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CHAPTER 18

Systems Thinking in Complex Responsive Processes and Systems Intelligence

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Systems Intelligence attempts to combine the holistic orientation of systems approaches to an appreciation of the everyday subtleties which continually mould the systems we are a part of. George H. Mead's theory of the emergence of individuals and social organizations holds that neither individuals nor organizations are stored anywhere but that both are continuously being formed by each other. The theory of Complex Responsive Processes, developed by Ralph D. Stacey and his associates, drawing from Mead's ideas, provides a process perspective on individuals and organizations as a challenge to the systemic perspective. The theory of complex responsive processes points to the incondensably complex nature of reality and, consequently, to the innate limitations of systemic descriptions. In this essay, some limitations of systemic conceptualizations are highlighted and the above theories are explored as a contribution to a systems approach which combines holistic thinking with intelligent participation in complex wholes.

Introduction

Systems Intelligence is a perspective on human action, on personal and organizational life, that combines engineering thinking with human sensitivity. Engineering thinking refers to a problem-solving-oriented mindset combined with an appreciation to the importance of the big picture. The human sensitivity perspective refers to the "tradition of sensing, experiencing and sharing the subtleties of one's environment" (Hämäläinen and Saarinen 2007, p. 6). The above perspectives combined, systems intelligence seeks for the positive systemic effects of taking subjective aspirations and emotions utterly seriously. (Saarinen and Hämäläinen 2004; Hämäläinen and Saarinen 2006)

The systems thinking movement and, in particular, the work of Senge (1990; Senge et al. 1994) has been influential to the development of systems intelligence. In general, systems thinking is an umbrella term for various approaches to acknowledge the complex and feedback-intensive nature of human issues. The rising of systems thinking dates back to mid 20th century including pioneers such as von Bertalanffy (1956) and Churchman (1968, 1979). Right from the early days of systems thinking, it has evolved in various traditions and has become a popular and diverse field, ranging from "hard" approaches, such as System Dynamics, see e.g. Forrester (1958) and Sterman (2000,

2002) to "soft" approaches such as Soft Systems Methodology, see e.g. Checkland (2000, 2001). The more recently emerged field of critical systems thinking aims to remain critical of hard *and* soft systems approaches and to appreciate the strength of each in a pluralistic manner, see e.g. Jackson (1991, 2003, 2007) and Midgley (1996, 2000). Peter Senge has introduced systems thinking to the general managerial audience with his book *The Fifth Discipline* (1990). A brief introduction to the development of systems thinking over the decades is provided in Barton et al. (2004). A more thorough review is provided in Midgley (2003).

An observation one readily makes about the vast systems thinking literature, and the related operational research literature, is that the field keeps undergoing rich theoretical and practical discourse, see e.g. recent viewpoints expressed in the *Journal of the Operational Research Society* (Mingers 2007, Morril 2007, Robinson 2007) and Ackoff's (2007) research note in the journal *Systems Research and Behavioral Science*. In some sense the systems intelligence approach is an attempt to incorporate systems ideas, already expressed in the literature, into environments we are a part of. It parallels with "soft" approaches in the sense that the word "system" is not seen merely as a description of the world but rather as a method of inquiry or as a conceptual appreciation of systemic effects. The tendency to conjoin multiple theoretical and methodological perspectives parallels with critical systems approaches. It is also possible to see systems intelligence as a perspective *on* systems thinking, since – according to the principal investigators – it considers systems *thinking* as secondary and the systemic *perspective* as fundamental (Hämäläinen and Saarinen 2006). The argument stems from the acknowledgement that our environment and actions within are systemic, regardless whether we take it into account or not. Thus, the goal is to incorporate the systemic perspective to the emergence of problems and their solutions, and not just to tackle issues perceived as problems with systems thinking. In this sense, systems intelligence has similarities with Midgley's (2000) practice of systemic intervention.

Systems intelligence "focuses on what people do right and could improve upon in systemic settings", as opposed to merely identifying and accordingly avoiding pitfalls.

In their recent article in the *SOL Reflections* journal, Hämäläinen and Saarinen (2006) argue that systems intelligence is more than systems thinking as the latter is traditionally understood. They claim that there easily is an "objectifying bias" in systems thinking and that systems intelligence attempts to avoid this. Another goal is the avoidance of being narrowed down to focus on systemic effects that produce negative outcomes. Systems intelligence "focuses on *what people do right and could improve upon in systemic settings*", as opposed to merely identifying and accordingly avoiding pitfalls (Hämäläinen and Saarinen 2006, p. 18).

