Changing the Corporate Paradigm: from the Duality of Individualism-Collectivism to Complementarism

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Abstract

There have been cries for the current dominant corporate paradigm to change, these coming from victims of the 2008 recession as well as corporate practitioners. The current paradigm centres on the cultural value set of Individualism, the opposite of which is Culturalism. However the Individualism-Collectivism duality creates an interactive dynamic that makes analyses by either view meaningless. This calls for a new Complementarist view, which should be provided by organisational theory, but there is an argument that its core is full of myth and of little value. Bandura tells us that cybernetic agency theory can take on this role. In this paper a new form of collective agency theory is outlined that is able to take the Complementarist role, and hence provide guidance for the development of a paradigm shift.

1. Introduction

The paper is partitioned into three parts. The first part considers the corporate paradigm as a problem issue, which is discussed in terms of the cultural value sets of Individualism and Collectivism that many consider to operate as a duality, and which can be argued to be part of a host *Complementarist* continuum. The second part will explore theory of the collective agency as a Complementarist approach. This adopts a cybernetic modelling approach that views the organisation, not only as an organ of production that requires management and strategy, but as a social collective that is susceptible to social psychology - the principles of which need to be harnessed to more fully understand it, and where necessary to guide its problem diagnosis. The organisation modelling starts with a human activity groups seen as a living system that is tied to its culture, and consideration will be made of its pathologies and how these can impact on its capacity towards sustainability. The third part discusses the nature of the paradigm, and how it changes as a reflection of organisational change, and how chaos enters into this change process. Finally, the paper is concluded with some reflection.

1.1 The Paradigm Problem and the Individualism-Collectivism Continuum

Mary Beth McEuen, vice president and executive director for The Maritz Institute, recently wrote an article[1] entitled *The Game Has Changed: A New Paradigm for Stakeholder Engagement*. This provides an analysis of the changes in the current business environment that have resulted from people's desire for greater meaning and connection. It argues that in the "new normal" environment, businesses must do more than merely offer a good product or serve to create value. Customers, sales partners, and employees "are looking for relationships with organizations they can trust . . . organizations that care...organizations that align with their own values. Instead of viewing people as a means to profit contemporary businesses must see their customers and clients as stakeholders in creating shared value." Traditional business beliefs that operate at the core of the paradigm that brought *success* in the past will therefore, according to the analysis, not bring success in the future. Indeed what it is that constitutes such success has also been discussed, and one of the results has been recognition of the need for sustainability, something which is not easily facilitated through the old/current paradigm.

By sustainability is meant the capacity of an organisation to make positive net contributions to its own viability and the development of the larger super system in which it is embedded (Schwaninger, 2001). For Bandura (2006), sustainability is endangered by the territorial culturalism and parochial interests apparent in the dominating duality of the *Individualism* and *Collectivism* polar perspectives that arise from distinct cultural value sets. Tamis-LeMonda et al. (2007) also note that the duality is theoretically and empirically limiting. The two perspectives are culturally embedded and affect how people respond to the world (Shulruf, Hattie & Dixon, 2011), even though how they are manifested also depend on the contextual situation (Triandis, 1988). Oyserman (2002) explains Individualism as the doctrine that all social phenomena (their structure and potential to change) are in principle explicable only in terms of individuals – for instance their properties, goals, and beliefs. In contrast Collectivism in principle and ideally relates to people coming together in a collective to act unitarily through normative processes in order to satisfy some commonly agreed and understood purpose or interest. Bodies that adopt Individualism and Collectivism have realities that are differently framed, and hence maintain ontological and epistemic boundaries that constitute frames of reality and meaning, and these represent barriers for coherent meaningful mutual communications. For Individualism, the reality frames the development

goal of *autonomy/independence* while Collectivism frames *relatedness/interdependence* (Tamis-LeMonda et al., 2007; Schartz, Luychx & Vignie, 2011). Individualism and Collectivism both embrace distinct cultural identities (from which organisational structures are a reflection) that are manifested within individuals as self-identity that impacts on basic motives for action (Earley & Gibson, 1998). Viskovatoff (1999) notes that Individualism-Collectivism represents a dualism, and recognises attempts to overcome it that: (i) adopts a post-structuralist approach; (ii) recognises that reality should be seen as chaotic (and hence subject to chaos), disorganized and fragmented (hence affecting the framing of development goals); and (iii) views the social world in terms of the *decentred* subject (thus impacting on self-identity).

Tamis-LeMonda et al. (2007) are interested in the socialization of children by their parents, and note the dominating influence in this of Individualistic and Collectivist perspectives. Each of these perspectives operates through a set of traits that inform the socialization process. Tamis-LeMonda et al. are also interested in examining if and how this duality might *coexist* is some form of continuity. Exploring the behaviour of parents during the socialization of their children within changing contexts, they find that the Individualism-Collectivism duality is a dynamic: (i) coexistence of the two cultural value systems as forms of association change over time; (ii) that may be better viewed as conflicting, additive, or functionally dependent; (iii) the dual parts of which are individually dynamic, changing across situations, developmental over time, and being so in response to social, political, and economic contexts. That idea that the Individualism-Collectivism duality coexists and maintains a dynamic changing relationship implies that the dominant cultural set in a given situation should be seen as a variable that is sensitive to fluctuating contexts, and is contained within a single continuum which maintains characteristics that embrace both value sets. In their study of child socialization processes Tamis-LeMonda et al. also note that the dynamic nature of the Individualism-Collectivist relationship implies discontinuities in parenting practices. This is consistent with work elsewhere (de Oliveira, Croson & Eckel, 2008; Hyldegård, 2009; Myers Briggs, 2000) in which, while the traits may be subject to continuous variation, they coalesce into only a few stable personality states that can result in particular modes of behaviour.

