

# THE COMMUNICATION PROCESS MODEL

## **The Communication Process Model of Organization**

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**Abstract**

This paper explores not only an emerging organizational paradigm based on process metaphysics, but the essence of an organization regardless of how it is labeled, and this essence of organization is one of process and a network of communication.

Irrespective of whether we as humans have labeled an organization rational, natural, or open or whatever other label we have used, organizations have always been process and networks of communication. The many enactments of organizations by organizational leaders have shaped how these organizations look, act, and feel to both those inside and outside of the organization. Yet organization has not changed, only the way organizations emerge based on our beliefs. How organizations are labeled could be called organizational mentalities as it is our mentality that is in question, not the organization. The various models and metaphors of organizations are simply organizational mentalities based off of the world views of those who enact those organizations.

We should take exception with the assumption that we design and control our organizations. Organizational structures enacted by us are outcomes of our mental models or as Chai (2010) has called them, organizational mentalities. It is clear from current financial events in our world that although we believe we are designing and controlling organizations, we in fact have very little idea of how to do this and the assumption that we can goes against the process view of organization. Yet the dominant model suggests exactly that, we do know how to design and control organizations to get the results that we want. This view of design and control is a model that I move away from in this paper. It is also a model which can help change the dominant discourse in organization studies.

### **The Communication Process Model of Organization**

This paper explores not only an emerging organizational paradigm based on process metaphysics, but the essence of an organization regardless of how it is labeled and this essence of organization is one of process and a network of communication.

A review of the history of organization studies over the last 100 years or so illuminates the use of labels we have given to organizations. These enactments of organizations by organizational leaders have shaped how these organizations look, act, and feel to both those inside and outside of the organization. This paper proposes that organization has not changed, only the way organizations emerge based on our beliefs. How organizations are labeled could be called organizational mentalities as it is our mentality that is in question, not the organization. Robert Chia (2010) explains the concept of organizational mentality this way, “It becomes the analysis of *organizational mentalities* and not discrete socio-economic entities called 'organizations' that become the primary focus of attention” (p. 133). Chia further explains:

In inquiring into the nature of organization, therefore, we are inevitably opening ourselves up to the wider question of the organization intervening and engaging with the world we find ourselves in. How our worldviews, perceptions, knowledge, and modes of comprehension affect our concerns and preoccupations and shape our objects of inquiry must be correspondingly investigated if we are to begin to grasp this wider sense of organization as a generic reality-constituting activity. (p. 131)

Organization is process. The various models and metaphors of organizations are simply organizational mentalities based off of the world views of those who enact those organizations.

This paper uses the organizational mentalities foundation to provide an argument for defining the Communication Process Model of Organization as the preferable mental model of understanding organization.

The foundation for this emerging field of study has deep roots. Hernes (2008) in referencing Rescher (1996) notes that “Heraclites . . . is seen as the founder of process thinking in the Western intellectual tradition. 'All things flow' is frequently cited from Heraclites' work” (p. 24). Not only do all things flow, stated another way is that what we consider as entities such as organizations, are actually in a state of becoming, they are in a constant state of flow. The description of organization by Ketchum and Trist (1992) provides an appropriate framing of the conversation. Although they were not speaking to organization as process or networks of communication, what they have described ends up providing a picture of how we construct the reality within which we live, and in this instance, our organizations. Ketchum and Trist explain:

An organization is an embodiment of shared ideas held in the heads and hearts of its members. It has values and beliefs, often referred to as its philosophy. It has axioms that are regarded as self-evident truths. It has theories and models that serve as conceptual maps. This commonly held body of ideas, values, axioms and theories constitute what we may call the organizational paradigm. It is used by the organization's members to explain to themselves and to others how the organization functions. It is the base from which organization leaders set organizational goals. It comes into play whenever members of the organization – separately or in groups – ponder, decide, or justify their actions. The organizational paradigm forms the base for policy formulation. It drives the organization's

structure and processes and therefore the behavior of its members. (p. 39)

### **The Foundation Conversation**

Humans organize to make sense of their world but organizing is never finished as in a stable result, organizing is in a constant state of flow or becoming. Weick, Sutcliffe, and Obstfeld (2005) speak to the concept of becoming as organizing. They say “A central theme in both organizing and sensemaking is that people organize to make sense of equivocal inputs and enact this sense back into the world to make that world more orderly” (p. 410). Hernes summarizes this concept in talking about organizations as process when he says “. . . yes, the world is fluid, but it is populated by humans whose sensemaking apparatuses pretend that it is not fluid. But, as Whitehead points out, although static categories may be used to enter into a fluid world, they are also *made by* a fluid world and *remade in* a fluid world” (p. 29). At the core of the process of organizing or becoming is communication. This forms the foundation for labeling this organization model process and communication. Taylor and Van Every (2000) explain this approach well when they say,

We see communication as an ongoing process of making sense of the circumstances in which people collectively find ourselves and of the events that affect them. The sensemaking, to the extent that it involves communication, takes place in interactive talk and draws on the resources of language in order to formulate and exchange through talk . . . symbolically encoded representations of these circumstances. As this occurs, a situation is talked into existence and the basis is laid for action to deal with it. (p. 58)

The exploration of organization as communication and process provides scaffolding to

help others embrace this emerging field of study. To provide this foundation, four primary texts are referenced: Taylor and Van Every (2000) for a treatment of organizations as networks of communication; Hernes (2008) for a treatment of organizations as process; Hernes and Maitlis (2010) for current thinking in organization as process; and Stacey (2010) who has transformed thinking around complexity and human organizing. These texts are supplemented with papers and other texts to expand on and illuminate this path to organizational theory.

“. . . we cannot forget that organizations are nothing more than networks of conversation and coordination of different human beings” (Garcia, 2009, p. 1333). It is understandable that being able to visualize what an organization as communication process looks like is difficult. There are two tools that have been of interest to those studying organization. A brief introduction to these tools is all that is needed as they are not the focus of this paper. Both of these tools help us understand the complex interactions within organizations by helping us see patterns in organization. One is the use of causal loop diagrams (CLD) which were born out of systems thinking as a way to try to understand the complex interactions in a system and break away from the cause and effect thinking that is so pervasive in scientific thought. The other tool being used to help theorists, leaders, and consultants understand these social networks is a mapping process called social network analysis (SNA). Sandow and Allen (2005) explain “If we take the time to use social-network mapping to study the pattern of relations in a collaborative work group . . . we will discover a social system structure wherein everyone is connected to everyone else in reciprocal relations” (p. 9).

The concept of mapping is central to the work of Taylor and Van Every (2000) as well.

Taylor and Van Every explain that “In the communication view, the map is what provides an image of the surface (fabricated out of the cultural inheritance of legitimated understanding) and thus gives that surface a meaning that it would not otherwise have” (p. 287). However, it is easy to revert back to the dominant discourse view that networks can be designed and controlled. That is not at all what is being suggested when exploring SNA. SNA is a tool to allow organizational leaders to see how conversations at the local level manifest, which can be helpful in understanding the organization as a network of communication. When talking about the patterns of organizing and causal loops, Weick, as quoted in Czarniawska (2010) described organizing “. . . as the process of assembling 'ongoing interdependent actions into sensible sequences that generate sensible outcomes'.” Czarniawska continued “The result of organizing is interlocked cycles, which can be represented as causal loops rather than as a linear chain of causes and effects. Speaking about 'interlocked cycles' or 'looped chains of events' may offer a way out of the growing emptiness of the term 'process’” (p. 153). The emptiness of the term process that Czarniawska is speaking of is that of process as work-flow, a concept that is steeped in dominate organizational discourse. This is not the process of becoming that process theory is exploring.

### **The Dominant Discourse**

The conversation about organization studies in this paper is different than it has been portrayed in the literature. After reading Scott (2003) or Morgan (2006) one might come away with the impression that the types of organizations that they describe did or do actually exist. Listening to managers, leaders, and consultants would give one the same impression that we have created a series of different types of organizations over the years. This paper takes exception with

the assumption that we design and control our organizations. It seems more plausible that the organizational structures enacted by us are outcomes of our mental models or as Chai (2010) has called them, organizational mentalities. It is clear from current financial events in our world that although we believe we are designing and controlling organizations, we in fact have very little idea of how to do this and the assumption that we can goes against the process view of organization. Yet the dominant model suggests exactly that, we do know how to design and control organizations to get the results that we want. This view of design and control is a model that this paper moves away and hopefully will help change the dominant discourse in organization studies. Stacey (2010) explains:

The vast majority of textbooks, business school programs and research projects around the world, most professional management and leadership development programs in organizations, management consultancies and people in organizations, including executives, all talk about how organizations *should* be governed, all making the same taken-for-granted assumptions. There is a dominant discourse in which it is assumed, without much questioning, that small groups of powerful executives are able to *choose* the 'direction' their organization will move in, realize a 'vision' for it, create the conditions in which its members will be innovative and entrepreneurial, and select the 'structures' and 'conditions' which will enable them to be in control and so ensure success. (p. 1)

Stacey (2010) concludes that “. . . we need to move from fantasizing about what organizations should be like and seriously explore the reality of organizational life in our experience and the way we might think about what we already do” (p. 2). This is what the field of



process theory provides to process theorists and practitioners.

### **Becoming a Process Theorist**

Initially, research into the field of organization theory led to an understanding of organization as a network of communication, conversation, and meaning making. These concepts have been woven into this view of organization as communication and process. “Since a process worldview is not a doctrine but an orientation, it can be developed in several different directions, exploring a variety of topics in organizational research” (Hernes and Maitlis, 2010, p. 9). Hernes and Maitlis note that current studies include routines, innovation and change, strategizing, naturalistic decision making, learning and knowing, communication, sensemaking, and the enactment of technological change in organizations. What all of these disciplines have in common is that organization is process and organizations are socially constructed. As noted earlier, seeing organization as process is not a new phenomenon. Irrespective of whether we as humans have labeled an organization rational, natural, or open or whatever other label we have used, organizations have always been process and networks of communication.