Similar biases have been pointed by other authors too. The starting point for the theory of *complex responsive processes* of relating (Stacey et al. 2000, Stacey 2001, 2003a, 2003b, Griffin 2002) is somewhat similar to that of systems intelligence. The theory provides a process perspective on human action in general and organizational life in particular. The perspective is conceptually different from the systemic perspective since it does not consider individuals and organizations as systems but as self-organizing processes of relating.

In this essay, I will discuss the ideas of Stacey and his associates about systems thinking. I will also review Mead's (1934) theory of individuals and social organizations as it highlights the intimate interdependence of individuals and the emergent nature of social organizations, or social systems. In Mead's model, social organizations are perpetually constructed rather than being "out there" or in the participants' minds. The theory of complex responsive processes links Mead's theory with concepts related to contemporary organization theory. I will present the complex responsive processes perspective and its in connections with the systems intelligence perspective.

Both perspectives emphasize the importance of local micro-interactions and day-to-day activities in which individuals are *constantly* constructing their environment while the environment, at the same time, influences them.

Notes on Systems Thinking

Ralph D. Stacey and his colleagues (Stacey et al. 2000, Stacey 2000, 2001, 2003a, 2003b, Griffin 2002) see that there are two potentially problematic underlying assumptions in systems thinking.

(1) Individuals have a capability to choose their goals and actions by stepping outside a system they are a part of. In other words, an individual's behaviour is determined by her intentions that she chooses without the influence of others. Her thinking and behaviour is not constrained by her environment. Stacey (2001) refers to this causal framework as the "rationalist teleology".

(2) It is meaningful to discuss social institutions as systems where the systemic structures lie – or they are thought of "as if" they laid – "outside" the interaction they produce. In other words, an individual is a victim of her mental models which determine how she reacts to her environment. Stacey (2001) refers to this causal framework as the "formative teleology".

In terms of these assumptions, it is problematic to distinguish between subjects, which choose actions that shape the structures of a system, and objects, whose behaviour is governed by the structures of a system. The first assumption holds that individuals are free to choose whether they conform to systemic structures or if they change those structures. The latter assumption, on the other hand, holds that individuals are objects to the systems they are a part of – the structures determine how they behave. Thus, the above assumptions are in contradiction with each other. According to Stacey (2001), this conflict is relaxed in systems thinking by assuming that individuals are *both* subject to influence of a system *and* free from it. Stacey (2001) and Griffin (2002) refer to this as the "both…and" structure inherent in systems thinking in which the rationalist and formative cause are kept apart, although it is not clear how this distinction should be made or how the distinction is formed to begin with. In parallel, Midgley (2000), a researcher in systems thinking, refers to this problem as the subject/object dualism that, he claims, several systems thinking traditions fail to dodge.

Some proponents of systems thinking (e.g. Senge et al. 1994; Sterman 2002) see identification and/or modelling systemic structures as integral parts of systems thinking. These systemic structures are understood as if they produced the behaviour a system generates. Yet, the apparent behaviour of a system reflects only a fraction of the subjectively held aspirations, since most of individuals' aspirations do not show up in their apparent behaviours. No systemic description of a social system can capture the richness of subjective experience and thus fails to capture how change could emerge from within shifts in subjective experience. In systems intelligence, human systems are seen as generative frames within which subjects perceive their lives taking place. The word system refers to the context within which outcomes emerge. Generativity refers to the common subjective experience that systems seemingly having a life of their own, that is, subjects perceive systems to enable and constrain individual behaviours. In this sense, systems intelligence embraces what could be called a phenomenological view of the word system. According to Hämäläinen and Saarinen (2006) one of the key differences between many systems thinking traditions and systems intelligence is SI's "refusal to take the outsider's view". This "refusal" stems from the recognition that no process of identification can generate a comprehensive systemic description. Hämäläinen and Saarinen (2006) suggest that the systems intelligence approach attempts to avoid such narrowing "bias for cognitive rationality and external viewpoint". In their words,

> Systems thinking highlights a domain of objects it believes is neglected – systems. But systems remain objects nonetheless, entities to be identified and reflected from the outside. (Hämäläinen and Saarinen 2006, pp. 17–18)

Griffin (2002) sees that one of the strengths of Senge's five disciplines and, in particular, systems thinking, is that it provides a thinking tool by which one can make sense of what is happening around and to oneself. It emphasizes the fact that there is more to understanding organizational phenomena than autonomously chosen intentions and actions of individuals. But again, it is autonomous individuals who choose either to conform to the systemic structures or to "step outside" them for reflection from the outside. The potential trap of the externalist persists.