While the context of the Tamis-LeMonda et al. analysis relates specifically to the short term individual processes of child socialization, it has a much broader implication when

it comes to the group as illustrated by other research. Here, consider that culture may be defined by a single trait variable, perhaps a resultant of a set of subsidiary traits that characterise the cultural value sets. It is representative of a culture that has two opposing culture sets that are in dynamic interaction, and the characteristics that the trait holds for the culture are the result of the interaction between the two polar culture sets. The trait is able to change its representation for the group because of the principle of immanent change (Sorokin, 1962; Yolles, 2006; Yolles, 2009b; Yolles, 2009; Yolles, Fink & Dauber, 2011). During this, the cultural sets that each of the two subgroups hold may be in conflict and create a chaotic cultural environment, but for durable groups one condition develops where either one of the cultural set achieves a stable dominance, or some form of stable balance between the two cultural sets may arise. Within this cultural continuum the ascendency of one cultural set over the other may change periodically through immanent change. The duration of the period depends upon the size of the population associated with the affiliation (Yolles, Frieden & Kemp, 2008). Hence for the case of individual parents as considered by Tamis-LeMonda et al., periodicity may be indiscernible and fully dependant on changing situations, while in the case of Sorokin's study of civilisations, it may occur over millennia.

In the current corporate paradigm the dominant cultural value set is Individualism. This is apparent from Milton Friedman's argument when he considers corporate social responsibility as "hypocritical window-dressing" in an article he wrote for *The New York Times Magazine* in 1970 titled "The Social Responsibility of Business Is to Increase Its Profits[2]. However, Collectivism seems to be important too, as illustrated by Rosenhead (1998) who notes that one of the characteristics of the well-managed organisation is that it has cohesive management teams. Hence, the corporate contextual level at which Individualism and Collectivism are practiced is different. So the corporate concern within its organisation is Collectivist, while outside it is Individualist. This inconsistency is never really an issue for corporations since they manage their analytic schizophrenia by maintaining independent frames of references for each context which they maintain quite separate.

That the dynamics of the two polar values sets of Individualism-Collectivism can result in an intermediate balance is always a possibility given that we are dealing with a continuum, and this seems to have emerged through the value set of *Collective Individualism* (Limerick & Cunnington, 1993). This refers to network organisations in which a corporation may be seen to have a reality frame of reference that supports the development goal of

collaboration. Here, individuals work together with others towards a common vision and mission, and their emancipation, their freedom from groups, organisations and social institutions. The organisation is also seen as a host for learning the development of shared values and beliefs among its participants. One of the features of Collective Individualism is shared value, and hence this would seem to satisfy the new corporate need as proposed by McEuen. However, it draws in not only shared value, but a process of decentring already referred to. From the cultural identity of Collective Individualism is manifested the self-identity of individuals that is referred to as that *liminalty*-a decentring that constitutes a threshold-like quality of the personality as people lose their group identity. This constitutes an emancipated identity defined not by the external agencies of social and institutional Individualists or Collectivists membership, but by self. Here, self is defined in terms of a number of characteristics within a corporate context, which include: identity, where self is continuity; psychological contracts are issue related; cultural values include integrity, maturity and field independence (perhaps today referred to as empowerment); and processes include negotiation, career responsibility of self, the transversing of many systems, and collaborating with others on issues.

For Bandura (2006) Individualism and Collectivism allow views to be taken that encompass territorial culturalism and parochial interests, and this draws in Collective Individualism too. This continuum establishes an orientation that creates partiality and more generally limits the capacity to undertake a balanced analysis, including that of sustainability. In concert with this, each of the value sets drives specific development goals that exclude the rise of alternatives that might be more suitable, especially under conditions of chaos when ontological boundaries and the related development goals may need to change. Bandura therefore looks towards an alternative that does not lie on the Individualism-Collectivism continuum. Like Bohr's proposition[3] concerning the physics of light, rather than exploring situations through either Individualism or Collectivism, the idea that they coexist in a continuum allows for a *Complementarist* view that needs to replace the now meaningless continuum of the value system duality. Bandura (2006) proposes that, unlike the Individualism-Collectivism duality, his social cognitive *agentic* theory that is directed toward human development adaptation and change can provide guiding principles and the creation of innovative practice in complex situations, and assist with creating sustainability. Thus for him, *agency* would appear to constitute a Complementarist view that does not require

reference to the duality continuum or its characteristics, but rather affords a more complete analysis that centres on issues of complexity. This is afforded by agency through its adoption of cybernetic principles (Bandura, 1991, 1997), and the characteristics of *intentionality* (that includes making action plans and strategies collectively through shared intention and which affects corporate performance), *forethought* (that includes goal setting and anticipation of likely outcomes of prospective actions to guide and motivate effort, and which provides direction, coherence, and meaning), *self-reactiveness* (that includes self-regulation that including the ability to construct appropriate courses of action and to motivate and regulate their execution), and *self-reflectiveness* (that includes self-examination of their own functioning through functional self-awareness, identity, and recognition of their efficacy, the soundness of their thoughts and actions, and the meaning of their pursuits). It is through the development of these characteristics into analytic approaches that problem issues can be explored and resolved in a way that is not limited by the classical value sets of Individualism and Collectivism.