The communication process model of organization is not a new or evolutionary step in organization theory, it is what an organization has always been, is, and will be in the future. Organizations are process and networks of communication. What is relevant is that how we label an organization has an impact on our socially constructed thoughts, beliefs, and behaviors, which can and do limit the possibilities to society and the world of organizing. Conversely, our socially constructed thoughts and beliefs have an impact on how we view an organization and that view determines the organization that we enact with others. One way to create the organization we

envision is creating texts from our socially constructed thoughts, beliefs, and behaviors that frame the organization enacted together. Therefore, an organization is the synthesis of texts we have constructed and the local conversations that create the texts from which organizations are born. This pattern fits within what Chai (2003) calls the recursivity-based theory of organization. Each organization is unique and is born from those who envision it and its structure is created by local conversations and local conversations are created by its structure. This birthing of an organization is far from the dominant discourse of planning and control.

The majority of those in the business of organization, still talk, act, and behave as if they actually can control organizations. This is a rationalist viewpoint and it frames what we do. So we do not need a new theory of organization, we need to have a shift to embrace what organizing actually is; it is about the process of becoming and networks of communication. The future is not something that can be controlled but a possibility that emerges from the texts enacted by people in organizations who locally construct the organization through conversations. Particularly in a world that is dynamic, fast paced, and complex, being able to break out of the rationalist paradigm of planning and control is critical.

Peter Senge in his work on learning organizations compares a rational mental model with one based on networks of conversation when he says “Just as 'linear thinking' dominates most mental models used for critical decisions today, the learning organizations of the future will make key decisions based on shared understandings of interrelationships and patterns of change” (Senge, 1990, p. 204). Although he labels this new organization a learning organization, which is a label or a mental model, the future organization that Peter is talking about is the organization as

a network of communication. This view is further supported by Isaacs (1993) when he explains “The discipline of dialogue is central to organizational learning because it holds promise as a means for promoting collective thinking and communication” (p. 28). Sandow and Allen (2005) explain “As a social system, organizations must institutionalize learning. Learning can occur only through group reflection on what we do, how we do it, what we value about our practices, and how we can improve them” (p. 11). The process that Sandow and Allen are talking about is both recursive and reflexive. The process is recursive because what we do and how we do it is captured in maps that are texts providing structure continuously evolving based on the local conversations within the organization. Process and structure co-evolve. They are reflexive because in the process of looking back at maps, those maps are changed. Taylor and Van Every (2000) explain this in their conversation about principles assumptions that provide the foundation for organizations as networks of communication when they say,

Although all maps, not just the organizational ones we have been talking about, are already on the way to obsolescence even as they are being drawn and thus need to be continually redone, the organizational map is singularly dynamic. Because it describes interactive events, not a noninteractive topography, its updating never stops. As technologies and product popularity change (people are hired and fired or quite) and social and economic conditions fluctuate, so, with each event, do organizational spaces expand and shrink. (p. 292)

The above process of organizational reinvention can be labeled organizational learning. Learning organization is another socially constructed model of organization and one that seems to

capture the spirit of what organizing actually is but still it is a model that paints a picture of a socially constructed entity. It is however useful to leverage the language of learning organization as it is an outcome of communication process as long as one is able to break away from the imbedded belief that the organization can be purposefully constructed and controlled. The following description of organizations as networks of communication from Sandow and Allen (2005) provides the tone for this conversation:

. . . organizational value is created in dynamic social systems that cross the boundaries of traditional organizational charts – charts that are becoming increasingly irrelevant. We maintain that these collaborative social systems are our natural social order. They are networks of relations that, like language and learning, are innate building blocks of human, social, and organizational development. (p. 2)

As a modernist view of an organization is rational, this conversation starts with the view that organizations as communication process are postmodernist. “A postmodernist view emphasizes the diversity of elements that make up organizations” (Scott, 2003, p. 322). In a modernist view, diversity has been suppressed and consistency arbitrarily imposed. This is reflected in the belief of control as introduced above by Stacy (2010). In a postmodernist view, diversity is embraced and there is not a drive to discover the one scientific truth, which leaves the door open for multiple realities to be co-created. One such organizational truth is structural hierarchy, a topic addressed in systems, and like control, the concept of structural hierarchy is also an attribute of modernism and is challenged in a postmodernist framework.

### **About Systems Thinking and Cybernetics**

An open system is one of the socially constructed models of organization used to help understand organizing. A systems view of organization is currently the dominant view of organization (Stacey, 2010). The labels of open and closed do not really inform our understanding of how organization is enacted. These labels demonstrate how we think, believe, and behave when we view an organization as an entity separate from an outside environment, a concept based on organic/living systems models translated into human systems. One of the defining elements of an open system model is its structural hierarchy and in an organization defined as a network of communication, hierarchy is but one way a network is manifested. “Hierarchies . . . are mere special cases of networks. Network metaphors of organizations say little about who occupies the nodes of a network – individuals, offices, or whole organizations. There is no implication of functions, suggesting that wholes do not determine the nodes. Networks may cross the boundaries of particular organizations” (Krippendorff, 2008a, p. 153). Further, from a communication process perspective hierarchy is relevant in communication but not in organization structure when it comes to organizing (Taylor and Van Emery, 2008). Most systems models have a foundation of embedded systems as a framework or a hierarchical view of a system. Second-order cybernetics as a systems model has distanced itself from this rigid hierarchical framework and is worthy of further exploration.

Although cybernetics is listed by Scott (2003) under open systems, it deserves a classification of its own, in particular second-order cybernetics. Second-order cybernetics begins to provide a framework for the conversation of organization as communication process and does so without the dependence of hierarchy that open systems bring. Krippendorff (2008b) believes

that a new epistemology has emerged for cybernetics and it is one that seems to support the organization as communication process. He describes the emerging cybernetic epistemology as “an epistemology of participation in social systems under continuous reconstruction (rearticulation and redesign) by their human constituents, able and willing to hold each other accountable for what they contribute, say and do, and how they move through discourses and networks of conversations among them” (p. 182). Although theorists and managers continue to put people and departments in boxes on organizational charts, an effort to create order out of complexity, people continue to organize into networks of conversations as the epistemology of cybernetics suggests. This is the natural way humans work together and this understanding is not fully recognized in other organizational models.

The concept of hierarchy as different in second-order cybernetics is further explored by Steier (1992). In talking about the difference between cybernetic thinking and systems thinking Steier says that researchers have substituted 'hierarchy as a useful attribute of an open system' with 'hierarchy being necessary to call a system an open system'. He notes that cybernetic thinking heads down a different path than this type of dictated from the top logic. The concept of second-order cybernetics fits with the concept of an organization as communication process because of its reflexivity. Steier notes “Cybernetic knowing is a self-reflexive enterprise, but it is a self-reflexiveness that is at once a social process, accomplished in dialogue, and indeed requiring others.” Steier further states that “Cybernetics is about understanding relationships and making connections in many senses.” Yet it is critical to differentiate between cybernetics and second-order cybernetics as cybernetics is founded on the premise of control which is the antithesis of

process theory. “To summarize the main idea behind cybernetics, one can say that, in order to control anything – from machines to spheres of collective life – it is necessary to design a control system, imitating those plants and animals already designed by Nature” (Czarniawska, 2010, p. 142). As process theory is not a living systems paradigm, it is important to keep these concepts separate and be aware of the differences and understand that even second-order cybernetics is a systems based epistemology.

Second-order cybernetics still has one foot firmly placed “. . . in the enlightenment project for a positive science, which is committed to providing truth-verifiable descriptions . . .” (Krippendorff, 2008b, p. 175) which prevents it from fully embracing a process epistemology. The emerging cybernetic epistemology does however provide a point of intersection with process theory particularly in its focus on dialogue and reflexivity as noted above. Although second-order cybernetics is still rooted in systems thinking, of all of the systems models it has the most promise of informing the study of process theory.

Organizations as communication process are not defined as open systems based on the above conversation. They are not structurally hierarchical and even though they share key attributes of an open system such as open boundaries and interaction with the environment, they do not fit an open systems model. In fact, the whole concept of boundaries may be suspect. A boundary is a concept socially constructed to help us understand complexity. Boundaries help us make order out of complexity (Hernes, 2008; Stacey, 2010). Although we construct the concept of boundaries to help us make sense of our world, it is important to keep in mind that these boundaries are merely social constructions and not real. Hernes further states that “Organization

is seen . . . as attempts at stabilizing in order to create a more predictable world” (p. 131). The communication process model of organization challenges the concept of boundaries separating organizations as entities from their environment. “. . . it is probably more true to say that organizations do not have boundaries if we see boundaries as stable unambiguous lines that circumscribe organizations. In process terms, at least, they cannot have boundaries, because entities can 'have' things which processes cannot” (Hernes, 2008, p. 10). Follett (1924) as quoted in Weick (1995) paints a very clear picture of how we co-create our world and the fallacy of believing we are separate from 'environment':

. . . we are neither the master nor the slave to the environment. We cannot, command and the environment obey, but also we cannot, if we would speak with the greatest accuracy, say that the organism adjusts itself to environment, because it is only part of a larger truth. My farmer neighbors know this: we prune and graft and fertilize certain trees, and as our behavior becomes increasingly that of behavior towards apple-bearing trees, these become increasingly apple-bearing trees. The tree releases energy in me and I in it; it makes me think and plan and work, and I make it bear edible fruit. It is a process of freeing on both sides. And this is a creating process. (p. 32)

