

## Leadership capability : an autopoietic perspective

SICE, Petia, KOYA, Kushwanth <<http://orcid.org/0000-0002-7718-1116>> and  
MANSI, Safwat

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# LEADERSHIP CAPABILITY: AN AUTOPOIETIC PERSPECTIVE

Petia Sice\*, Kushwanth Koya\*, Safwat Mansi\*

\* Northumbria University, Faculty of Engineering and Environment,

Pandon Building, Camden Street, Newcastle Upon Tyne, NE2 1XE

[Petia.Sice@northumbria.ac.uk](mailto:Petia.Sice@northumbria.ac.uk), corresponding author, tel. 00 44 243 7632

[Kushwanth.Koya@northumbria.ac.uk](mailto:Kushwanth.Koya@northumbria.ac.uk),

[Safwat.Mansi@northumbria.ac.uk](mailto:Safwat.Mansi@northumbria.ac.uk)

## **Abstract**

There is a large body of literature by the Chilean biologists Humberto Maturana and Francisco Varela, referred to as Autopoietic Theory. This theory describes the dynamics of living systems; dealing with cognition as a biological phenomenon. The theory, however, has found far wider application than may be suggested from its biological roots, to generate implications for epistemology, i.e. enactive view of cognition, communication and social systems theory. This paper presents key insights and explores their implication to understanding leadership capability from the perspective of an enactive view of cognition.

Autopoiesis suggests that the quality of human experience, is determined by the interplay between the internal dynamics (biological processes) and the environment (social and other) of an active situated human agent, and thus offers an alternative perspective to interpreting and developing leadership capability. What is required is to foster an environment where awareness is actively developed, fragmentation of experience is avoided and language is used to promote creativity. A mini case study of the hearing aid manufacturer, Oticon A/S, is used for illustration.

**Keywords:** leadership, epistemology, autopoiesis, dialogue, enactive view of cognition, becoming aware.

Developing an adequate leadership capability to allow for socially responsible action is of critical importance in the current climate of swift changes and within the context of globalisation and communication opportunities and challenges presented by day to day advancements in information technologies [28, 30]. Thus, there is a need to rethink the phenomenon of leadership to reflect the more subtle levels of reality that deal with the quality of consciousness and awareness, all of which determine the quality of experience, intention and, therefore, the quality of action.

Leading, as used in everyday language, is linked to the ability to guide, direct oneself and others. It is related to an individual's cognitive capacity, an ability to learn to 'see' clearly, conduct 'appropriate' choices and actions. What 'appropriate' means in this context very much depends on what one can 'perceive', what is important to them. The theory of Autopoiesis [14] suggests that the development of this cognitive ability is a continuous process of 'becoming' that is determined by our biological embodiment and by our co-existence in an environment, that is integral to what we may choose to call Universe. This paper interprets the insights of Autopoiesis in terms of developing a 'clearer' understanding and involvement in leading ourselves and others in creating the life we desire, i.e. the articulating the factors that contribute to developing a leadership capability.

## **1. Autopoiesis**

There exists a large body of work by two Chilean Biologists: Humberto Maturana and Francisco Varela, usually referred to as Autopoietic theory [14]. This body of theory concerns the dynamics of living systems, asking the questions: What is a definition of a living entity? What does it mean to be alive?

Maturana and Varela define a living entity as a system that produces itself, i.e. a system whose output is itself. An autopoietic (living) system is

defined as ‘a network of processes of production of components that produces the components that: through their interaction and transformations continuously regenerate the network of processes that produced them’ [14].