We often feel powerless in producing a lasting change. Human interaction expresses remarkable repetitivity, although it is problematic to point to any identifiable mechanisms that would force this. Systems, in this sense, *seemingly* have a life of their own. Systems thinking can be thought of as a method of inquiry which considers human interaction "as if" it was produced by systemic structures. In this sense, it is a tool for making sense of change and of obstacles to change. Similarly, Hämäläinen and Saarinen (2006) see the idea of a "system that rules" (formative cause) as a metaphor for the constraints that subjects (consciously or unconsciously) perceive to be posed on them. However, systems intelligence recognizes that identifying and modelling the "forces", which seem to be producing behaviour, sets the primary focus on what has emerged from human interaction. Such thinking, while helpful in understanding the underlying causes of observed events, runs the risk of losing sight of what is continually emerging from interaction, or what is continually being experienced. Furthermore, as it is important to understand what a system generates, it is equally important to understand what a system does not generate. Accordingly, systems intelligence attempts to recognize this by refocusing attention to the actual emergence of systems. The perspective emphasizes what systems *do not* generate and what they *could* generate to complement thinking about what systems currently do generate. What systems do not but could generate often reflect the cognitively non-transparent aspects of human systems, that systems intelligence considers essential.

Human beings manage to get things done rather intelligently, although the mess within which such intelligence manifests itself, does not seem to fit into any rational conceptualization.

A note about Stacey's and his colleagues' critique on systems thinking is in place. As Stacey (2001) also recognizes, systems thinking is not just one unified theory. It is rather an umbrella term for a variety "methods, tools, and principles, all looking at the interrelatedness of forces" (Senge et al. 1994, p. 89). Systems are "perceived whole[s] whose elements continually affect each other" (ibid., p. 90) where no "single right answer" (ibid., p. 91) to the question, what the system is, ever exists. C. West Churchman (1979), one of the pioneers of systems thinking, acknowledged that the reality of a system, in general, is neither "out there" nor is it solely in the mind of an individual pondering what the system is. They are rather contexts within which some outcomes are experienced and within which individuals strive to influence what those emerging outcomes are. Thus, the above critique is to be thought to concern only a narrow interpretation of systems thinking since no one theory of systems thinking exists[1]. One should also note the important work of Midgley (2000) who has discussed similar problems in systems thinking that Stacey and his associates have raised.

[1] For an extensive graphical illustration of streams of systemic thought, see http://www.edu365.cat/aulanet/comsoc/comentaris/Knowlege%20Network.pdf and http://www.iigss.net/gPICT.jpg (accessed 12 March 2007).

Stacey's and his colleagues' critique is relevant because it points to how the "systems language" is conceptually limited to discussing human interaction in terms of entities, systems' boundaries and so on. The language is limited in its capability to explain how entities and systems originally have emerged. Reality is far richer than any systemic description of it. It is to be noted that while systems, its "components" and their interconnections, are identified, action is already taking place. While we can, to some extent, inquire what a system seems to be, it is already continually being constructed. Churchman (1979, pp. 45–53), for example, emphasizes that striving for "greater and greater precision" of systemic descriptions helps only to some extent, because "what's really happening in the human world…is totally different from the rational approach…the reality cannot be conceptualized, approximated, or measured". It seems paradoxical, that human beings manage to get things done rather intelligently, although the mess, within which such intelligence manifests itself, does not seem to fit into any rational conceptualization. It seems that Stacey's and his colleagues critique on systems thinking stems from the recognition of the importance of paying attention to the direct experience within perceived wholes and not limiting oneself to merely observing and re-designing those wholes.

Who we are as individuals is not simply located in us, but also around us, in our relationships with others and in our experience of those relationships.