In practical terms of every day organizing, those individuals who enact the organization at the beginning of every day, need to be able to communicate to the world what they envision the organization to be. This is one reason, particularly with marketing groups, that the effort to solidify a fuzzy border is so important. With the world becoming more and more complex this is becoming harder to do. “At the same time that organizations have become preoccupied, even



obsessed, with the communication of their identities, the problem of defining organizational boundaries has become more acute than ever” (Cheney and Christensen, 2004, p. 525). The difficulty in defining a boundary is well stated when Cheney and Christensen quote Mead (1934, p. 215):

As a man adjusts himself to a certain environment he becomes a different individual; but in becoming a different individual he has affected the community in which he lives. It might be a slight effect, but in so far as he has adjusted himself, the adjustments have changed the type of environments to which he can respond and the world is accordingly a different world. (p. 510)

### **Further Discussion of Rationality**

Although systems thinking has become the dominant discourse over the last 20 years, it is still rooted in the rationalist paradigm. Whether speaking of chaos, self-organization, emergence, networks, or causality, when applied to organizations, these concepts use a set of rules from which behaviors can be predicted. There is still the belief that the organization can be designed and controlled. Because of this belief in design and control, although repackaged, systems thinking is still rooted in the rational positivist paradigm. Stacey (2010) states this when he says,

I do not think that it is too sweeping to say that instead of provoking new thinking, the sciences of complexity have been used in ways that simply justify existing ideologies, preserve without any questioning the taken-for-granted underlying assumptions of causality to be found the dominant discourse and so simply re-present that discourse in strange jargon . . . What we seem to be stuck in is an abstract way of thinking which

distances us from our experience of being immersed in the experience of daily life in real activities of organizing. (p. 92)

The communication process model challenges the dominant western concept of rationality. Embedded within the rational model is the belief of objectivity. The metaphor of objectivity, although foundational to western thought, has problems in a human system. “Being objective is always relative to a conceptual system and a set of cultural values. Reasonable objectivity may be impossible when there are conflicting conceptual systems or conflicting cultural values, and it is important to be able to admit this and to recognize when it occurs” (Lakoff & Johnson, 2003, p. 227). Rational objectivist models also do not support different ways of knowing which are foundational to humans and social systems because the positivist epistemology believes in seeking the objective truth in every circumstance. The model of the organization as communication process does support multiple ways of knowing as meaning making is central to this model.

Krippendorff (2008a) suggests that “. . . the vocabularies of current theories of organization, which may well be regarded as expert accounts, have the effect of concealing their conversational nature, reifying the holistic, abstract, and functional conceptions of organization they describe, and denying places for human agency” (p. 157). The current vocabularies represented by prevailing metaphors of organization could be replaced “. . . by vocabularies of the conversational moves that individuals may or may not want to make in reconstituting networks of conversations and practicing organization” (p. 157). The language that we use in describing an organization creates the mind set of not only those who research the organization but that of the people within the organization. Understanding this approach supports the concept of an

organization as a social system in which its members construct meaning about the organization. In talking about how language frames how we think about an organization, Marshak (2008) says of new organization development (OD) practices that promote this evolved thinking,

. . . they address the significance of language and other discursively mediated experiences in transforming social reality, influencing organizational behaviour, and shaping organizational members' mindsets. They also emphasize postmodern thinking, focusing on the processes that construct common social meanings and agreements within organizational contexts while asserting that there is no single, objective reality; rather, there are multiple realities that might offer alternative understandings of organizational phenomena. (p. S11)

Weick (1995) said that in enactment people construct a picture of their world. “. . . there is not some kind of monolithic, singular, fixed environment that exists detached from and external to these people. Instead, in each case the people are very much a part of their own environments. They act, and in doing so create the materials that become the constraints and opportunities they face” (p. 31). Taylor and Van Every (2008) explain “Weick's essential insight has been that doing and seeing are part and parcel of the same enactment of organization. It is we that distinguish between them in our theorizing of them; by Nature, they form an indissoluble unity” (p. 317). In speaking of the 21 propositions of social field theory, Scharmer (2007) states that “Social systems are enacted by their members and in turn shape their members' actions . . . and all enactment takes place in a context” (p. 233).

Since we enact the organization within which we work, the language that we use becomes

critical to what is enacted as emphasized above. If we speak in rational linear terms, we most likely will enact a rational organization, one based on linearity and deny the linguistic foundation of an organization as a social system. “Quite simply, in the absence of people's willingness to speak and listen differently, there can be no conversational shift and no organizational change” (Ford, 1999, p. 488). By proposing that organization is communication process, dialogic practices become core to the understanding organizations as process and language based. Dialogue and deliberation as a field of practice will need to become more important to the study of organizations which goes well beyond the structural focus of most business schools. “And the problem is not that business schools have embraced scientific rigor, but that they have forsaken other forms of knowledge, especially considering that managers have to cope with the complexity of human beings themselves” (Garcia, 2009, p. 1333). Integrating in some aspects of second-order cybernetics into the process conversation will be helpful for this transition in thinking.

As Wheatley (1999) says about change in organizations “To become effective at change, we must leave behind the imaginary organization we design and learn to work with the real organization, which will always be a dense network of interdependent relationships” (p. 144). Wheatley suggests that all of the metaphors and models that we have assigned to organizations are indeed just that, names, and we need to see an organization for what it is, communication process. I am reminded of one of the greatest if not the greatest verse regarding a name that illustrates this thought, and that is spoken by Juliet to Romeo in *Romeo and Juliet* (Shakespeare, 1958):

'Tis but thy name that is my enemy;

Thou art thyself, though not a Montague.  
What's Montague? it is nor hand, nor foot,  
Nor arm, nor face, nor any other part  
Belonging to a man. O, be some other name!  
What's in a name? that which we call a rose  
By any other name would smell as sweet;  
So Romeo would, were he not Romeo call'd,  
Retain that dear perfection which he owes  
Without that title. Romeo, doff thy name,  
And for that name which is no part of thee  
Take all myself. (p. 1017)

### **About Luhmann**

As I am able to recognize complex patterns from disparate inputs, as an organization theorist I naturally gravitated to systems theory. However, what I believed to be a somewhat homogenous field turned out to be a complex group of theories and theorists and my simple view of systems thinking began to become very complex. When viewing the map of the new science of complexity in Castellani and Hafferty (2009, p. 244), I began to realize my systems research and practice began to converge specifically on social systems. Niklas Luhmann and his work in social systems and autopoiesis provided important insights that informed the development of organization as communication process.

Autopoiesis theory provides the foundation for understanding the social systems work of

Luhmann and has created a mine field for social system researchers. Hernes and Bakken (2003) provide an insight when they explain that “Niklas Luhmann (1927-98) has emerged as one of the most controversial and influential social scientists of recent times. His autopoietic systems theory span a wide range of social theory, among which is organizational theory” (p. 1511). Organization as communication process and the emerging thinking in organizational studies draws from Luhmann (1995), Stacey (2010), Taylor and Van Every (2000), Hernes (2008), Hernes and Maitlis (2010), Weick (1995), Maturana and Varela (1998), von Foerster and Broecker (2010), Hatch and Schultz (2004), Winograd and Flores (1987), and Castellani and Hafferty (2009). The ongoing question has been how to reconcile systems thinking and yet support the understanding of the impermanence of what we describe as entities.

Luhmann ascribes to process and structure the co-generation of each other and in a pure process epistemology, structure is viewed as only a mental construct. Taylor and Van Every (2000) communication theories strongly support a process epistemology and they also speak to process and structure co-generating each other in their conversation of dialogue and texts. Stacey (2010) outright rejects systems thinking. He says “Complex responsive processes, however, is a responsive temporal process theory which, when it comes to understanding human action, argues against systems thinking. Human interaction is patterned in the interaction between bodies and there is no need to look for any causal agency outside human interaction itself” (p. 225). As such he also rejects bodies of research that include structure or relationships with non-human objects such as actor-network theory (ANT) (Hernes, 2010). Reflexivity and self-reference provide a bridge between these diverse fields of inquiry.

Hernes and Bakken (2003) provide insights on reflexivity and self-reference as organizational theory. As a researcher, my journey in organizational studies provides an example of this paradigm. I have studied, researched, and assimilated, all process work, and through this effort structure has emerged. And the structure is now creating my process. Process and structure are co-creating each other providing an example of reflexivity and self-referencing. Learning through conversation, a structure of communication and a process of communicating, is another example. The two co-generate each other. Even in studying a text, one is in conversation with the author and meaning is constructed in the social interaction between the reader and the author (Adler and Van Doren, 1972).

In their conversation about Luhmann and how he fits within organizational studies, Hernes and Bakken (2003) propose three rough organizational epistemologies and then reflect on Luhmann's fit within each. The first is Equilibrium-Based Theory which is equivalent to the rationalist/positivist tradition within which the Western world is set. The next is Process-Based Organization Theory which is best portrayed in the new edited book by Hernes and Maitlis (2010). And third is Recursivity-Based Organization Theory which is the bridge between process and structural based theories. This structure by Hernes and Bakken provides the framework for inquiry into organization as communication process.

**Luhmann's concepts and organizational studies.** Without access to Luhmann's posthumously published organizational theory text published in German in 2000 (Luhmann, 2000) that as yet is unpublished in English, Hernes and Bakken (2003) provide the key organizational theories relevant to this inquiry as Luhmann (1995) does not fully address all of his thoughts on

autopoiesis and organization theory in this earlier text. Hernes and Bakken as well draw off of a variety of other untranslated Luhmann papers to inform their summary of Luhmann's thoughts on organizational theory. It should also be noted that “Luhmann's autopoiesis is first and foremost a correction of Parsonian structural functionalist theory, which we will refer to as equilibrium based theory” (Hernes and Bakken, p. 1512). So in exploring Luhmann's work with Hernes and Bakken, we travel along a path that distances organization as communication process from equilibrium-based theory, the dominant discourse in organization studies and focus on process-based and recursivity-based theory.