1.2 Sociopathic Organisations

A pragmatic antecedent for current calls for a new corporate paradigm away from the excesses of Individualism seems to have been indicated by appearance of the *FTSE4Good* Index[4], created by the Financial Times together with London Stock Exchange. This was intended to objectively measure the performance of companies that meet globally recognised corporate responsibility standards. The Index reflects the perceived need for open transparent management, and criteria that give confidence to investors that corporations are sociocentric- as opposed to being sociopathic. Sociopathic organisations contribute to the creation of pathologies within their external environment, sometimes through strategic (egocentric) motivations and sometimes through autopathologies–when internal pathologies affect a corporate capability to function as it would expect. Sociopathic organisations have socially problematic exogenously oriented attitudes that are likely to include callousness and a conscience-defect (Ackbar, Abbot & Bakan, 2005).

As a topical illustration of the sociopathic problem of the current paradigm, around the world people are not only debating, but have been demonstrating against the excesses of the corporate horizon, especially banks and the huge bonuses that they pay to their executives (Mason, 2011), in particular delivering an *October revolution* that was the start of a global

rally against banks and financiers (MacDonald, 2011). All banks operate under the same paradigm, and an underlying issue is that they pay such high bonuses more or less (Treanor, 2011) in proportion to the profits that they accrue. High Street Banks, unlike Investment Banks, have a special place of being core infrastructural instruments of modern industrial society, and this privileged position must demand from them a facility for their customer base to have a significant voice in their operations, if not a constrained capacity to acquire added value on their transactional operations. It does then seem that the banks' abandonment of social responsibility is consistent with sociopathic behaviour. The desperate need for change is clearly recognised, when for instance Bob Diamond, Chief Executive Officer of Barclays Bank, said[5]: "the single most important thing for banks and for businesses now is to focus on helping to create jobs and economic growth; and being able to do that requires us - banks in particular - to rebuild the trust that has been decimated by events of the past three years; and that rebuilding trust requires banks to be better citizens.". Of course it is more than trust that is meant by his statement. Like McEuen it likely implies shared value, and reflects on the recognition that until now corporations have maintained ethical principles that support a desire towards self-gain at any cost, leading ultimately to a sociopathic condition. Typically, the corporation maintains a "self-interest [that] makes it inherently amoral, callous and deceitful; it breaches social and human qualities of empathy, caring and altruism, … [and here the] embodiment of laizzez-faire capitalism meets the diagnostic criteria of a 'psychopath'" (Ackbar, Abbot & Bakan, 2005, p. 2). When the mode of operations of the psychopathic corporation is through mass social markets, then its operations become sociopathic.

This idea of the modern corporation being sociopathic is supported by Bakan (2005) in his exploration of the nature of private corporations and their conduct in operational environments. Bakan's study of the private corporation begins with the recognition that in the mid 1800s it emerged as a legal person having a "personality". It is also an autonomous body that pursues amoral self-interest, enabling it to operate as a self-seeking acquirer of profit. In doing this it overwhelmingly ignores any social ethic, and as a consequence of its single minded behaviour during the following century has accrued significant wealth. Bakan also recognises that there is no legal requirement for corporations to have social responsibility or conscience, which would normally be reflected in its ethical and ideological make-up.

1.3 Conceptualising Corporate Paradigm Change

Our interest here has been corporate paradigm change, and within this we have discussed cultural values and their relation to Individualism, Collectivism and Complementarity. These emerge as philosophical perspectives that drive ideologies and ethics, but they also integrate with and drive scientific theory. Now the corporate paradigm has a history that is based on the development of the western industrial revolution, which came hand in hand with the recognition that science needs to have a balance between theory and practice. As such commercial practice is supported by the various organisational theories that are loosely and incoherently linked into a dominant, if fragmented, organisational paradigm. These theories hold commonality with the management knowledge that conceptually drives organisational behaviour, a view that is implicitly supported by Andersson and Bateman (2000) when they note that the organisational paradigm extends to organisational decision makers, and so by implication it also embraces the management knowledge that occurs within the organisation. Indeed, Koontz (1980) notes that management theory is generally considered to be a subset of organisational theory. When Lock (2004) discusses management knowledge, he is therefore by implication also referring to organisational theory. Now there is a schism in this organisational theory that reflects the corporate schizophrenia referred to earlier. It is that in the current paradigm, its holders distinguish between the organisation and its operative social and ecological supersystem such that organisational success is promoted above supersystem sustainability. This disregard for the host supersystems is, according to Gladwin et al. (1995, p. 874), where modern management theory is constricted by a fractured epistemology which separates those in the organisation from its supersystem, and hence diminishes any capacity towards organisational sustainability.