Mead on the Emergence of the "Individual" and the "Social"

George H. Mead[2] (1934), one of the pioneers of social psychology, described the human mind and social organizations in terms of symbolic interaction. The perspective of symbolic interaction discards the notion of mind and social organizations as entities to be identified. Instead, they are actions of the human *body* directed towards oneself and others. In abstract sense, the individual and social organizations emerge from the self-organizing processes of symbolic interaction. Individuals and social organizations are different aspects of on going processes of symbolic interaction and, consequently, systemic descriptions of social organizations may have a reality only in an abstract sense. For a more comprehensive explanation of Mead's theory, see for example Stacey (2001) or Griffin (2002).

Mead described symbolic interaction consisting of *gesturing* and *responding*. A gesture is a symbol in the sense that it points to a meaning which becomes apparent in the response that it calls forth. Together the gesture and its response constitute a social act and its meaning is "constructed" for both. Social acts are not in isolation of each other, since each gesture is a response to some previous gesture and so on. The gesture–response model describes communication as actions of human bodies, that is, facial expressions, postures, vocal gestures and so on. This is depicted in FIGURE 1.

[2] Mead's work is accessible online at http://spartan.ac.brocku.ca/~lward/Mead/ (accessed 19 March 2007).

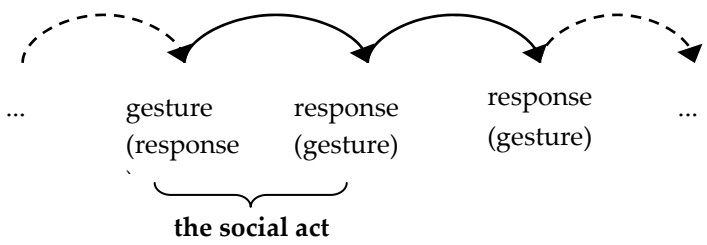

FIGURE 1. Social acts constitute a conversation of gestures.

The gesture–response model is different from the sender–receiver model, which Stacey (2001) describes to be the common abstract framework of describing social interaction. Systems thinking, according to him, embraces the sender–receiver model. In the sender–receiver model an individual translates an idea in one's head to some language and then transmits this message to the receiver who, in turn, decodes the message in her head to grasp what the sender was trying to send. The gesture–response model does not require translating anything. It does not make any assumptions about the "inner worlds" of individuals. In social interaction, a bodily gesture simply calls forth a response in the other. The gesture–response model thereby draws a messier and more subtle notion of individuals than the notion of individuals as "processors of information", implied by the sender–receiver model.

Mead's idea was that the human mind, or consciousness, is a process – actions of the human body – rather than an entity or a "thing". It is a process that is a part of and similar to social interaction. It leans on the idea that humans have a capability to call forth in one self a similar response as it does in the other. While making a gesture to another, the gesturer calls forth a similar response in oneself. This makes it possible for the individual to intuit something about the possible meaning of the social act. Mead referred to this as a "significant symbol". This ability is at the core of Mead's explanation of how humans "know" what they are doing. This "knowing" takes the form of experiencing similar feelings to those of the other. Of course, these evoked feelings may be milder or turn out dissimilar to those of the other and, therefore, "knowing" in social relationships always implies uncertainty. This is depicted in FIGURE 2.

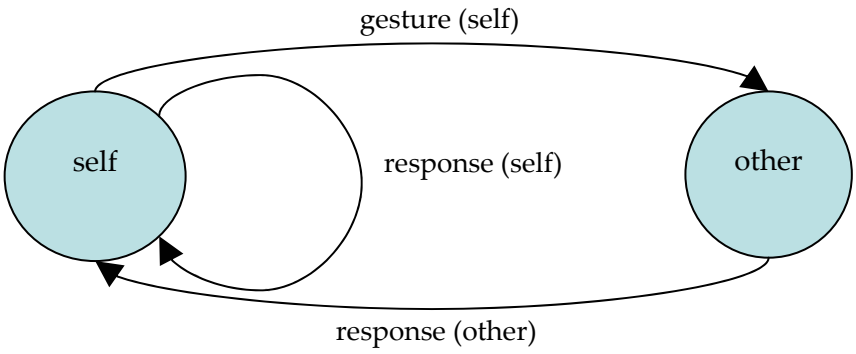

FIGURE 2. Calling a similar response in oneself as in the other.