The foundation of Luhmann's work on social systems is autopoiesis (Maturana and Varela, 1998). Hernes and Bakken (2003) explain:

Autopoiesis ('auto' meaning 'self' and 'poiesis' meaning 'create') was coined by the Chilean biologists Humberto Maturana and Francisco Varela (1980; Varela et al. 1974), whose point of departure was the formulation of biological theory as an alternative to Darwinian ecology theory. A key element of autopoiesis was that systems are not subject to environmental selection in a linear process of selection, as prescribed by classic biological models derived from Darwinism. Systems, argue Maturana and Varela, interact with themselves as they produce and reproduce themselves in a recursive fashion. (p. 1512)

Recursivity provides the foundation of Luhmann's communication model of social systems and also provides the foundation for recursivity-based theory and the communication process model of organization. Maturana provides the theoretical framework to understand communication not as a transmission as the dominate discourse might explain, but a co-generated



phenomenon created between bodies in conversation. Maturana's work also provides the theoretical framework for The Coordinated Management of Meaning (CMM), a communication perspective on conversation (Pearce, 2007) and for Taylor and Van Every's (2008) work on communication as process. Luhmann advocates that one of the primary characteristics of an organization based on languaging is autopoiesis.

First explained by Maturana as a defining element of a living system, autopoiesis has been used to explain the behaviors of social systems. Often called self-organizing or self-referential, the concept applied to social systems is not without argument. Maturana suggests that a social system is not autopoietic but sees that humans through languaging realize their biological autopoiesis. Luhmann suggests that a social system is autopoietic. Capra (2002) quotes Luhmann (1990) to describe this concept "Social systems use communication as their particular mode of autopoietic reproduction. Their elements are communications that are recursively produced and reproduced by a network of communication and that cannot exist outside of such a network" (p. 83). Capra (1996) further explains Luhmann's concept when describing the circularities inherent in networks of conversations in a family "Since all these processes take place in the symbolic social domain, the boundary cannot be a physical boundary. It is a boundary of expectations, confidentiality, loyalty, and so on. Both the family roles and boundaries are continually maintained and renegotiated by the autopoietic network of conversations" (p. 213). Maturana (1970) explains:

The basic function of language as a system of orienting behavior is not the transmission of information or the description of an independent universe about which we can talk, but the creation of a consensual domain of behavior between linguistically interacting systems

through the development of a cooperative domain of interactions. (p. 50)

Although Luhmann has been at the center of controversy in translating autopoiesis to social systems, he was by no means the first to suggest this connection. Hernes and Bakken (2003) note that “. . . the social systems theorist Stafford Beer (1980) commented that autopoiesis has considerable potential for the study of social systems. At around the same time, Giddens (1979, p. 75) arrived at a similar observation” (p. 1513). So Luhmann was not alone in exploring autopoiesis in social systems but he has taken the concept further than others. Luhmann did not confine himself with creating a foundation for his work to Maturana. Luhmann also was influenced by works including “. . . Spencer-Brown's (1969) mathematical treatment of laws of form, Whitehead's (1929) philosophical work on process and reality, and von Foerster's (1991, 1993) work on the application of recursivity in social research” (p. 1513). From this theoretical foundation, Luhmann's theory of social systems emerged.

**Central concepts of Luhmann's autopoiesis.** Luhmann did not directly import terminology from other theorists, but created his own nomenclature. His work does not try to use autopoiesis as Maturana and Varela (1980, 1998) described it but to use their concepts to inform his understanding of how social systems work. “Autopoiesis, as Luhmann develops it, is first and foremost a way of seeing social systems, and not a way of categorizing them” (Hernes and Bakken, 2003, p. 1514). A conversation on the most central concepts of Luhmann's autopoiesis follow and then move directly into a conversation about the three epistemological bases for organization research that Hernes and Bakken define, equilibrium-based theory, process-based theory, and recursivity-based theory.

**Communication.** As an organization is a socially constructed entity, looking at how it organizes from a human perspective moves us toward the view of the organization as a communication process. Humans are social creatures and our social behaviors are how we communicate. In describing communication as a feature of human social systems, Maturana and Varela (1998) describe “The particular feature of communication, therefore, is not that it results from a mechanism distinct from other behaviors, but that it takes place in a domain of social behaviors” (p. 193). Maturana and Varela further explain:

. . . the uniqueness of being human lies exclusively in a social structural coupling that occurs through languaging . . . [and that] . . . without love, without acceptance of others living beside us, there is no social process and, therefore, no humanness. Anything that undermines the acceptance of others, from competency to the possession of truth and on to ideologic certainty, undermines the social process because it undermines the biologic process that generates it. (pp. 246-247)

Meaning making is also central to Luhmann's concept of communication. Humans socially construct meaning. This is the foundation of the epistemology of constructionism which is one of the frameworks within which organization as communication process is situated. Although there is a great amount written on constructing meaning, two examples are (Weick, 1995, 2000), referring back to Luhmann as a point of reference addresses meaning making in an autopoietic social system. Luhmann's treatment of meaning making is complex but the following statement in Luhmann (1995) illustrates the concept:

On the whole, meaning is thus a processing according to differences, indeed, according to

differences that are never pre-given as such but rather acquire their operative applicability (and, of course, their ability to be formulated conceptually) only out of meaningfulness itself. The auto-agility of meaning occurrences is autopoiesis par excellence. On this basis every event (however brief) can acquire meaning and become a system element. (p. 66)

Based on these insights, bringing people into conversations where they can construct new meanings together in a network of conversation, is the foundation of a social system and the foundation for an organization as a communication process. To play off of the rationalist model, this is the only rational way to view a human system. Putting the human back into the organization is the key to organizations as communication processes. Otherwise we are simply cogs in a system without our humanness as the primary organizing mechanism. This is indeed a lonely paradigm and may account for the profound lack of connection people feel to organizational communities framed on other organizing models. Maturana (1978) states this well when he says “Every human being, as an autopoietic system, stands alone. Yet let us not lament that we must exist in a subject-dependent reality. Life is more interesting like this, because the only transcendence of our individual loneliness that we can experience arises through the consensual reality that we create with others, that is, through love” (p. 19).

***Emergence.*** “Social systems are forever emergent phenomena in the sense that they reproduce themselves recursively. There is no beginning of a social system, nor is it to be seen as a per-existing and permanent entity” (Hernes and Bakken, 2003, p. 1514). Emergence is one of the concepts from living systems that the dominant discourse has taken and twisted into a force to be planned into existence. “. . . emergence is regarded as some kind of force to be deliberately

brought about by managers by creating the right conditions. It is striking, how in these developments of the notion of emergence, people and their ordinary activities simply disappear” (Stacey, 2010, p. 81).

Luhmann certainly does not adhere to the planned view of emergence but understands emergent properties of a system cannot be designed and planned for. Holman (2010) states “No conductor is orchestrating orderly activity” (p. 23). She further explains that emergence “. . . is higher-order complexity arising out of chaos in which novel, coherent structures coalesce through interactions among the diverse entities of system” (p. 18) and the diverse entities of a social system are the people in local conversations. A system is emergent when it makes distinctions temporally from before or after or if it makes distinctions between itself and the environment. This is a recursive process of production and reproduction. “Without recursion systems cannot exist because it is only through interaction with their own state over time that they can uphold themselves” (Hernes and Bakken, 2003, p. 1515). This leads into the next concept, events.

**Events.** In a temporal framework, there are many alternative future possibilities, nothing is designed nor is anything set. The decisions that we make are events where we enact a possible future. We move into possibilities through the decisions we make and these decisions which are events made in time mark the difference of the before and the after. Hernes and Bakken (2003) explain this when they say “A major aspect in Luhmann's autopoiesis is the idea of temporality. Events take place in time and they mark the difference between 'before' and 'after'. Events exist in time, but have by themselves no extension in time . . . Events exist as markers that allow us to explain the continuity as well as discontinuity of social systems” (p. 1515). Hernes

(2008) explains that “Systems attain autopoiesis through differentiation (distinction), which takes place at 'decisive' events” (p. 88). Also of note is the irreversibility of decisions. “Events mark selections of some alternatives over others. If an unfortunate decision is made, correcting it will not eliminate that decision, but its correction will enter the process as a new event” (p. 87).

***Operational closure.*** Luhmann saw operational openness or closure as processes, not states of being, therefore moving away from the dominant discourse of open or closed system organization models. Luhmann also understood that boundaries are created from inside the social system and are invisible from outside. As such, these boundaries are socially constructed and are constantly in flux, they are not solid as assumed in the dominant discourse. Boundaries in this understanding are not entities. Hernes and Bakken (2003) explain:

The concept of autopoiesis presupposes that systems are operationally closed. Traditional systems theory based on the laws of thermodynamics, which have also had considerable influence on organization theory, assumes that social systems work on an input-output basis. Systems such as organizations may be located somewhere on a scale ranging from closed to open. In Luhmann’s autopoiesis, the problem is circumvented by saying that systems are both open and closed, and that openness and closure refer to different processes. Systems interact with their environments, which consist of other systems (that is, they are open interactively). On the other hand, they are closed by the boundaries of meaning as the meaning creation takes place through the system’s autoreferencing. The system can only make sense of the outside world through the observation of its own experiences. In other words, the social system operates in the medium of meaning, and this

operation is a closed one. (pp. 1515-1516)

**Equilibrium-based theory.** As we explored above in the dominant discourse regarding systems thinking, this organizational school of thought has dominated for over half a century. Of the three organizational epistemologies outlined here, Luhmann is the least aligned and in fact, it is against this dominant discourse that he developed his social system theory. “Autopoiesis represents, in many ways, a radical departure from equilibrium-based theory, and it is against equilibrium-based thought in sociology that Luhmann’s criticism is aimed in particular” (Hernes and Bakken, 2003, p. 1517). The concept of equilibrium as used in the dominant discourse is based on organic system theory (Hernes and Bakken). Organic systems theory states that systems are in equilibrium with each other. This biological systems theory has been translated into organization theory and has been evolved into the dominant model of organization in Western thought. Chai (1998) explains:

The classical Platonic view of such essences is that they constitute a fixed and unchanging realm of reality, which can be faithfully located, classified and represented through adequate systems of ordering. This “taxonomic” orientation, first inspired by Aristotele and subsequently pursued by Linneaus and Darwin amongst others, has become the definitive feature of modern Western thought. (p. 346)

***The 'problem' of double contingency.*** Developing shared norms and values has been the cornerstone of organizational development under the equilibrium-based paradigm. I am fairly sure that virtually every intervention that I have led has had its center the exercise of creating shared values and norms. The assumption is that actors who share values and norms act in mutual

coordination and their action is consensual. Luhmann rejects this consensual model of action.