Lock (2004) is interested in the background to management knowledge. He notes that the rise of management knowledge during the post 2nd World War period has been synthesised through the earlier established disciplines that include economics, engineering, sociology and psychology, converging around decision/general systems theory. It maintains, we are told, a quasi-scientific frame of reference that enables the integration of the social and technical sciences that have been concerned with the systematisation of the behaviour of human and technological resources. Elaborating on Lock's discussion, Jeffcutt (2004, p. 20) notes that this development has been intellectually limited because: (a) it is embedded in a

knowledge base that is positivist and functionalist; (b) it is distant from the intellectual developments across the human sciences; and (c) it is unable to build successful theory (Alvesson & Willmott, 1996; Clark, 2000). More, Jeffcutt informs us that the development has been operationally limited and remains based around outmoded understandings of practice that assumes organisational and occupational stability. For Koot (2004) there is some indication that there is a paradigm shift as the old paradigm changes its *philosophical* frame of reference, and discards characteristics that entertain the traditional principles of management knowledge which uphold the old traditions of rationalisation, control, standardisation, and more deterministic approaches to strategic decision making and principles of production. This shift purports to embrace new characteristics of postmodernism, with the pronounced "death of truth and reason, with the consequent vigorous opposition to absolutism, universalism and monoculturalism" (Koot, 2004, p. 188). In organisational theory the new paradigm supposedly embraces a new philosophy, supporting principles of ambiguity, paradoxicality, multiperspectivism, pluralism, hybridity, and a situational switching and strategic deployment of corporate identities. However, the old paradigm has not shifted as long as old traditions persist, with the core characteristics simply becoming more complex and veiled by pseudo-postmodernity.

This highlights Jeffcutt's (2004) realisation that current theory is ignorant of the complexity and ambiguity in operative processes, and does not satisfy the need for the flexibility that is required in complex environments. That is not to say that some attempts have not been made to create theory that addresses alternative perspectives, but these tend either to be outliers (e.g., Beer, 1980, 1989; Schwaninger, 2001) and thus are marginalised, or offer theoretical portions (e.g., Argyris, 1977; Stacey, 1993) that are only substantive enough to be used as veils for the current paradigm. Jeffcutt's realisation drives him to the conclusion that management knowledge is full of myth, having little value and moving from a virtuous to a vicious circle of relevance; and while being dominant it has nothing significant to say. Historical instances of this are easy to find. Friedman's adherence to Individualist thinking referred to earlier seemed to have led others at the time. Thus, Peters and Waterman (1982) identified the characteristics of managerially excellent companies as *profitability and product improvements over competitors*. Within five years two thirds of the cited companies could no longer be regarded as excellent, and Peters (1987:3) proposed, not a substantive new strategic management theory as might be expected, but just another veil for the old paradigm

(following the logic of Koot, 2004) to say that "there are no excellent companies", though those who approach excellence are those who embrace constant improvement and change, impermanence, and embracing chaos. This seems to have been a reflection of Prigogine (1976) and Prigogine and Stengers, (1984) generic perspective, and a view later taken up by Stacey (1993).

Such realisations underline the recognition that organisational theory has been unable to properly understand organisations and their processes in any coherent way. In the light of Jeffcutt's view, it may not be surprising to realise that there is growing disaffection with dominant organisation theories, and this is due to their incapacity to adequately model organisations in relation to the demands of their social environments, a view highlighted by Suddaby et al. (2008). In particular there is a need to recognise different forms of successful behavioural conduct that apply to different contexts, and to have tools to identify, predict and correct socially detrimental organisational behavioural misconduct. This is demonstrated by the numerous scandals that have in general caught organizational theorists by surprise. A couple of illustrations of this are the infamous Enron crisis resulting in its bankruptcy in 2001 (Whittington et al., 2003; Probstand & Raisch, 2005), and the recurrent Shell Nigeria pollution "accidents" (Ejibunu, 2007) that recently caused so much damage to the health of people in its immediate social environment. In such situations, the capacity of organisations to theoretically resolve their problems seem unavailable (Boje 2002), and this has further led to a renewed interest in organizational theory and organisational misconduct that current theory is unable to adequately discover, diagnose, or predict (Greve et al. 2010). While the position of both Jeffcutt (2004) and Koot (2004) provide an explanation for this, there is another "fragmented horizon" argument: that organizational theory is in general unable to create any degree of coherence in the field due to the plurality of its unconnected and unrelated models (Scherer 1998; Suddaby et al. 2008), resulting in "a growing disaffection with the existing set of theories that dominate the study of organizations and organizational behaviour" (Suddaby & Huy, 2009, p. 1).

2. Theory of the Collective Agency

Human activity system models that respond to the needs of complexity have been developed, for instance, by Beer (1975, 1979, 1981, 1985, 1989). However, this work has not developed any primacy in the field for mainstream theorists because its technical language

seems to create a barrier to common understanding. However, this approach, while successful in developing a theory from which organisational pathologies can be well identified and organisations diagnosed, currently has three limitations (Yolles & Fink, 2011) which are: (1) it is unable to model organizational orientations that is able to offer some level of expectation about future operative behaviours; (2) no techniques are available to explore emotive phenomena, and these can be a significant contributor to organizational pathology; and (3), even though the approach is designed to deal with complexity, it is not intended to differentiate between normal (equilibrium) and post-normal (non-equilibrium) situations, and it has no specific theory to deal with this. Rather, here a different if cybernetic ally related approach is adopted that can respond to these attributes.