Autopoiesis is basic to the living individual. What happens to the individual is subservient to its autopoietic organisation, for as long as it exists the autopoietic organisation remains invariant. What this means, is that its identity, and therefore its emergent global properties, are generated through a process of self-organisation, within its network of components. However, we must also realise that this process of self-organisation is conditioned by a two-way process of local-to-global and global-to-local causation, i.e. we need to consider the mutual embeddedness of component dynamics, autopoietic entity and its environment. First, there is the local-to-global determination (‘upward’ causation) through which the entity, with its properties, emerges. Secondly, however, there is global-to-local determination (‘downward’ causation), where global characteristics constrain or direct local interactions between the components. Thus, the internal dynamics of the components (neuronal nets, metabolic nets, energy flow and so on) generate and sustain the global properties of the autopoietic entity. At the same time, however, the global properties (body, consciousness, mind, emotion, and so on) constrain and govern the behaviour of the individual components. This dialectic relationship between local and global levels is described in autopoietic theory as ‘reciprocal causality’. For example, in organisms with a nervous system, the rules of interactions within the neuronal network are in reciprocal relationship with the overall activity of the autopoietic entity. To a very large extent, behaviour is a regulator of perception. We enact our world rather than recognise one [21, 23].

Cognition is a characteristic pertaining to an active situated agent, continuously making sense and acting in a context. Knowledge emerges and

develops in the processes of interaction in an environment and thus more suitable to define as a process ('knowing') rather than as a container ('knowledge') [29]. Our focus is on autopoiesis and cognition. We are staying away from the unsettled discourse of organisations as autopoietic or autonomous systems [14, 24, 29, 31].

## **2. Enactive View of Cognition**

Autopoiesis suggests an enactive view of cognition, i.e. we enact the world, rather than recognise one [14]. Our experience of the world is born in our interactions with the environment and these are validated by our embodiment. These experiences represent an irreducible first-person ontology [20]. Thus, we cannot explain experience 'on the cheap', by assuming a third person or objective viewpoint as advocated by Western culture [26]. What is required is to recognise that both first-person and third person accounts, and their interplay, are necessary in order to do justice to the quality of our knowing. Thus, exploring human experience as one of pure reflection [5,9] is not enough to improve the quality of our knowing, as it does not address the possibility of enhancing the quality of experience and thus richer enaction of the world we live in. Varela points out to the importance of developing human experience rather than being confined to mere reflecting on experience [8]. He suggests that what is needed in developing our cognitive ability, is a disciplined act of cultivating our capacity 'of becoming aware' of the sources of our experience and, thus, opening up new possibilities in our habitual mind stream. In the work of N. Depraz, F. Varela and P. Vermersch [8], this action of becoming aware is punctuated by three 'gestures': (1) Suspension – a conscious transient suspension of beliefs about the thing being examined; (2) Redirection – turning ones own attention from the object to its source, backwards towards the arising of the thoughts themselves; and, (3) Letting go - changing ones attitude from looking for something to letting it come.

Action in terms of ‘doing’ or ‘reflection’ is an activity of the actor towards or in response to the environment [9]. The act of becoming aware, on the other hand, is one of uniting, being part of the environment, experiencing being part of the universe [7,11,17]. The cultivation of the capacity ‘of becoming aware’ is the basis for human creativity and success: as the Japanese philosopher Kitaro Nishida [15] puts it, ‘the burst of insight is a quality of experience sustained in one’s spiritual practice’; and for Nonaka [16], ‘the spiritual essence of place is an essential part of situated knowledge creation’.

### **3. Avoiding Fragmentation**

Autopoiesis recognises distinction as the main cognitive operation [14]. However, since our distinctions are generated through our interactions, then the content of our knowledge is not simply a mapping of reality, but our way of living it. Because of this, the distinctions that we make in the process of knowing the World are not proof of the objective existence of separate entities, they are how the World unfolds through us. The problem, however, is that our thought is pervaded with differences and distinctions and this leads us to look on these as though they were real divisions, so that the world is seen and experienced as actually broken up into fragments [4].

Knowing is the actor’s experiencing (doing, becoming aware, reflecting) of the World. Thus, all our theories are nothing more than insights that are neither true nor false. Our experience is validated in a special way by the human structure, and this shapes the entity that arises in our description. Thus, in our interactions we specify a world rather than recognise one and it is this specified world that constitutes our knowledge. It is a failing of Western reductionism, that drives us to look for complete knowing and, thus, for ‘true’ knowledge. However, if we recognise that the world will

never be truly revealed to us and that our theories or models are merely our current way of explaining it, then we must resign ourselves to the notion that our theories will continuously evolve and adapt since, in effect, there is no fixed or final goal to be attained [22].