Hernes and Bakken (2003) explain Luhmann's thoughts when they say,

Luhmann rejects consensual theories, not so much because they are not relevant, but because they are overvalued. His main criticism is that the sociological tradition oversimplifies the problem by underestimating the *improbability* of creating social order. Consensus is but one possibility for interaction. Luhmann's concern is that there are no (deterministic) laws of nature dictating the evolution of social systems, and it is essential to bear in mind that things could turn out differently. Herein lies much of the 'problem' of double contingency. The contingency lies in the interaction rather than at the abstracted level of norms and, as such, it sets the stage for the emergence of the social system. This point ties in with the rejection of determinism in Luhmann's autopoiesis. Social order should not be explained transcendently, but as a circular movement that has neither beginning nor end (Luhmann and Schorr 1990). (p. 1518)

Moving away from normative factors, Luhmann takes a sharp departure from the dominant discourse in organization studies. This departure opens up the opportunity for new forms of organization to be explored and the organization as communication process is one such form. "By not limiting the analysis to normative factors, Luhmann's work opens up for alternative explanations, such as the relationship between action and communication" (Hernes and Bakken, 2003, P. 1518). As a representation of the dominant discourse on norms and values, Schein (2010) sums up the normative purpose of values when he says "The espoused beliefs and moral/ethical rules remain conscious and are explicitly articulated because they serve the



normative or moral function of guiding members of the group in how to deal with certain key situations, and training new members how to behave” (p. 26).

***Boundaries, openness and closure.*** In the dominant discourse, to study organization is to study boundaries. Scott (2003) framed the conversation when he explained “The central insight emerging from the open systems model is that all organizations are incomplete: all depend on exchanges with other systems. . . . By contrast, both the rational and natural system perspectives insist that organizations, as a condition of their existence, must maintain boundaries that separate them from their environment” (p. 185). Luhmann departs from this debate and although he agrees that social systems are boundary-maintaining systems, he insists that boundaries can only be drawn from the inside (Hernes and Bakken, 2003, p. 1519). Hernes and Bakken quoting Luhmann (1995, p. 29) state “Using boundaries, systems can open and close at the same time, separating internal interdependencies from system/environment dependencies and relating both to each other” (p. 1520). This leads to one of the central points in Luhmann's autopoiesis theory and that is “a system must be closed in order to be open” (p. 1520).

**Process-based organization theory.** Where equilibrium-based theory explores structure and entities, process-based theory as its foundation focuses on becoming not being. As noted earlier in the paper, process-based theory spans a variety of approaches and several theorists approach process in the same way as Luhmann, with process and structure as complementary. These theorists will be addressed directly in the recursivity-based theory section. Having a process orientation is not simply replacing nouns with verbs, but it requires that mentally the world is approached differently. If one believes that an organization is an entity, just changing the word to

organizing does not change the mental model of the organization. It takes a foundational shift in perception to make this a meaningful mental model. Weick (1974) is most often cited about this mental shift when he said,

The word, organization, is a noun and is also a myth. If one looks for an organization one will not find it. What will be found is that there are events, linked together, that transpire within concrete walls and these sequences, their pathways, their timing, are the forms we erroneously make into substances when we talk about an organization. (p. 358)

Although Luhmann does not treat process as separate from structure, process is still central to his theory of autopoiesis. A process perspective focusing on actions puts the subject at the center and events not only provide a way for the system to reproduce but provide a means for new possibilities to emerge. Hernes and Bakken (2003) explain “Combinations of events and unintended consequences of actions make the process non-deterministic, as there is no assumption of outcomes converging toward some sort of equilibrium” (p. 1521). Of importance to process-based theory is the role of actors or if including non-human participants, actants. This is where there is a strong departure between process-based theory and Luhmann's theory of social systems and of autopoiesis. Based on this understanding, Luhmann's social systems will be more fully explored in recursivity-based theory. In this conversation we explore process-based theory as an emerging field of inquiry in organization studies.

According to Hernes (2008), process-based theory,

. . . is based on the idea that organization is about attempts at some ordering, redirection or stabilization in a fluid world forever in a state of becoming, where nothing is ever

accomplished in a final state. The idea embodies basically two assumptions. The first of these is a mere ontological assumption; that the world exists as flows in which entities are in a state of becoming rather than as a final state of being. The second assumption relates to epistemology; actors intervene in the world of flows equipped with their understandings of how it works, and equipped with models of how to bring about some order, either by continuing doing what they are doing already or by attempting to stabilize the worlds that surround them into some intended pattern. (p. 128)

Hernes (2010) further explains that “The gist of recent process thinking in organization studies is to think of organization as attempts at ordering, amid a world of flux, ambiguity, and uncertainty, but without assuming stable external referents against which organizing may be held up” (p. 162). These descriptions paint a stark difference from the equilibrium-based theory discussed earlier. No longer are organization theorists working to design and control an organization as an entity attempting to insure a predetermined outcome, instead the focus is on enhancing the local conversations in an organization in an attempt to encourage emergence of new knowledge leading to unseen possibilities for creating an unforeseen future.

Hernes (2010) explains that “. . . organizational phenomena are not treated as entities, but as enactments of processes involving actors making choices interactively; in inescapably local conditions, by drawing on *broader rules and resources*” (p. 163). Hernes further explains that “Organization is not seen as an existing circumscribed system within which actions occur, and which has it change in order for new patterns or action to emerge. Instead organization is the work (Czarniawska, 1997) of imposing some sense of stabilization upon a world on the move” (p.

163). Here in lies one of the key differences between process-based theory and systems theory. In systems theory the organization is viewed as an entity within which actions occur. 'The System' is common language for approaching organization. How do we influence 'the system'? How do we change how 'the system' is structured? How do we help 'the system produce' better outcomes? How do we design a 'better system'? These are all common questions asked in systems based organization change initiatives. One might envision a different question from a process-based theorist such as How do we encourage more impacting local conversations around questions of importance to the organization?

In Hernes (2008, p. 128) Hernes describes four basic ideas that provide a foundation for process-based theory: first is the primacy of organizing as connecting; second is organization as reiteration and novelty; third is plot or organization; and fourth is actuality versus potentiality. Let's take a look at each of these ideas to further understand how process-based theory differs.

***The primacy of connecting.*** There is no process without connectedness.

“Connectedness implies bringing together things to form a basis from which action can take place” (Hernes, 2008, p. 129). This view of organization is in contrast to the dominant discourse where “Organization theory has traditionally been based on the view of organizations as providing contexts for actions, and management theory has traditionally worked from the idea that managers create contexts in which intended results are achieved” (p. 129). For those of us who have grown up in the dominant discourse and have practiced organization development, this is a major departure in practice. Marshak (2009) explains the transformation needed to begin to see organization differently. “. . . organization transformation requires that executives [consultants]

release their existing worldviews and acquire new mindsets in order to 'see', think and act differently" (p. 182). To do this, practitioners and theorists must start to see the organization as locally constructed from the daily conversations between the actors within the organization.

"Working towards an aim means connecting people and activities to an aim" [and] ". . . connecting is done through conscious organizing of activities" (Hernes, 2008, p. 129). The concept of connecting is done at a local level, it is not a top down planned and orchestrated event. There are three questions to be asked about connecting according to Hernes. First what is assumed to *connect*? There are an infinite number of actors or actants that can connect. Choices are made at the local level to connect and those choices are significant as they will be the beginning of new possibilities. ". . . connecting is the essence underlying all dynamics of organization" (p. 130). Second what major factors characterize the *process* of connecting? Connecting is a process in and of itself rather than being a condition much in the same way that network is a process rather than a condition to be studied. Connecting is not about mechanically connecting those things considered to be existing, "Connecting is about approaching something that may become" (p. 131) again referring to possibilities. Looking back to choices, when actors make choices, they bracket off all other options and focus on a specific connection. "Bracketing is a form of enactment in the sense that it includes a selection of possible explanations from a tangled world where many (other) explanations are possible" (p. 132). Third what can be assumed in terms of *nature* of connections? The nature of connections is based on the concept of loose coupling introduced by Weick (1976) and March and Olsen, (1975). Within this concept, an understanding that conditions for coupling may or may not lead to coupling and that actors have a

freedom of choice form the foundation of loose coupling and provide the final piece of the primacy of connecting.