Here, the human mind takes a form of conversation of gestures in which an individual makes gestures to oneself which call forth responses in oneself. Stacey (2001) and Griffin (2002) refer to this communication with oneself as "private role play", as opposed to "public interaction". This private role play is the basis of one taking an attitude of the other, i.e. another individual or of the generalized other, i.e. a group or an organization. By taking an attitude of the generalized other,

one becomes an object to oneself. Thus, the "self" is a social construct by definition. It emerges from social experience. Note how his explanation does not imply storing any mental contents in individual minds. It simply describes the mind as a continuous process of gesturing and responding where the individual is both the gesturer and the responder.

Systemic structures have reality only insofar they are expressed in local situations.

In the silent conversation of gestures, where one makes gestures that call forth responses in oneself, one is able to reflect on the behaviour of oneself by taking the attitude of the (generalized) other. One is able to form expectations of others' expectations of one's behaviour. Individual "communication strategies" then are formed by these expectations. They reflect past experience because conversations of gestures carried in one's own mind are affected by social experience. The attitude of the generalized other is not given, but evolves over time. It evolves because individuals respond to what they perceive to be the generalized other at a given context. This is formed by past experience and as an individual is engaged in social interaction, she – together with others – form each other's past experience that affects their private role play and, furthermore, future social experience. In this sense, the histories of groups, or organizations, and individuals are intimately intertwined.

Mead's explanation of the emergence of individuals and organizations is radically social. Individuals and social organizations form each other and the absence of the other would deny the existence of the other. This is not to say, that human beings would not exist without other's presence, but that the "individual" would take an entirely different form. The social forming of the individual is essential to the explanation of the emergence of complex cooperative endeavours. Complex, conscious cooperation is possible because individuals are able to abstract away from social experience to take the attitude of the other, take the attitude of the other taking the attitude of the other, and so on. It seems striking that our ability to *abstract away* in this way is closely related to our ability to *tune in* to others by calling forth similar responses in ourselves as in others, as depicted in FIGURE 2.

From the perspective of the gesture–response model, the mind is to be thought of as a process rather than some mental apparatus which determines how an individual adapts to her environment. Mead's explanation of the human mind describes the human mind and social interaction as similar processes which closely interrelate with each other. Such explanation is, in Stacey's (2000, p. 349) words, paradoxical

> …in that it is at the same time between individuals but experienced in their individual bodies. Mind is also paradoxical in another sense: it is formed by the social/the group at the same time as it is forming the social/the group.

Related to this paradoxical nature of the human mind, Mead (1934, p. 329) noted that "Anything that as a whole is more than the mere form of its parts has a nature that belongs to it that is not to be found in the elements out of which it is made." Systems thinking acknowledges that the way individuals behave as participants in a particular group is different from how they would behave if that group did not "exist". Or, in words often used in systems thinking literature, the behaviour of a system is more than sum of its parts. Mead's theory points further to an acknowledgement that it is not only that individuals constitute groups, but that groups mould individuals. Who we are as individuals is not simply located *in us*, but also *around us*, in our relationships with others and in our experience of those relationships. It is not only, that individuals are interdependent when it comes to making some long-reaching decisions. The interdependence that Mead suggests is much more intimate. Individuals both co-adapt and co-evolve, that is, they "construct" themselves, each other and their environment.

However, as Griffin (2002, p. 160) also makes a note of, this does not imply a "radical denial of the individual". While providing a social understanding of individuals, individuals are considered to remain responsible for their actions, since it is individuals who "have the freedom to choose their next acts" (ibid.). While social systems are perceived as being generative and "out there", these emergent behaviours are indeed expressed in local situations by individuals that have been formed by their social experience. It is this mutual influence between the individual and the social that we as individuals cannot escape.

The Complex Responsive Processes Perspective

Stacey and his colleagues (2000, Stacey 2000, 2001, 2003a, 2003b, Griffin 2002) use Mead's conceptual framework in making sense of phenomena emerging in organizational settings. They give rise to the problem of making a distinction between an individual and the social. They do not consider individuals as autonomous of their environment, that is, they cannot form goals and action plans without *at the same time* being influenced by their environment. Following Mead, the theory of complex responsive processes theory describes individual and organizational identities as self-organizing processes of relating expressing little variation. The theory discards the notion of a system and embraces a process view of individuals and organizations. In contrast to what they refer to as the rationalist and formative causes of human action they depict a causal framework to which they refer to as *transformative teleology*.