Insight is continuously turned into something false and misleading by the procedure of learning mechanically through conformity to existent teachings, rather than through a creative grasp of the insights implicit in such teachings [4]. For when true insight occurs, the source cannot be within ideas already contained in the field of study, but rather, has to be in the 'immeasurable'. The problem, however, is that there is nothing positive or direct that one can do to get in touch with the immeasurable. Creativity is important. When communication between different theories and views is free and open so that a number of different fragments (alternatives) can be held together at the same time, then it is possible to make new creative perceptions. Moreover, the dynamics of the knowing process should be freed to be sensitive to the small changes that allow these new creative insights to flourish. It is the interplay between stability and instability (conformity and chaos) that is the essence of this freedom. Our distinctions (insights) can be considered to be temporarily stable and, thus, allow us to manage in the world. However, how they will evolve or change is chaotic and, is a result of the structural drift exhibited in structural coupling (interaction) of the actor with the environment [23].

When we examine the world through our theoretical insights, the 'factual knowledge' that we obtain will be shaped by our theories. Clarity of perception necessitates that we are generally aware of how our experience is shaped by these insights [2]. If we are not aware that our theories are ever changing forms of insight, giving shape and form to experience in general, our vision will be limited. To give up these insights would make us feel as though we have no ground to build on, and so we cling to them. There is an

alternative. As soon as we realise the relative truth of our theories we can use them as home base and feel free to come and go. It is for this reason that moments of openness to 'becoming aware' should not be ignored. For it is this openness to 'becoming aware' that allows new insights to flourish. Consequently, awareness and openness to the whole should be welcomed rather than explained away within our inclination to engage in a rationalistic argument [22].

True unity in the individual and between man and surroundings, can arise only in a form of action that does not attempt to fragment the whole of reality. Wholeness of existence can be understood properly only when we ourselves are whole and free of the prevailing fragmentation to which we have been conditioned [2].

#### **4. Information Sourcing**

The importance of the concept of information sourcing is that it recognises the entity's behaviour is not only determined by its situatedness but also by the form of the global information field. The form, or the state of this information field at an instant, is referred to by Bohm [4], as the information potential. Further, the information potential is thought of as becoming active when it enters the entity's energy field and influences the behaviour of the entity. The basic idea of active information has significant applications in the social domain. For example, in an organisation, the philosophies of a particular management theory, if adopted, may well enter and direct all the activities of the organisation. Moreover, it is also possible to envisage that such a process takes place through a process of resonance, that is, when the information pattern from the global information field communicates with a similar or sympathetic local information pattern, it can promote and reinforce it. [25]

Such a premise is also supported by the findings of chaos theory [22].

Negligible changes in form or starting point can lead to vast differences in



the final outcome. Therefore, promoting a culture which is sensitive to both local and global information sourcing can lead to benefits in the form of new creative interpretations of the World and, thus, to new actions. Knowing is not necessarily local to the knowing agent. There is both a local and a non-local context to any situation with which the knower is involved and these exist simultaneously. Thus, it is better to embrace local (immediate) and non-local information as a whole, rather than to focus attention purely on the local context of a situation (as may be the case with the majority of organisational case studies). In this respect it is important that we encourage action of an awareness character, that is, action that will allow tuning with the information field both globally and locally and sensing subtle changes. From an autopoietic perspective, as humans (individually and collectively), we respond to the distinctions we are able to make, i.e. to what is important to us. The act of 'becoming aware' as articulated in the work of N. Depraz, F. Varela and P. Vermersch [8] could be interpreted as tuning in, both individually and collectively, into the information field of what is wanting to emerge[1].