*Organization as reiteration and novelty.* Since we are talking about process and not entities, reiteration is what keeps organization going. Organization is created by the repeated enactment of some existing order. Order is not created out of nothing but is brought forward from the past (Hernes, 2008). In Maturana's verbiage (Maturana, 1998), something is conserved and because it is conserved it exists in the present to form the foundation for enactment of future possibilities. Without patterns brought forward from the past, there is no organization. Novelty if important is conserved. Coherence is not consistency which is the stuff of the dominant discourse in OD. "Organization implies continuity, and to the extent that there is novelty, there is novelty in continuity. Nothing 'organized' starts from zero" (Hernes, 2008, p. 133). When all of the people leave the organization at night and there is nothing but an empty building, the organization is not created anew from nothing the next morning, but is reiterated from the order that was the result of the patterns left from the night before. Whitehead (1925) referred to reiteration as remanifestation or reappearance and described this as successions and contrasts of patterns (p. 133). ". . . the distinctive feature of organization lies in the attempt at the actual coherence of its connecting operations. . . Coherence allows for holding things together so that the whole make up of things is recognizable from one point in time to the next" (Hernes, 2008, p. 133). Hernes provides us with a transition to the next idea that provides an understanding of process-based theory, and that is plot. He says "Despite all the talk about organizational change, organization in a changing world is first and foremost about stabilization around some central set of ideas, what

we might call a 'plot'" (p. 133).

*The essence of plot.* So what enables continuity? Every organization has an organizing theme, or plot. The theme is what differentiates each organization otherwise we would not be able to know which organization was which. The use of the term plot fits nicely in a setting where actors enact the organization. But to do so they must have a plot around which to act. Hernes (2008) notes that "Latour, working with the idea of networks, seems to locate the 'plot' in the relations between actors" (p. 134) and as a network unfolds, some groups can turn into 'macro-actors' or 'black boxes' that are more predictable in their actions and are viewed as a more stable structure. Luhmann also addresses the concept of 'plot' although he does not label it as such. His concern is more with communicative structure as the way that a social system defines itself (p. 135). Hernes helps us understand the essence of 'plot' when he explains:

A plot may be considered to be relational in the sense of forming a configuration of different factors. One definition of a plot in literature relates to a storyline, a sequence of events, where the plot represents the particular pattern of stringing together events. Vaara (2002) points out that a characteristic of narratives is that they are interpretations of sequential events. (p. 136)

*The potentiality-actuality dimension.* "According to Whitehead, the potentiality-actuality dimension is a general principle of processes" (Hernes, 2008, p. 136). The organization that emerges does so from many possibilities. The emergent character of organization is contrary to the dominant discourse of designed predictability. Each temporal connection generates a new possibility of organization and forms the foundation for that possibility. The consequences of

actions generated from connections are unintended and this is another indication of the novelty that is generated through connections. We do not plan the future, we act locally and the future emerges from an infinite number of possible futures. Controlling outcomes is an illusion. Hernes explains potentiality as follows:

The form that emerges is the actual form, emerging as one of the many different possibilities. The actual form of organization consists of sets of interconnected abstractions that provide meaning to actors, both within and outside the system. It is in many ways the form that 'is', derived from potentialities of previous forms. At the same time, the actual form represents potentiality for possible future actual forms. The potentiality provides a number of factors – within the reach of actors and outside it – and holds potential for causing unanticipated consequences. (pp. 136-137)

The difference between potentiality and actuality is the difference between that which cannot be accounted for nor assessed and that which is visible and can be accounted for and assessed. Potentiality and actuality are interdependent. Potentiality emerges from actuality and actuality is the result of potentiality enacted. This relationship is inevitable in the process of organizing.

**Recursivity-based organization theory.** Luhmann is a recursive theorist (Hernes and Bakken, 2003; Hernes, 2008). Rather than pitting process against structure, he proposes that the two are inseparable. Although Hernes and Bakken have introduced three categories of organizational theory, I do not see recursivity-based organizational theory as a departure from process epistemology, but a refinement of it; a field of study within process-based organization



theory if you will. Even though recursivity involves both process and structure, structure is not viewed as a permanent entity as it is in equilibrium-based organizational theory. Structure too is in flux, a process-based view of structure. Those theorists who are solidly process-based organizational theorists study the relationship between process and structure in flux and therefore recursivity. Hernes and Maitlis (2010) propose that “. . . some of the most intriguing ideas in Process Organization Studies are emerging from research that takes categories and concepts that are usually considered as stable, and questioning their underlying stability” (p. 14). The foundation for the communication process of organization theory is based in part on the work of Taylor and Van Every (2000), which is recursive in nature.

It is in recursivity that studies in organization as communication process, social change, dialogue, justice, and social transformation converge. Recursivity is the bridge that helps illuminate possibilities that have before been clouded in the rationalist constructionist arguments. When Hernes and Bakken (2003) note that “Recursivity-based studies may contribute the depth and dynamics of organization that other approaches do not offer” (p. 1530). Langley and Tsoukas (2010) provide a picture of this emerging field when they explain:

This brings us back to an earlier subtle ontological distinction between process studies that consider the evolution of organizations seen as entities being displaced or transformed over time, and studies that examine how organizing is dynamically and continually reconstituted by ongoing processes, that is, studies that more strongly reflect process metaphysics. Research that emphasizes the activities of people, and how these activities contribute to the creation of stable categories, comes closest to reflecting this view.

Examples include Feldman's (2000, 2004) studies of the recursive yet dynamic nature of organization routines, and Barley's (1986, 1990) classic work on how structure is regenerated through ongoing interactions surrounding technology . . . Yet because of the focus on reproduction and recursiveness inspired by structuration theory (Giddens, 1984), the heading 'reconstituting the evolving present' better reflects their overall temporal orientation. (pp. 13-14)

Since process-based organization studies view everything as in flux, the temporal nature of what's studied is pivotal. Temporality is what prevents a process theorist from accepting structure as an unchanging entity, permanence simply is not a reality. Langley and Tsoukas (2010) note “. . . many of the management field's well established variance theories that relate practices or organizational characteristics to performance are not as easily actionable as they appear precisely because they assume static equilibrium conditions and ignore temporal dynamics. . . (p. 10). So although recursivity-based organization theory explores the relationship between process and structure, structure is still viewed as in flux and is in itself process, but process that has more stability or longevity in its current state. Hernes and Bakken (2003) explain this paradox when they say “A rejection of structure excludes explanation of the stable states and orders that demonstrably exist. At the same time, structures, although they appear stable and sometimes permanent, are incessantly subject to modification in some form or another” (p. 1524). In other words, structure is in flux even if it does seem permanent. It is from this reflexive foundation that Luhmann developed his theory of social systems. Hernes (2008) explains:

Luhmann's sociological project aimed at developing a general theory describing how

society recursively reproduces itself through systems of communication. The theory is based on the idea that society differentiates itself into subsystems which operate according to their respective codes of communication. (p. 78)

Hernes and Bakken (2003) noted that at the time of their writing, recursivity was underrepresented in organization studies. With process-based organization theory emerging as a field of practice, this situation is changing. Theorists like Luhmann and Giddens who have been at the forefront of recursive organization studies, have provided a foundation for inquiry into organization as process and indeed as communication process. In one of the newer works in the field, Hernes and Maitlis (2010) provide a diverse series of conference papers in this edited volume that provides a glimpse into this emerging field of research. Many of the chapter's touch on recursivity even if they do not explicitly state so. In their introduction to the volume, Langley and Tsoukas (2010) provide a view of the importance of this work when they say,

A process orientation is sensitive to the constructive role of embodied-cum-embedded agency in bringing about the world we come to experience as an independent structure (Shotter, 1993, 2009) . . . Human phenomena cannot be properly understood if time is abstracted away. Process thinking is intimately connected with what philosopher Stephen Toulmin (1990) calls an 'ecological style' of thinking. The latter seeks to embrace complexity by reinstating the importance of the particular, the local, and the timely; it is sensitive to context, interactivity, experience, and time; and it acknowledges non-linearity, emergence, and recursivity. (pp. 5-6)

***Communication process.*** Communication process is situated in recursivity-based

organization theory. The recursivity of communication is stated by Taylor and Van Every (2000) when they say “We perceive the emergence of organization to be similarly boundaried by two conditions. One . . . is the relatively permanent structuring of text . . . the other is the relatively chaotic . . . processes of conversation” (p. 31). They further state “. . . communication must exist at the intersection of conversation and text” (p.73). Therefore, the co-generation of text, (structure), and conversation (process) is the foundation of Taylor and Van Every's work and the foundation for communication process and is clearly a recursive process.

Two comprehensive treatments of communication process are found in Taylor and Van Every and the extensive writing of Barnett Pearce summarized in Pearce (2007). Pearce uses the concept of structure to explore the context within which dialogue takes place, which provides a different look at structure as text. One current work on communication process is from Stacey (2010) in which he devotes a full chapter to processes of communication and yet nowhere references the work of Taylor and Van Every or Pearce. This lack of alignment may be considered a gap in process-based organization studies. Stacey supports the concept of communication process in his work when he says “As soon as we start asking ourselves what we are doing every day in our ordinary local interactions in which we accomplish our work in organizations, I think we realize how the most fundamental activity is that of communicating with each other” (p. 143-144).

The most important aspect of this inquiry into process is the understanding that organization is a communication process and through communication the organization is enacted. What is less apparent is the recursive relationship between the two dialogic aspects of

communication. The two aspects include the text that has been created as an artifact of conversations, the textual account of the conversations, and the local conversations that are responsible for enacting the organization as we experience it. A social system must have both as Luhmann explains. It is liberating to step out of the structure vs. process argument and be able to embrace both. Structuralism is not going to go away and it is important to understand organizing in terms of both structure and process. In recursivity-based organization theory both structure and process are understood from a process perspective and communication process falls within this paradigm.

