees this as the first of four factors that make up transformational leadership (p. 135). Drucker (1996), on the other does not see this as significant, however, explaining that “The one and only personality trait the effective [leaders] I have encountered did have in common was something they did not have: they had little or no ‘charisma’ and little use either for the term or for what it signifies” (p. xii). It could be argued that Drucker was not necessarily discussing transformational leadership, but rather effective leadership. It should also be pointed out that what Northouse was referring to as charisma appears to be somewhat closely related to what Drucker referred to as being a role model, or example. However, it still seems that the role of charisma in leadership will need further time and study to determine just what that is, and perhaps approaching it from the point of view of the leader/follower event could be helpful. Approaching charisma as a trait proves problematic as not everyone finds certain people charismatic. Rather, someone is usually described as charismatic due to the responses of followers. The role of followers in trying to determine the nature of charisma could be redressed by looking at charisma as a characteristic of the leader/follower relationship within the context of specific events.

CONCLUSION

While it seems clear that the task/relationship dichotomy may be a bit too simplistic to fully explain the leader/follower event, these two elements still remain as core aspects of the relationship. If we envision the task being made up of organizational fulfillment and personal fulfillment, then it is clear that the leader needs to be conversant with both, in order to lead toward the fulfillment of inner goals and outer goals at the same time. Yet, we should be cautious about seeing these as separate issues. If organizations are living systems, then according to chaos theory they are self-organizing, and the more that leaders enable those around them to exercise their self-organizing potential, the more likely it is that organizational goals will be met. Thus, the relationship between the leader and the follower in the leader/follower event, is the core process through which both goals can be achieved.

Ideas from the New Science are being applied in the behavioral sciences in ways that appear to be contributing to a better understanding of human behavior. It is less clear whether this reflects a fundamental relationship between humans and elementary nature, or whether this is merely a convenient metaphor. Such a discussion lies beyond the scope of this paper, and there is no suggestion here of any attempt to resolve this question one way or the other. However, the sheer utility of such an application of New Science concepts to behavioral

science in terms of theoretical clarity and in facilitating the operationalization of research criteria makes this somewhat extraneous to the practitioner and applied researcher, and it is in this spirit that the present views are expressed.

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