> Complex responsive processes of relating are temporal processes of interaction between human bodies in the medium of symbols [in Mead's sense] patterning themselves as themes in communicative action. These themes are continuously reproducing and potentially transforming themselves in the process of bodily interaction itself. (Griffin 2002, p. 169)

There is an ever-present lurking opportunity for the transformation of undesirable behavioral patterns for the better.

From the complex responsive processes perspective, transformation of communicative interaction is enabled by the past. Individuals express spontaneity which is constrained and enabled by their past experience. There exists no external cause for the reproduction or transformation of communicative interaction other than the bodily interaction itself. Change does not result from re-designing systemic structures or mental models but from novel responses of individuals. Individual and organizational identities are understood in terms of perpetually constructed themes of communicative interaction. Transformation of these identities are to be understood as transformation in the themes of communicative interaction, that is, private role playing and public interaction taking place in individuals' minds and between individuals. For other elaborations of the theory, see for example Stacey (2001, p. 172), Griffin (2002, pp. 168–174) or Stacey (2003b).

Insights from the Theory of Complex Responsive Processes

An important starting point for the complex responsive processes perspective is that by observing merely "the obvious" themes of communicative interaction one is not able to make sense of what is happening in an organization. Obvious themes are those that reflect the formal, conscious and legitimate aspects of organizational behaviour, e.g., proclaimed visions, strategies, plans, procedures, hierarchically defined roles of employees, and so on. On the one hand, these are not adequate for making sense of organizational behaviour, and on the other, while focusing on these themes one loses sight of how they emerge from non-transparent themes that reflect the informal and/or unconscious aspects of communicative interaction.

The complex responsive processes perspective acknowledges the *context-dependent* and *local* nature of human action. Human relating is context-dependent, because the way individuals perceive their environment affects how they respond to it. An individual's perception of an environment is affected by her past social experience. Yet, there is more to understanding how people behave than their personal characteristics. The perceived environment in which interaction takes place impacts how individuals see their roles within, that is how they perceive the generalized other, which affects how they respond to that environment. How individuals respond to their environment, in turn, affects how the environment is perceived. As contexts are formed in this way, they become unique. The complex responsive processes perspective considers this uniqueness to be essential.

Human interaction is inherently and inevitably local. This is because, values, ideologies and strategies, and so on, are not stored anywhere but perpetually constructed in the public interaction and silent conversations of individuals. In Griffin's (2002, p. 170) words

> Whatever the global themes one might want to articulate for an organization or a society, they have reality only insofar they are expressed in local situations in the living present.

Or, systemic *structures* have reality only insofar they are expressed in local situations. Thereby, leaders are not in control of their organizations in the traditional meaning of control. Surely they can draw visions, make plans and re-design organizational structures, but what happens then, that is how these plans come to realize in lower levels of the organization, is beyond their control. To an extent, they are beyond the reach of control systems, incentive mechanisms and formal contracts. The perspective emphasizes, that instead of making more plans and designing better systems and procedures in order to making things better, one should pay particular attention to the "specific, unique situations in which people are already creating and obstructing new meaning…" (Stacey 2001, p. 230) The perspective emphasizes this because what Stacey et al. (2000, p. 4) have found striking is

> …the complete lack of discussion of how they [managers] get things done day-by-day activity of organizing. If asked, they make few remarks about personal connections, unexpected encounters, bending rules and lobbying for support. However, they seem embarrassed about having "got things done" in this way, generally giving the impression that they do not really know how they "got things done"

The authors continue by questioning ways of managerial thinking, that they find common, as follows.

> Why do managers think they ought to be able to design control systems…so as to be in control of what happens in their organization? Just as important, why do they keep finding that they are not nearly as much "in control" as they believe they should be? Even more important, what then they are actually doing to "get things done, anyway"? Then why do they repeat the same search for improved procedures and systems every year, ignoring the failure to find them in any previous year? Why do they continue, each year, not to ask how they "got things, anyway"? (ibid.)