### **Conclusion**

When approaching organization as communication process, I started from the paradigm that organization is communication process and the various models and metaphors that have been used to describe organizations are simply organizational mentalities based off of the world views of those who enact those organizations. Understanding that we as actors enacting organizations create exactly what we envision, is necessary to get beyond analysis of organizations and start exploring what we create together. From local conversations, we create organizations that behave as open, closed, rational, or organic systems simply by acting on our mental models of organization. But the essence of organization is communication process. Since an organization is communication process, defining the purpose of organizing becomes the question. Humans organize to make sense of their world. And since we do organize to make sense of the world, it is useful to use mapping to gain a better understanding of what we have enacted together. We do not map to see network or work-flow as entities, but to understand what we are creating

together.

The terminology of process-based theory is quite different than the terminology used in the dominant discourse. Rather than viewing the world as a given, in process-based theory we speak of flow, flux, and impermanence. We are not analyzing entities but exploring the reality of organizational life. Although this paper is not a study of rational thought, it is important to note that the world as envisioned by Western cultures since the time of the Enlightenment has separated us from the objective world and this simply is not a view consistent with process-based theory. Based on current worldwide trends, if it was not clear before it should now be clear that we cannot design, plan, and execute the world around us and be able to control the outcomes. Our insistence on believing in the illusion of control is damaging our conversations and preventing us from working together to make better decisions that provide better possibilities for our future. The world is complex and it is not like a living or organic system. There is no structural closure and there is no way to predict the future in social systems.

Embedded within the rational model is the belief in objectivity and objectivity assumes that we as a biological living system can be objective, an impossibility that Maturana fully explored in Maturana (1970). Admitting that we organize to help us make sense of an incomprehensibly complex world would at least start us off on a path of honesty so that we would not try to pretend that we are rational and objective. Using honesty as a mental model would allow us to see organization for what it is, communication process and then let us organize and understand why we organize rather than believe that our mental models of rationality are actually reflections of an objective real world. Luhmann's work on process and structure provides a breakthrough in

organization studies. I find his work liberating allowing me to see how we create the world together in conversation and do so based on structures that are artifacts of conversations over time. It is difficult in this study of organizing to let go of a history of systems thinking and open my mind to what lies beyond the systems thinking framework. It certainly was difficult to see that systems thinking is yet another manifestation, label if you will, for a rationalist perspective of the world and this is based on the view of organization as similar to organic or living systems. This supposes that there are entities to control, develop, improve, etc.

Returning back to Luhmann and his work as an organization theorist can be intriguing and baffling at the same time. While initiating this research, I was told that Maturana did not support Luhmann's work on autopoiesis in social systems and it was unclear how to proceed given my deep respect for Maturana. Yet as research continued, a foundation for a conflict did not emerge and in fact other theorists have suggested that autopoiesis as a concept should be explored in a social systems setting. Clearly Luhmann does not see a social system as a living or organic system and he did not simply import autopoiesis into his theory, but he did understand the power of reflexivity and self-reference as concepts in helping explain how social systems reproduced themselves through communication as action.

Luhmann has made a substantial contribution to process-based organization theory in particular the recursivity of social systems and therefore organization. Added to this is Luhmann's temporal understanding which lands him directly in a process epistemology and helps us understand his rejection of equilibrium-based organization theory where there is not an acceptance of the temporality of process but instead, an insistence on fixed entities. Luhmann's approach to

boundaries is informative. Unlike in equilibrium-based organization theory, boundaries are not fixed entities, but are socially constructed from within the system helping the system construct meaning for itself and differentiate itself from other systems. So as Luhmann proposed, systems must be closed to be open. Luhmann is also aligned with other theorists such as Weick who explore meaning making through local conversations as social phenomena. Luhmann is certainly one of the optimistic theorists believing in emerging possibilities and the opportunity to enact infinite futures through local conversations. I find his work to be one of hope and possibilities for human's and his work remains a foundation for my work as a process theorist.

Of note are the legacy frameworks I have brought with me into my evolving work as a process theorist, in particular my practice on helping organizations create norms and values. Stacey has introduced language that has helped permanently transform my approach to organization and that is the language of local conversations. No matter who you are or where you are located in an organization, virtually all of the work to enact the organization is done in local conversations. A deep understanding of local conversations virtually eliminates the tendency to create norms from the top down. The work of organizing becomes based on local conversations and helping create the contexts and questions for these local conversations.

To make the transition to process-based organization theory requires a shift in mind set. Simply turning nouns into verbs will not make this happen, a fundamental shift in beliefs about what constitutes organizing is necessary and this shift in mind set is what is necessary to move to process theory. Part of this shift is the insight that we as humans do organize in an attempt to create structure out of complexity, but at the same time it is critical for the understanding of



process theory that we understand that the structure that we have enacted is not a real entity but a socially constructed structure to help us make sense out of this world of complexity, ambiguity, and uncertainty. Mental models frame the organization that we enact and to thrive in the complex world, we need to change our mental model to one of communication process.

With the extensive research and work being done in process theory, process-based organization theory is an umbrella theory embracing a variety of research, which includes recursivity-based organization theory. This is where Luhmann specifically fits within process theory but he is certainly not the only theorist exploring the intersection between structure and process. Process theorists see structure differently than rational theorists. What differentiates a process theorist view of structure from a rationalist view is the view of structure as in flux, it simply does not change as quickly as local conversations. Including recursivity-based organization theory within the process umbrella makes sense because of this view of structure. It is from this vantage point that communication process as an organization model is introduced.

The communication process model of organization is a recursive paradigm. First and foremost, it is based on the understanding that organization is socially enacted locally through conversation. Communication process is indeed process unlike the dominant discourse where communication is viewed as transmission of information from one entity to another. Pearce's body of work for the last 30 years has been specifically based on the process theory of communication. But this is only half of the communication process model of organization, the other half is the history of those local conversations and this history, in whatever form it may take, is an artifact of those conversations. This history can simply be called text and text offers the structure from

which new possibilities are created through conversation and provides the continuity necessary for organizations to autopoietically reproduce themselves. It is the recursivity between text and conversation that provides the foundation for the communication process model of organization and a bridge to those who live in the language of the dominant discourse.

## References

- Ackoff, R. L., & Emery, F. E. (2008). *On purposeful systems: An interdisciplinary analysis of individual and social behavior as a system of purposeful events*. New Brunswick, NJ: Transaction Publishers.
- Albert, S., & Whetten, D. A. (2004). Organizational identity. In Hatch M. J., & Schultz, M. (Eds.), *Organizational identity: A reader* (pp. 89-118). New York, NY: Oxford University Press.
- Alder, M. J., & Van Doren, C. (1972). *How to read a book: The classic guide to intelligent reading* (Revised and updated edition). New York, NY: Simon & Schuster, Inc.
- Ashforth, B. E., & Mael, F. (2004). Social identity theory and the organization. In Hatch M. J., & Schultz, M. (Eds.), *Organizational identity: A reader* (pp. 134-160). New York, NY: Oxford University Press.
- Barley, S. R. (1983). Semiotics and the study of occupational and organizational cultures. *Administrative Science quarterly*, 28, pp. 393-413.
- Bear, S. (1980). Preface. In Maturana, H. R., & Varela, F. J., *Autopoiesis and cognition: The realization of the living*. Holland: D. Reidel Publishing.
- Bushe, G. R., & Marshak, R. J. (2009). Revisioning organizational development: diagnostic and dialogic premises and patterns of practice. *Journal of Applied Behavioral Science*, 45, 348-368. Retrieved 11/01/2010 from <http://jab.sagepub.com/cgi/content/abstract/45/3/348>
- Capra, F. (1997). *The web of life: A new scientific understanding of living systems*. New York, NY: Anchor Books.

Capra, F. (2002). *The hidden connections: A science for sustainable living*. New York, NY:

Anchor Books.

Castellani, B., & Hafferty, F. (2009). *Sociology and complexity science: A new field of inquiry*.

New York, NY: Springer.

Chai, R. (1998). From Complexity Science to Complex Thinking: Organization as Simple

Location. *Organization*, 5(3), pp. 341-369. Retrieved 2/15/2011 from

[www.org.sagepub.com](http://www.org.sagepub.com) at UNIVERSITY OF MICHIGAN

Chai, R. (2010). Rediscovering becoming: Insights from an oriental perspective on process

organization studies. In Hernes, T., & Maitlis, S. (Eds.), *Process, sensemaking, &*

*organizing: Perspectives on process organization studies* (pp. 112-139). New York, NY:

Oxford University Press.

Cheney, G., & Christensen, L. T. (2004) Organizational identity: Linkages between internal and

external communication. In Hatch, M. J., & Schultz, M. (Eds.). *Organizational identity: A*

*reader* (pp. 510-557). New York, NY: Oxford University Press.

Czarniawska, B. (1997). *Narrating the organization: Dramas of institutional identity*. Chicago,

IL: University of Chicago Press.

Czarniawska, B. (2010). Going back to go forward: On studying organizing in action nets. In

Hernes, T., & Maitlis, S. (Eds.), *Process, sensemaking, & organizing: Perspectives on*

*process organization studies* (pp. 140-160). New York, NY: Oxford University Press.

Feldman, M. (2000). Organizational routines as a source of continuous change. *Organization*

*Science*, 11(6), pp. 611-629.