## **5. Communication, Knowing and Co-creation**

In the previous section we argued that the cultivation of awareness is an important aspect in the enhancement of the quality of our knowing. To end our deliberations here, however, would limit our understanding of the scope of this knowledge to a one of private ascertainment. To be of greater benefit this gain in our awareness must be expressed explicitly in language, to form communicable items. Moreover, it is clear that once these descriptions are made public they become part of the environment and thus shape our experiences as much as the gain in awareness that shapes them. Thus again it becomes clear that the mind and the world that we bring forth through our languaging together are not separate, but exist in continuous co-determination. It is this reciprocal relationship, between experience and

language, that organisations need greater cognisance if they wish to promote creativity and innovation. It is through explicitly introducing the insights of experience into language that will allow for new ways of acting in social systems. Caution is to be applied as this in turn will shape and condition experience. Since we exist in language, the domain of discourse that we generate becomes part of our domain of existence and constitutes part of our environment. From the autopoietic perspective, language is not a tool to reveal an objective world; rather language is a venue for action, coupling the cognitive domains of two or more agents. It is through languaging that we coordinate our actions and create our world. Because of this, we have a responsibility to create communication practices that will allow, at least transiently, the coexistence of different understandings as we develop and explore our language together [21, 22].

Bohm [3] suggests that a new type of dialogue is needed in human communications. The basic idea of Bohm's dialogue is to be able to talk while suspending our opinions, holding them in front of us, while neither suppressing them nor insisting upon them, not trying to convince but simply to understand, without having to make any decisions or saying who's right who's wrong.

The form of dialogue suggested by Bohm encourages opening up and engaging ourselves in listening without a particular purpose, listening for the purpose of hearing what else there is, what is it that is being said, whilst trying to consciously suspend our assumptions and judgements. It is building collective awareness of what there is to be heard without focusing it through the lenses of our judgements and assumptions [4]. Through this generative process organisations will enhance their capability of developing a meaningful language, a valid venue for action and continuous learning. As humans we are constituted in language and the domain of discourse that we

generate becomes part of our domain of existence and constitutes part of the environment in which we conserve identity and adaptation [14]

However, whether language is exploited to promote creativity or to stifle it depends very much on how organisations and their leaders perceive the role of the human actor, both individually and as a collective. If language is used to promote the status-quo or, one way or other, reinforce a specific world-view, then it can lead to pathological organisational life, where the individual members are 'enslaved' to support and act in organisational processes that they have no access to change. Such organisations, deliberately or not, use language as a repressive tool to shape human experience, and because of this, the creative potential of exploring and developing human experience into alternative language and practices, is lost [22].

A simple pragmatic alternative is to respect human experience. What is required is that we foster an environment where our awareness (and attentiveness), of ourselves and of our surroundings is actively developed. This, however, is not enough. In addition, we need to allow freedom for the local actors to enact and manage their microworlds [29]; and develop communication practices to harness the experience of the individual through introducing it in the collective linguistic domain. Quality of conversations becomes important when we seek to encourage new linguistic distinctions based on new experiences and awareness to emerge. Improving quality of conversations means improving our understanding of others, of others views and assumptions.

## **6. The Evolving Order**

Our Western culture embraces the perception of static order [18].

Consequently, we implicitly believe that we can find an order that explains behaviour; or that we can conjure and implement an order that generates the

behaviour that we want to achieve. It is the assumed position that the World is governed by orders that we call laws. And, if we discover these laws we can explain, manage, control and even create systems to obey them.

Authors such as Nicolis and Prigogine, however, consider such a premise to be a misconception. They contend that man must have looked for the power of creation in the wrong place and, because of this, created the domination of one person's will over the others; and an order of human enterprise where control and rigid structures are the norm. The power of creation, as studies in deterministic chaos have shown, lies within what is being created, within the building blocks and their communication with each other. 'As there is no one to build nature we must give to its very elements - the microscopic activity, a description that accounts for the building process' [18].