The novelty of the complex responsive processes perspective is in taking seriously the question, "how things get done, anyway?" It calls forth thinking and discussing about one's everyday actions and local interactions to complement planning and designing. It sees leadership as a process of *participation* as opposed to a leader as a *designer*, *teacher* or *steward*, as suggested by Senge (1990). It is about drawing attention to what Shotter (1993) refers to as the conversational "hurly burly", since it is this "hurly burly" that our lives essentially constitute of. This perspective is similar to that of systems intelligence's:

> For the mind-set of a "master of everyday", what works comes first; understanding why it works comes second. (Hämäläinen and Saarinen 2006, p. 19)

Hämäläinen and Saarinen continue,

> Such was our starting point. We were saying: Let's allow *the system working* to guide us; let's focus primarily on the actual emergence of a human system instead of focusing of our cognitive maps of that emergence. (ibid., their emphasis)

Both perspectives, in this way, take a step away from what both Stacey and his colleagues and Hämäläinen and Saarinen (2006) refer to as systems thinking. One particularly interesting move of the complex responsive processes perspective away from systems thinking, is its explanation of the emergence of constancy, or reproduction of behavioural patterns, and novelty, or transformation of behavioural patterns.

On the Emergence of Constancy and Novelty

In terms of systemic descriptions, constancy can be considered to result from relatively stable systemic structures that govern the system's behaviour. Change results from an individual designing and implementing an intervention that shapes these structures. In this sense, transformation of behavioural patterns is thought more fundamental than the reproduction of them. The complex responsive processes perspective, on the other hand, considers both reproduction and transformation as fundamental. They are both inherent properties of themes of communicative interaction. In Stacey's (2001, p. 135) words,

Organizational change is to be understood in similar terms to that how the organization came to "exist" in the first place.

> history has patterned the private role playing of each individual in particular ways that enact, that is selectively enable and constrain, what individual responds to both privatively and publicly. That history establishes what aspects of the gesturing of the other will be striking, will call forth, or evoke, a response and what kind of response it will evoke…And when they are not strangers, the history of their own personal relating to each other, and the histories of the groups they are a part of, also become relevant.

The history of individuals and groups is thus both enabling and constraining change of those individuals and groups. In similar, but systemic, terms,

> many of the core beliefs of the people around us do not show up in their actions. People have adjusted to *what they believe is the system* (Hämäläinen and Saarinen 2006, p. 21, their emphasis).

Both the complex responsive processes perspective and systems intelligence draw a far more optimistic picture of systems and their transformation than, for example, Senge (1990). Systems intelligence considers that systems may change due to a small but significant change in one's behaviour. An act symbolizing a glimpse of hope, for instance, might cause the latent beliefs of individuals to surface. Systems can change "dramatically, massively, and instantaneously" (Hämäläinen and Saarinen 2006, p. 21). It is the path-dependency of behavioural patterns, which both constrains and enables change, even massive change. From a systems thinking perspective, change looks like a lot of work. It requires "identifying" the current system, designing an intervention that changes the system and the implementing that intervention. Neither the complex responsive processes perspective nor systems intelligence denies that change can require a considerable amount of work. What both perspectives emphasize, however, is that change has

less to do with the identify-design-implement cycle and more to do with something more subtle. Indeed, systems intelligence emphasizes that things could, virtually all the time, be different in most situations. Or as Mead (1934, p. 215) wrote,

> 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 may be a slight effect, but in so far as he has adjusted himself, the adjustments have changed the type of the environment to which he can respond and the world is accordingly a different world. There is always a mutual relationship of the individual and the community in which the individual lives.

Or as Griffin (2002, p. 158) put it,

> Change in societies, cultures and organizations will usually come about gradually: no one individual can reorganize the whole society, but each is continually affecting society by his/her own attitude because he/she does take up the attitude of the group and responds to it, and that response can change the attitude of the group.

It would seem that where undesirable behavioural patterns are reproduced over and over again, there is an ever-present lurking opportunity for the transformation of those behavioural patterns for the better. The "mechanism" for this type of change is a "by-product" of all human interaction. This reflects the concept of a "hidden potential" in social systems, highlighted by Saarinen and Hämäläinen (2004).