2.1 Modelling the Human Activity System

From considerations by, for instance, Yolles (2006), Yolles et al (2011) and Dauber et al (2011), one can represent the organisation through a cultural model shown in Figure 1. These elements can be elaborated on (for example with respect to ethical and ideological issues), and the cybernetic paradigm (which has its basis in organisational culture) can be developed.

The model is a development of Schwarz's (1994, 1997) "living system" theory, but set within the frame of reference of the organization as a socio-cultural collective that can be explored through principles of social psychology (Yolles, 2009). Its ontology is essentially a distinction between believing, thinking and acting, each of these being considered as independent, but connected through networks of processes (the dotted lines). These ontological distinctions take the name of existential, noumenal and phenomenal domains (Yolles, 2006).

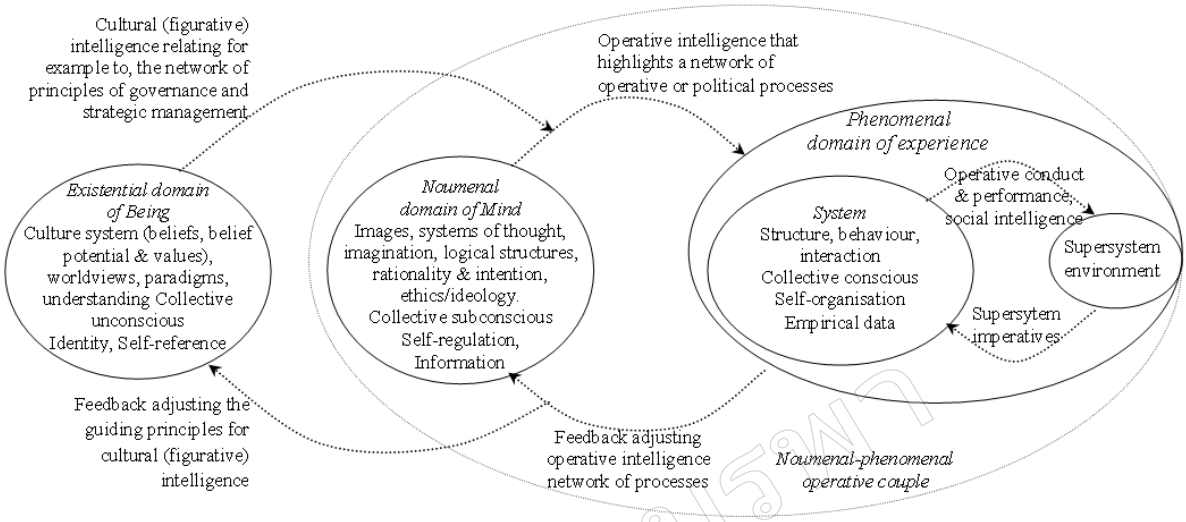


Figure 1: Cultural Model of the Organisation

The existential domain involves the paradigmatic belief system and patterns of knowledge. It maintains organisational culture including a system of beliefs and values, belief potentials that when directed result in attitudes and emotions/feelings, a worldview or more formally an expressed paradigm that is impacted on by patterns of tacit knowledge and culture. It houses identity, and is the home for self-reference. In the noumenal domain there resides the logical base, models and information that operate as the theoretical patterns that the paradigm holds; and in the phenomenal domain reside the normative modes of practice that emerge from the theory and become manifest as observable phenomena. This domain operates through images, systems of collective thought, rationality, intention and ideology. Here tacit knowledge is manifested as theory which connects with ideology and ethics, and it is the seat of self-regulation, and operates through cognitive information. The noumenal domain also houses the collective mind, a term elsewhere referred to as a social mind. According to Cooley (1962) the interactive influences that arise between parts of the social group creates some whole, and he notes that "everything that I say or think is influenced by what others have said or thought, and, in one way or another, sends out an influence of its own in turn" (Cooley, 1962, p. 4). For Jenkins (2004, p. 63) this social mind is relatable to the internalisation of Mead's (1934) *generalised other* in the development of an individual's personality and the rejection of any sharp divide between individual and social psychology (since for Mead it is through social interaction that consciousness arises). Bolender (2010, p. 3) recognises this

notion of the social mind as a relational cognition which can be expressed in terms of cooperation. Such relational cognition is not only connected with attitudes and rationality, but also with emotion enabling the idea of *emotional climate* (de Rivera, 1992; Tran, 1998; Ozcelik, Langton & Aldrich, 2008) to develop. The argument for this is that the social mind operates through cognitive scaffolding (Sterelny 2010; Caporael, 1997b; Wilson 2005) that has developed into Hutchins' (2010, p. 445) notion of enculturated cognition-that is ecological assemblies of human cognition that make pervasive use of cultural products that are typically assembled as ongoing cultural practices, arising as behaviours that are part of processes of interaction. The idea of the social mind can be elaborated on by recognising that a durable group with a dominant culture has the capability of collective cognitive processes (Clark, 2008; Clark & Chalmers, 1998; Theiner, Allen & Goldston, 2010), which constitute a pre-required conceptualisation for the existence of a collective mind.