Moreover, in the case of human enterprises these elements (and the description of the building process) lie in the people (no matter what their seniority) that inhabit them.

## **7. Reflection on Leadership Capability at Oticon A/S**

### *Awareness, Insight and Evolving Order*

Shortly after his appointment as the President of Oticon A/S, Lars Kolind visited a Hearing Aid exhibition in Germany. Looking over the exhibits Kolind became only too aware that competition in the product field was intense and that the financial base of his company could never match that of its major competitors. To survive in this intense oligopoly Oticon needed a different approach. The technology was not enough; the ability 'to think the unthinkable' and to make it happen would be the vital ingredient for success. The question was, how could he unlock the door to the 'unthinkable' (the immeasurable).

Kolind was aware that the competitiveness of his company would depend on its ability to generate new knowledge and to utilise this effectively in its products and services. What was needed was an organisation based on

insight. Thus, in Oticon every employee is expected to be creative, take initiative, and have the courage to go beyond formal frameworks and conventions [13]. Moreover, this continuous urge for reinterpretation has become embedded within Oticon's vision of itself. Creativity forms part of the company's image of itself and the ability to take responsibility is highly valued. The company motto is 'Freedom with Responsibility' [10]. Thus, learning occurs in an atmosphere where communication between different theories and views is free and open so that a number of alternatives can be held together at the same time and this makes it possible to develop new creative perceptions. Moreover, the dynamics of the knowing process are inherently chaotic and, therefore, are sensitive to small changes (embryonic insights). Coherence and focus in learning is achieved through responsibility and commitment to common values (consensus).

In contrast to the more traditional ways of thinking, founded on a rationalistic exploration of the situation based on current beliefs and past experiences, Oticon's motto is 'think the unthinkable'. The message is simple, break out of the boundaries of accepted logic, relax the security of known barriers, cultivate a desire for listening, and challenge your experiences of yourself and of the universe. This attitude is reinforced by actively encouraging listening: to what everyone in Oticon has to say; to the world outside; and, by interpreting the company in terms of society as a whole. That is, to constantly move the focus, from oneself, to the company, to society in a continuum in harmony with the total flux. Artificial borders are reduced; ideas are encouraged to come from everyone and everyone is encouraged to contribute in the way they are best able. To facilitate this, information is owned by everyone and all documents are accessible and stored in a common electronic information space. 'We are one large team, says Kolind, describing the need for an open office environment. We have to be able to move to the area where a particular task is being solved. Each of us works on several tasks. And our role in those tasks change' [25]. At

Oticon, not only is everyone encouraged to articulate their ideas, but also, to initiate new developments or improvements. 'I know, says Lars Kolind, that you are all able to think and act responsibly and innovatively, and moreover you know what is needed to be done. If you have suggestions for improvements, please let me know. If I have not answered you in 24 hours you can take it for a yes, and you will be given resources to realise your proposal' [12]. In Oticon, doing is seen as a source for innovation, and learning is encouraged.

#### *Local and non-local Information sourcing*

Oticon actively seeks the non-local as well as the local interpretation and information. Ideas and opinions are encouraged to come from outside, that is from the customer and from actors with different backgrounds, cultures and perspectives on society. Oticon's image of itself is born in and developed in resonance with its public image. The challenge for Oticon is to manage transparency and to mirror itself in the eyes of the outside world and to learn from its reactions. To this end, employees are encouraged to perceive themselves as part of the hearing care service, rather than as employees in the hearing aid industry. Thus, a holistic approach to the customer is pursued, which listens to the customer as a person and takes into account the whole spectrum of customer needs. 'Earlier we saw the ear as our customer, now it is the entire person' [25].