The Theory of Complex Responsive Processes and Systems Intelligence

What is intriguing about the complex responsive processes perspective is that while discarding the notion of individuals and social organizations as systems that have some pre-existing reality, it retains both the notion of an individual and social organizations which affect individuals. It does not consider one being superior to the other since each forms the other. Groups (or organizations) and their characteristics begin to form immediately as individuals enter the scene while, *at the same time*, the scene starts forming the individuals involved. Since organizational identities are formed by interaction of individuals, organizations do not exist outside that interaction. Organizational change is to be understood in similar terms to that how the organization came to "exist" in the first place. The perspective is in effect systemic in the sense that it recognizes the mutual and simultaneous influence of the processes of the mind and social interaction, although Stacey and his associates do not conceptualize their perspective as such. Indeed, they have recognized that the (responsive) processes in which individuals and social organizations come into "being" are systemic. The complex responsive processes perspective emphasizes, however, that neither individuals nor social organizations are to be thought as ever complete or moving towards a knowable future. Rather, both are constantly unfolding in an unpredictable manner as individual identities are "perpetually under construction" and social organizations are "continual processes of iteration" in which these wholes are perpetually constructing themselves (Stacey et al. 2000, p. 32).

Similarly, systems intelligence sees systems as constructs and thus relative to the point of view. Systems intelligence highlights the role of the strong dependence of the assumptions held by individuals of systems they are a part of. On the negative side, such characteristic of human systems can be seen to drive systems towards repetitive and undesirable behavioural patterns. These systems are perpetually evolving wholes which are only seemingly fixed, yet they potentially give rise to illusions of command and fixedness (Hämäläinen and Saarinen, 2006, 2007). But – on the positive side – the downwards-driving system cannot persist if individual

assumptions regarding the system do not persist. The potential pitfall of the systems thinking approach is in the risk of remaining captive of seemingly fixed aspects of human systems. Systems intelligence perspective aims to appreciate the leverage within this sensitivity-to-beliefs property of human systems.

Both perspectives aim to refocus attention from identifying and controlling systems to actively participating in them. Stacey and his colleagues are cautious in drawing any prescriptions from their perspective. In fact, Stacey (2000) stresses that he prefers to discuss the "implications" of the perspective rather than to talk about the "applications" or "prescriptions" of it. No wonder, because the perspective itself emphasizes the uniqueness of human relating and, consequently, the dangers of narrowing one's thinking down to simplistic universals and some grand picture of organizational life. Accordingly, Stacey (2000, p. 412) argues that the main implication of the complex responsive processes perspective is in its goal to refocus attention to what people in organizations "are already, and always have been, doing". The "whole" of interest should be one's own, direct experience of "relating and managing in relationship with others". Midgley (2000) sees a need for a similar, but systemic, perspective. In his practice of systemic intervention observation is not seen value-neutral and prior to but value-full and part of intervention. One cannot observe without being influenced by contexts that one is, or has been, a part of, thus making it impossible to be "value-neural". Furthermore, if one is to observe and experience a whole, one needs to be a part of such a whole, thus making observation a part of any intervention in a social context. Midgley's (ibid.) perspective emphasizes the importance of such systemic nature of intervention.

Systems intelligence perspective takes a similar standpoint. On the other hand, systems intelligence seeks to connect this perspective to an action-oriented and systemic perspective, which is the "engineering thinking" perspective. The perspective highlights solutions and opportunities rather than problems and potential pitfalls. According to Stacey (2000, p. 9), when "people focus their attention differently, they are highly likely to take different kinds of actions." While refocusing attention surely has impact on what actions individuals take, one might add that refocusing attention to actually taking different kinds of actions has even bigger impact on whether different actions eventually are taken. From this action-oriented point-of-view, systems intelligence attempts to go further from refocusing attention to how "things get done, anyway" to *striving* to "get things done, anyway". Furthermore, it is conceptually oriented towards unexpected surfacing of hidden potential rather than towards unwanted surprise.

Due to the fact that our lives take place in "messes" rather than clean and identifiable systems, there is a need for holistic thinking about these messes, or systems. Furthermore, due to the messy nature of human systems, what the system is can never be fully grasped. Yet, we must, and, indeed, we always have been, acting within these messes. What the complex responsive processes perspective and the systems intelligence perspective both point to, is that within such innate uncertainty, we can act intelligently, by focusing on what we already are, and always have been doing. Such form of intelligence is not merely implementation of intelligent interventions every now and then, but also intelligent participation in the environments we already are a part of. It is this intelligence-operating-from-within-a-mess that is of interest to systems intelligence.

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