In the operative domain, the operative system of the collective involves structure which constrains and facilitates or amplifies behaviour. It is from here that interactions develop with the social and ecological supersystem environment, and these occur in a structural coupling that operates through social and indeed ecological intelligence. The connection between logical structures and practice/modes of behaviour in the paradigm is autopoietic, constituting a network of processes that self-produce both an organisation's components and its boundary. The viable system can pass through processes of emergence and evolution towards complexity and more developed autonomy by which it maintains itself, changes and survives. This occurs through the use of operative intelligence, a concept that we shall return to shortly. For any viable system there are a set of principles that hold: (1) there is a connection between objects, relations and wholes; (2) every dynamic system consists of a dual principle governing change, a drift toward disorder and a capacity to increase order (and complexity) through self-organization; (3) as the complexity of the system increases and *operational closure*[6] develops that can lead successively to self-organization, self-production (autopoiesis), self-reference and autonomy in durable viable systems. Self-organization is the source of morphogenesis within which structures change, autopoiesis is the source of the overall coherence of the living organisms, and self-reference is at the root of consciousness.

2.2 The Intelligences

The domains of Figure 1 are connected by *organisational intelligences* that define the nature of the living system. There are a number of classes of intelligence that includes operative/figurative (Piaget, 1950), cultural (Earley & Ang, 2003), social (Kihlstrom & Cantor, 2000) and emotional (Salovey & Mayer, 1990). In this paper organisational intelligence is taken as an interpretation of the definition given by Akgün, Byrne and Keskin (2007) that fits with the socio-cognitive theory adopted here. *Intelligence* is an information processing cognitive function of the collective in an adaptable culturally based human activity group in which legitimate behaviour is recognised, and in which the group: (i) responds to its own cognitive structures; (ii) adopts its own accumulated patterns of knowledge and applies them through interpretive schemes; and (iii) manages its resources and emotionally layered commands through its bounded meaningful social interrelationships. Piaget's (1963) notion of intelligence is a subset of this, and refers to the ability of an agency to adapt to its immediate environment, and while this occurs in the individual, collective intelligence can develop in kinship systems. Such adaptation occurs because an agency develops its intellect through figurative schemas that are changed with a learning process, and two forms of adaptation occur: Assimilation (new information and experiences are fitted into existing schemas) and accommodation (schemas are changed when new information cannot be assimilated). It is from this understanding that Piaget develops his ideas of figurative and operative intelligence. These concepts are used in the modelling approach adopted here. However, figurative intelligence as used here should be seen as a development of that proposed by Piaget. Rather than figurative intelligence being seen as a passive notion as indicated by him, it is here taken to be second order active by recognising that its actions occur through a meta-dynamic that arises from a higher order coupling between a cognitive metasystem and that impacts on an operative couple involving operative intelligence.

The collective mind may use any cultural tools that create guidance that is ultimately responsible for the development of regulations and finally structural rules that facilitate constrain or amplify forms of behaviour. In Figure 1 the term *cultural (figurative) intelligence* is used which is specifically related to the human activity group and its culture, but the term has its basis in the work of Piaget (1950). It is a reflection of patterns of knowledge and belief potentials from which theory, ideology, ethics, strategy and communication result. Cultural (figurative) intelligence involves experiential reflections from operative intelligence. Since

states cannot exist independently from the transformations that interconnect them, cultural (figurative) intelligence derives its meaning from operative intelligence. It adopts knowledge and belief based normative network of meta-processes (like principles) that provide a copy of states of cultural reality, including identity, to be manifested in the noumenal domain of the collective mind as detailed cognitive information. In the theory here cultural (figurative) intelligence is a broader term than the more well known term of *cultural intelligence*, defined as the ability for an agency to successfully adapt to a change in cultural settings attributable to cultural context (Earley & Ang, 2003, p. 3; Thamas & Inkson, 2009). This definition requires a plurality of cultural beliefs, attitudes and values, which are in interaction and create a plural figurative base that has some level of cultural conflict within it. However, in the case where there is no such conflict, then cultural intelligence simply reduces to "the manifestation of the figurative base as patterns of cultural knowledge". *Operative intelligence* is responsible for the representation and manipulation of the transformational aspects of reality. It involves all actions that are undertaken so as to anticipate, follow or recover the transformations of the objects or persons of interest. Strategies 'for sensemaking' in detection of 'patterns in processes or their driving mechanisms', as well as with respect to 'prediction' or 'detection of meaning of processes for people involved' (Langley, 1999, p. 695) are related to figurative and operative intelligence.

Figurative and *operative intelligence*[7] were originally applied to the psyche of the developing child by Piaget (1950), but later it was also applied to the developing human activity group (Yolles, 2008). *Figurative intelligence* is a network of principles that provides an agency's core relational explanations of reality. Within the context of Figure 1, it is responsible for the influence that is created by the network of cognitive principles that relate to "I", and which provide an anchor for the collective mind. *Operative intelligence* is a network of processes that evidences figurative intelligence. Collective agencies with poor figurative intelligence do not maintain good representation of their supersystem experiences. *Operative intelligence* provides information for the group to assist it in its decision making operations, and thus relates to the potential for phenomenal and observable behaviour and "to what actually is happening." It frames how the world is understood, and if understanding is not successful, operative intelligence is able to change.

Consider now the notions of social and emotional intelligence. *Social intelligence* is the ability of an agent to perceive its own and others' internal states, motives, and behaviours,

and to act toward them in an appropriate way (Thorndike, 1920). It can also be defined contextually in terms of an agent's fund of knowledge about the social world, geared to solving the problems of social life and managing the life tasks, concerns or personal projects which an agent either selects or is assigned (Cantor & Kihlstrom, 1987). Weinstein (1969) sees it as the ability to manipulate the responses of others. *Emotional intelligence* is constituted through the ability of an agent to perceive accurately, appraise, and express emotion, to access and/or generate feelings when they facilitate thought, as well as to regulate emotions to promote emotional and intellectual growth (Salovey & Mayer, 1990).