#### *Enaction of Diverse Perspectives*

Oticon's vision starts with the people. Oticon is a company where the majority of activities performed by an individual are something that they enjoy doing and are good at. The aim is to liberate the creativity of each individual, to allow him to work flexibly and to provide him with maximum freedom [13]. An important aspect of Oticon's approach to knowing is a shared feeling of enjoyment, of creating and being listened to. This

provides energy, which stimulates new ideas and allows the free play of thought. Oticon deliberately seeks to be a 'happy organisation', and by listening to the opinions of its employees and to the outside world, is continuously exploring its understanding of happiness. Oticon actively looks for wholeness of existence, both for itself and for its employees. The aim being to free employees from the fragmentation that arises when they are 'living' very different sets of values in their private and working lives. When asked to characterise Oticon in five words employees most often came up with: 'freedom', 'fun', 'inspiring', 'happiness', 'joy', 'pride', 'team spirit' [19].

Conflicts are accepted and dealt with openly. In project organisation, where everyone is encouraged to participate actively and, therefore, to compete on ideas and for resources, conflict between different worldviews is 'just normal'. Conflicts are respected and resolved openly through negotiation and dialogue. Thus, conflict, rather than being destructive, becomes another avenue leading to productive dialogue.

The most striking feature of Oticon's approach to knowing is that it is inherently dynamic, whilst more traditional companies have tended to build on their existing strengths, Oticon has built on the ability to change.

Allowing knowing to manifest itself as enaction of the situation, rather than merely being data for the process of building representations, is an important factor for organisational success.

### *Warning Signals*

Despite its success the ultra busy competition and conflict paradigm, enacted within Oticon, has the disadvantage that there is no space for 'mental relaxation', no project with a redundant existence (in terms of its outcomes not in terms of its usefulness to the individual), to allow developing awareness and promote self harmony. It is our contention that

the process of knowing (the path to knowledge) is important and that this process comprises (at least) four equally important elements (doing, reflecting, feeling and becoming aware). What's more, the neglect of any of these elements substantially diminishes our knowledge of our situation. Thus, constant demands and the absence of a counter balance, a 'place of relaxation', may tend to lead to an elevation in the 'base' stress level. This will diminish organisational well-being, and have an impact on organisational performance in the longer term – beyond that of Lars Kolind's CEO-ship.

## **8. Towards a Conclusion**

When making sense of a situation we look to identify the things that matter and the relationships between them, i.e. the order of things. At any given stage it is possible to describe a certain order as relevant and appropriate. The problem, however, is that in practice we often act as if the order that we perceive is a given or absolute reality. Very often social groups and societies work with categories of distinction upon which they implicitly agree, and because these categories are valid for the majority, they are accepted as if they have some sort of objective existence. This is dangerous because when the context of inquiry changes, and new perceptions of order are needed, the mind tends to cling to these old perceptions since these are what have been accepted. Such implicit conventions of order, when held fixed, stifle creativity. Moreover, they can lead to a breakdown in communication between the supporters of the new emerging perceptions of order and the stabilised or well-accepted perceptions of order. This, of course, is because we tend to reinforce our concepts and beliefs as though they are absolute and in so doing we choose to fragment 'the world' from ourselves, without recognising that we are participants in its creation. What we need to remember is that our concepts and their meanings are moulded by the activities of our everyday life within our social group or



society. When the context of this society changes new categories are needed. Thus, working with the old set of concepts within the new context will more often than not result in inappropriate behaviour. In essence, our ordering of 'reality' influences how we live and our life together gives meaning to our concepts. It becomes clear, therefore, that we should adopt fluid rather than fixed perceptions of order. This implies:

1. A realisation that order is also dynamic and that our perceptions of order change in the continuous cycle of interaction between the subject and the object of knowing.
2. Order is created and validated by the interactions between human actors in the continuous interplay between first and third person's accounts of the situation.