- Ford, D. F. (1999). Organizational change as sifting conversations. *Journal of Organizational Change Management*, 12(6), 480-500. Retrieved 10/25/2010 from [www.emerald-library.com](http://www.emerald-library.com)
- Garcia, O. (2009). Human re-engineering for action: An enactive educational management program. *Kybernetes*, 38(7/8), 1332-1343. Retrieved 10/25/2010 from [www.emerald-library.com/0368-492X.htm](http://www.emerald-library.com/0368-492X.htm)
- Giddens, A. (1979). *Central problems in social theory: Action, structure and contradiction in social analysis*. London: Macmillan.
- Giddens, A. (1984). *The constitution of society*. Cambridge, MA: Polity Press.
- Hatch M. J., & Schultz, M. (Eds.). (2004). *Organizational identity: A reader*. New York, NY: Oxford University Press.
- Hernes, T., & Bakken, T. (2003). Implications of self-reference: Niklas Lunmann's autopoiesis and organization theory. *Organization Studies*, 24(9), 1511-1535). Retrieved 1/12/2011 from <http://oss.sagepub.com/content/24/9/1511>
- Hernes, T. (2008). *Understanding organization as process: Theory for a tangled world*. New York, NY: Routledge.
- Hernes, T. (2010). Actor-network theory, Callon's Scallops, and process-based organization studies. In Hernes, T., & Maitlis, S. (Eds.). *Process, sensemaking, & organizing* (pp. 161-184). New York, NY: Oxford University Press.
- Hernes, T., & Maitlis, S. (Eds.). (2010). *Process, sensemaking, & organizing*. New York, NY: Oxford University Press.

Holman, P. (2010). *Engaging emergence: Turning upheaval into opportunity*. San Francisco, CA: Berrett-Koehler Publishers.

Hurley, T. J. & , J. (2009). Conversational leadership: Thinking together for a change. *The Systems Thinker*, 20(1), 2-7. Retrieved 3/10/2010 from <http://www.pegasus.com/>

Inman, J. (2002). Con versare: To dance together (unpublished paper). *The Dialogic Leader*. Retrieved from <http://www.johninmandialogue.com/wp-content/uploads//2012/09/Con-versare-To-Dance-Together.pdf>

Isaacs, W. N. (1993). Taking flight: Dialogue, collective thinking, and organizational learning. *Organizational Dynamics*, 22(2), 24-39. Retrieved 10/25/2010 from [www.cmapspublic.ihmc.us](http://www.cmapspublic.ihmc.us)

Ketchum, L. D., & Trist, E. (1992). *All teams are not created equal: How employee empowerment really works*. Newbury Park, CA. Sage Publications, Inc.

Krippendorff, K. (1993). Major metaphors of communication and some constructivist reflections on their use. *Cybernetics And Human Knowing*, 2(1), 3-25. Retrieved 12/26/10 from <http://repository.upenn.edu/asc-papers/84>

Krippendorff, K. (2008a). Social organizations as reconstitutable networks of conversations. *Cybernetics And Human Knowing*, 15, 149-161. Retrieved 11/2/10 from <http://repository.upenn.edu/asc-papers/135>

Krippendorff, K. (2008b). Cybernetics's reflexive turns. *Cybernetics And Human Knowing*, 15(3-4), 173-184. Retrieved 11/2/10 from <http://repository.upenn.edu/asc-papers/136>

Lakoff, G., & Johnson, M. (1993). *Metaphors we live by*. Chicago, IL: The University of Chicago

Press.

Lungley, A., & Tsoukas, H. (2010). Introducing “perspectives on process organization studies”.

In Hernes, T., & Maitlis, S. (Eds.). *Process, sensemaking, & organizing* (pp. 1-26). New York, NY: Oxford University Press.

Luhmann, N. (1990). The autopoiesis of social systems. In Luhmann, N., *Essays on self-reference*. New York, NY: Columbia University Press.

Luhmann, N. (1995). *Social Systems* (Translated by Bednarz, Jr., J., & Baecker, D.). Stanford, CA: Stanford University Press.

Luhmann, N. (2000). *Organisation und entscheidung*. Opladen: Westdeutscher Verlag.

Luhmann, N., & Schorr, K. E. (1990). *Zwischen Anfang und Ende: Fragen an die Pädagogik*. Frankfurt: Suhrkamp.

March, J. G., & Simon, H. A. (1958). *Organizations*. New York, NY: Wiley.

March, J. G., & Olsen, J. P. (1975). The uncertainty of the past: Organizational learning under ambiguity. *European Journal of Political Research*, 3, pp. 147-171.

Marshak, R. J. & Grant, D. (2008). Organizational discourse and new organization development practices. *British Journal of Management*, 19, S7–S19. doi: 10.1111/j.1467-8551.2008.00567.x

Marshak, R. J. (2009). *Organizational change: Views from the edge*. Bethel, ME: The Lewin Center.

Maturana, H. R. (1970). Biology of cognition. *Biological Computer Laboratory Research Report BCL, 9.0*. Urbana, IL: University of Illinois, 1970. As reprinted in *Autopoiesis and*

- Cognition: The Realization of the Living*. Dordrecht: D. Reidel Publishing Co., 1980, pp. 5-58. Retrieved 2/8/2011 from <http://www.enolagaia.com/M70-80BoC.html>
- Maturana, H. R. (1978). Biology of language: Epistemology of reality. In Miller, G. & Lenneberg, E. (Eds.), *Psychology and biology of language and thought* (pp. 1-19). New York, NY: Academic Press. Retrieved 11/2/2010 from [http://www.biolingagem.com/biolingagem\\_antropologia/maturana\\_1978\\_biology\\_of\\_language.pdf](http://www.biolingagem.com/biolingagem_antropologia/maturana_1978_biology_of_language.pdf)
- Maturana, H. R., & Varela, F. J. (1980). *Autopoiesis and cognition: The realization of the living*. Holland: D. Reidel Publishing.
- Maturana, H. R. & Varela, F. J. (1998). *The tree of knowledge: The biological roots of human understanding* (Revised Edition). Boston, MA: Shambhala Publications, Inc.
- Mead, G. H. (1934). *Mind, self, & society* (Vol.1). Chicago, IL: University of Chicago Press.
- Mitchell P. Koza, M. P., & Jean-Claude Thoenig, J. C. (1995). Organizational theory at the crossroads: Some reflections on European and United States approaches to organizational research. *Organization Science*, 6(1), 1-8. Retrieved 12/28/2010 from <http://www.jstor.org/stable/2635235>
- Morgan, G. (2006). *Images of organization* (Updated Edition). Thousand Oaks, CA: Sage Publications, Inc.
- Pearce, W. B. (2007). *Making social worlds: A communication perspective*. Malden, MA: Blackwell.
- Rescher, N. (1996). *Process metaphysics – An introduction to process philosophy*. New York,



NY: State University of New York Press.

Sandow, D., & Allen, A. M. (2005). The nature of social collaboration: How work really gets done. *Reflections: The SoL Journal on Knowledge, Learning, and Change*, 6(2/3), 1-14.

Retrieved from [www.solonline.org](http://www.solonline.org)

Scharmer, C. O. (2007). *Theory u: Leading from the future as it emerges – The social technology of presencing*. Cambridge, MA: Society for Organizational Learning.

Schein, E. H. (2010). *Organizational culture and leadership* (4<sup>th</sup> Edition). San Francisco, CA: Jossey-Bass.

Scott, R. W. (2003). *Organizations: Rational, natural, and open systems* (Fifth Edition). Upper Saddle River, NJ: Prentice Hall.

Senge, P. M. (1990). *The fifth discipline: The art & practice of the learning organization*. New York, NY: Doubleday/Currency.

Shakespeare, W. (1958). Romeo and Juliet. In Kittredge, G. L. (Ed.), *The Kittredge-Players edition of the complete world of William Shakespeare* (pp. 1005-1044). New York, NY: Grolier Inc.

Shotter, J. (1993). *Conversational realities*. London: Sage Publications, Inc.

Shotter, J. (2009). Moments of common reference in dialogic communication: A basis for unconfused collaboration in unique contexts. *International Journal of Collaborative Practices*, 1, pp. 31-39.

Spencer-Brown, G. (1969). *Laws of form*. London: Allen and Unwin.

Stacey, R. D. (2010). *Complexity and organizational reality: Uncertainty and the need to rethink*

*management after the collapse of investment capitalism* (2<sup>nd</sup> Edition). New York, NY: Routledge.

Taylor, J. R. (2001). The “rational” organization reconsidered: An exploration of some of the organizational implications of self-organizing. *Communication Theory*, 11(2), 137-177.

Taylor, J. R., & Van Every, E. J. (2008). *The emergent organization: Conversation as its site and surface*. New York, NY: Psychology Press.

Toulmin, S. (1990). *Cosmopolis*. Chicago, IL: University of Chicago Press.

Vaara, E. (2002). On discursive construction of success/failure in narratives of post-merger integration. *Organization Studies*, 23(2), pp. 213-250.

von Foerster, H. (1991). *Observing systems*. Seaside, CA: Intersystems Publications.

von Foerster, H., & Broecker, M. S. (2010). *Part of the world: Fractals of ethics – a drama in three acts* (First American edition) (Translation by Barbara Anger-Diaz). Urbana-Champaign, IL: Publications Office, Department of Electrical and Computer Engineering, University of Illinois.

Weick, K. E. (1974). Middle range theories of social systems. *Behavioral Science*, 19(6), pp. 357-367. Retrieved 2/15/2011 from [www.umich.edu](http://www.umich.edu)

Weick, K. E. (1976). Educational organizations as loosely coupled systems. *Administrative Science Quarterly*, 21, pp. 1-18.

Weick, K. E. (1995). *Sensemaking in organizations*. Thousand Oaks, CA: Sage Publications, Inc.

Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. (2005). Organizing and the process of sensemaking. *Organization Science*, 16(4), 409-421.

Wheatley, M. J. (1999). *Leadership and the new science: Discovering order in a chaotic world.*

San Francisco, CA: Berrett-Koehler Publishers.

Whitehead, A. N. (1925). *Science and the modern world.* London: Free Association Books.

Whitehead, A. N. (1929). *Process and reality: An essay in cosmology.* New York, NY:

Macmillan.

Winograd, T., & Flores, F. (1987). *Understanding computers and cognition: A new foundation*

*for design.* Norwood, NJ: Ablex Publishing Corporation.