In his theory of human agency, Bandura (1994, 1999) links information processes with both the self-efficacy of an individual agent and the "collective efficacy" of a collective agent. The efficacy of agencies relates to the soundness of their thoughts and actions, the meaning of their pursuits, and their capacity to make corrective adjustments if necessary (Bandura (2006: 165). Efficacy is conditioned by emotive imperatives (deriving from emotions and feelings) that can be controlled (Adeyemo, 2007) by emotional intelligence (Salovey & Mayer, 1990). Efficacy influences an agent's *capabilities* to produce designated levels of performance that exercise influence over events that affect life. Bandura (2006) also refers to empirical research that shows that perceived collective efficacy accounts for distinctions in the quality of group functioning in diverse social systems. In referring to *perceived* collective efficacy, he means the common beliefs that reside in the minds of group members about their collective capability. The membership believes that they are acting on their common beliefs that contribute to the transactional dynamics that promote group attainments. It involves a perception that efficacious collective actions are possible in relation to a social need. While this necessarily differs from the self-efficacy of the individual, the two concepts arise from the same origin. A difference between self-efficacy and collective efficacy distinguishes between cultural cohesion and the differences that exist between the agency members that compose the collective. The degree of cultural cohesion that an agency has can in turn influence the development of collective cognitive cohesion or dissonance (Brehm & Cohen, 1962; Greenwald, 1980; Fraser-Mackenzie & Dror, 2009), an unpleasant state of arousal that occurs when an agency becomes aware of attitudinal and behavioural inconsistency that have their original in a perception of cultural incoherence (Leontovich, 2003). Thus, for instance, a problem of normative culture can influence collective cognitive cohesion that in turn may affect normative performance through an agency's lack of

confidence and/or perceptual differences in collective efficacy (Bandura, 1995). The efficacy of a collective agency will also influence how an agency feels, thinks, motivates itself and behaves, and will affect the major processes of cognition, motivation, effectiveness, selection, communication, goal setting, and ultimately how information is manifested across distinct parts of the corporate system. Returning to a discussion undertaken earlier, it seems clear that the idea of efficacy can in effect substitute for some of the characteristics that distinguish between Individualism and Collectivism.

Related to the concept of efficacy is the notion of *collective intelligence* (or co-intelligence), defined as the capacity to think in terms of interconnected wholeness so the ideas generated will be for the collective benefit; the intelligence incorporates diversity, creativity and power sharing (Atlee & Zubizarreta, 2003), and the two notions may be seen to be conceptually closely aligned. Like emotional intelligence, efficacy may be distinguished within the cybernetic modelling approach into a figurative and operative part that together and in their own way affects (e.g., enhances or diminishes) figurative and operative intelligence.

Intelligence is delimited with inefficacious processes since the latter affects corporate cognitive coherence and hence diminishes its capacity to process information. It is also affected by inadequacies in corporate: reflections on adaptive and response capabilities; access to collective patterns of knowledge; recognition of the nature of interpretive schemes; recognition of normative legitimacy, or the recognition of bounds that define meaning, realities or theorising. Intelligence is also linked with the ability to discern attributes of cultural knowledge, to discriminate, relate, manipulate and apply that knowledge in a variety of phenomenal environments (Yolles, 2006, p. 287), and to create inferences, and make effective decisions (Bourdieu, 1984; Gardner, 1983, 1993; Pór, 1995; Atlee & Zubizarreta, 2003). Intelligence delimitation develops through the pathologies (conditions of ill-health), that result in undesirable behavioural misconduct (Samuel, 2010, p. 159), and where undesirability is determined by the frame of reference and context. Such misconduct may occur both at a personal and organisational level (Krawiec, 2005) affecting sustainability on both counts. Misconduct in relation to personal sustainability occurs through the illegitimate acts of single independent agents within their organisational system with the intention of enhancing individual performance in some way and for some reason, the illegitimacy arising through the disregard of the formalised norms and standards in the organisation as supported by the preferences of principals (like shareholders) and their representatives (the board of

directors and senior management). This is intrinsic to the organisation and comes under the header of autopathology. Misconduct in relation to organisational sustainability occurs through organisational agents who have the intention of in some way illegitimately (if need be) enhancing corporate performance (e.g., profit above all else) against the formalised norms and standards of the organisation and/or those of its host supersystem, and where the primary motivation of the organisation is to promote or somehow safeguard its agents who are undertaking the misconduct. This may be seen as organisationally extrinsic and comes under the header of sociopathology. Autopathic and sociopathic conduct meet each other through the definition of illegitimacy. The norms and standards of the organisation that legitimacy refers to are determined through organisational cultural supported by knowledge and understandings that emerge through the dominant paradigm that it supports. This is reflected in its ideology and ethics, which does not recognise the notion of shared value as highlighted by McEuen. It is through these and the strategic images that the organisation creates, that regulations and structural rules develop that guide behaviour.