Our understanding of experience suggests that while experience is clearly a personal event, this does not mean it is private, in the sense of some kind of isolated subject that is parachuted down onto a pre-given objective world. Mind and world are not separate. The senses do not perceive 'the world' instead they are participating parts of the mind-world whole [27]. Consequently, the 'separation' of first-person vs. third person accounts is misleading. It makes us forget that:

*'...so called third person, objective accounts are done by a community of concrete people who are embodied in their social and natural worlds as much as first-person accounts. The line of separation between rigour and lack of it is not to be drawn between third and first person accounts, but rather on whether a description is based on a methodological ground leading to a communal validation and shared knowledge.'* [8, pp. 120]

It follows, therefore, that the process of leadership must be in harmony with this view of the creation of reality, based on a perspective of 'the self', both

individually and collectively. The working environment must allow the expression and growth of the 'self'. Moreover, it becomes apparent that the core processes of leadership will be deeply intertwined with the capability to cultivate awareness: the use of one's 'self' to sense and bring to the fore that which 'wants to emerge'. Thus, leadership appears as both deeply personal and inherently collective and may be defined as shaping 'life-enhancing' conditions [1] and, thus, promoting organisational wellness through a 'sensitive' organisational culture, a culture that allows and promotes evolution of order.

Based on these arguments, Table 1 presents our understanding of the factors influencing leadership cognitive ability as perceived from a reductionist and from an autopoietic perspective.

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**Dr Petia Sice**, Reader in Complexity and Organisation at Northumbria University. She is passionate about interpreting and applying insights from systems and complexity theory for facilitating positive change and

wellbeing for individuals and organisations. Latest developments in her research focus on exploring synergies between complex systems theory and social science, and how these may inform a new paradigm of thinking and practice.

She is a senior associate editor of the International Journal of Systems and Society, co-founder of the Wellbeing, Complexity and Enterprise (WELCOME net) and convenor of the UK Systems Society North.



**Kushwanth Koya**, PhD researcher in *Complexity and Leadership* at Northumbria University. The main aim of his research is to develop a holistic approach and models for

understanding leadership that allow for: continuity and coherence between the biological and the social; a generative (explanatory) perspective of leadership behaviour related to state of being. Kushwanth Koya is sponsored Corpus Media Labs Ltd.



**Safwat Mansi**, Professor and Head of Enterprise, Northumbria University. Professor Mansi joined Northumbria University in 1987 following 7 years industrial experience

leading a Satellite Communication Planning unit at Sudan Telecommunication and then research and teaching posts at Newcastle and Reading Universities during 1980-86. Since 1988 he supported businesses and from 1995 led two DTI, 5 European technology transfer projects, one European research project and supported over 1000 North East businesses to develop new products and processes. He is also involved in research and technology development in the areas of wellbeing and process innovation.

**Table 1. Factors Influencing Cognitive Ability in Leadership**

<b>Factors influencing Leadership Cognitive Ability</b>	<b>Reductionist Perspective</b>	<b>Autopoietic Perspective</b>
<b>Epistemology</b>	<p><b>Encouraging Fragmentation:</b> The distinctions we make are perceived as real divisions. The World is seen and experienced as broken up into fragments. This fragmentation forms the basis for management definitions.</p> <p><b>Sourcing Information:</b> local, only the immediate context is taken into account.</p> <p><b>Engaging in doing and reflection</b></p>	<p><b>Avoiding Fragmentation (enaction):</b> The distinctions that we make in the process of knowing the World are not proof of the objective existence of separate entities, they are how the World unfolds through us.</p> <p><b>Sourcing Information:</b> local and non-local context have relevance.</p> <p><b>Engaging in doing and reflection and becoming aware (enhancing experience)</b></p>
<b>Communication</b>	<p><b>Means for effective communication:</b> Information and knowledge transfer; discussion, etc.</p>	<p><b>Means for effective communication:</b> Dialogue - dialogue encourages opening up and engaging ourselves in listening whilst trying to consciously suspend our assumptions and judgements</p>
<b>Order</b>	<p><b>Order as fixed categories of distinction:</b> Social groups work with categories of distinction (i.e. order) upon which they implicitly agree, and because these categories are valid for the majority, they are accepted as if they have some sort of objective existence.</p>	<p><b>Evolving Order:</b> Categories of distinctions (i.e. order) are created and validated by the interactions between human actors. New categories of distinction appear with the emergence of new contexts.</p>