2.3 The Collective Mind as a set of Personality Traits

Figure 1 arises from a generic model that can be used recursively to represent a collective form of Bandura's notion of the socio-cognitive agency, as shown in Figure 2. This illustrates the agent's nominal collective mind (also seen as a subsidiary living system"), and is here indicated as the normative personality. Here, since the collective mind is considered to be a "living system" in its own right. The collective agency model is now depicted to have a cultural environment - itself a system, and a figurative collective mind composed of three cognitive systems in interaction with its. The cultural environment houses the belief system composed of beliefs, belief potentials (that drive emotions and feelings) and values; in addition there are worldviews and their more formalised paradigms, and cultural meanings are accumulated through cultural knowledge, generating a basis for cultural understanding. This is the seat of the collective identity and hence maintains cultural self-reference. The normative personality is figurative in nature, concerned with cognitive information the images of which are subject to self-regulation through which people formulate goals, standards and motivations toward identifiable outcomes, and create and manifest strategies, formulate and apply their ideologies and ethicalities, and make decisions. As such these self-regulative attributes are subject to cognitive identity (self-reference), cognitive self-regulation

(adjustment of regulatory instruments that guide the agencies goals, standards and motivations) and cognitive self-organisation that enables the structures of the collective agency to operate in a way that is deemed appropriate through its manifestation of goals, standards and motivations. The normative personality is thus composed of:

The personality metasystem that houses referential patterns of conceptual information, attitudes and positively or negatively directed emotions, and cognitive self-reference that anchors the self-regulative possibilities of the collective as a whole and hence ties goals, standards and motivations (as well as providing a base for ideologies, ethicalities and theories) with cultural identity, and it is here where a relationship with cognitive intention is maintained.

The personality figurative system that houses figurative information as schemas that includes appreciative information (Vickers, 1965), feelings and decision imperatives, and which provides for cognitive self-regulation. It is here that strategy, goals, standards and motivations, as well as ideologies, ethicalities and theories are finalised.

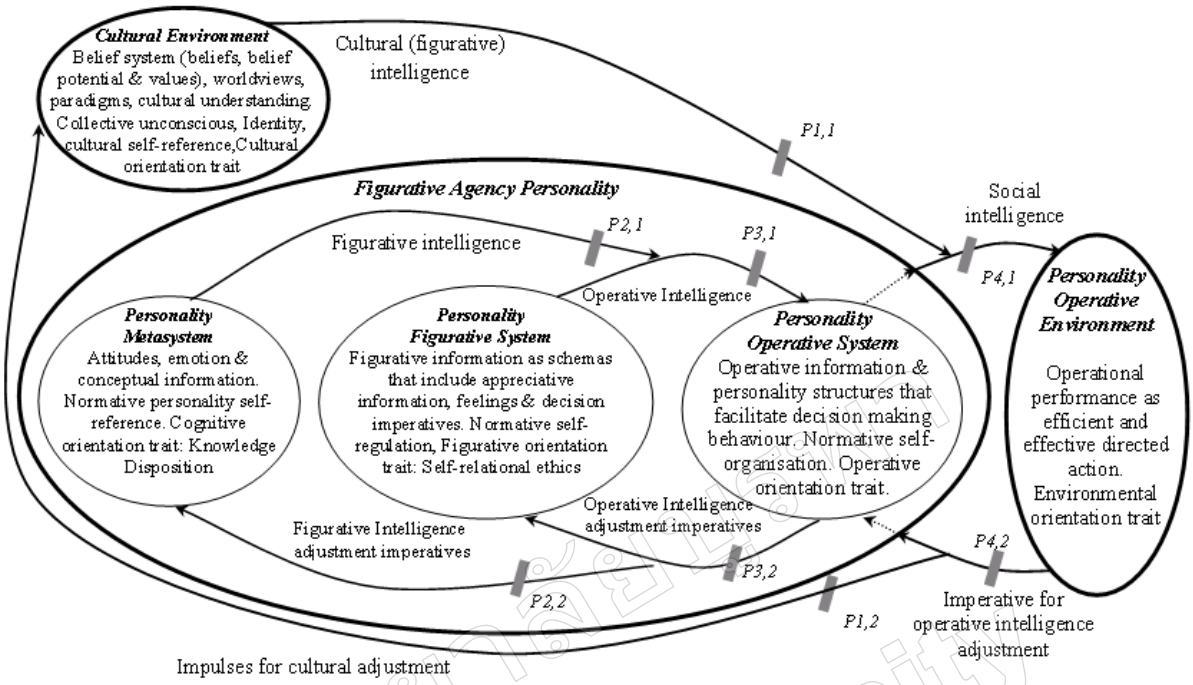
The personality operative system that houses operative information and personality structures that facilitate decision making behaviour, and which provides for cognitive self-organisation of the normative personality and its self-regulatory capacity. In other words it is here where goals, standards and motivations as well as ideologies and ethicalities are subject to restructuring.

This collection of systems defines an agency *suprasystem* that operates within a host social and ecological environmental supersystem. The personality operative environmental of Figure 2 may be seen as being composed of a dual system in a structural couple, in which the agency undertakes behaviour within a social and ecological environment. There are other ways of representing this interaction that may be suitable for specific contexts. The personality operative system is modelled to coincide with the operative structures of the collective as a whole: that is where decision making structures and operative structures coincide – in other words, where the structure of an organisation relates to both the manifestation of decision making and operative behaviour. In this case self-organisation of the regulatory capacity of a collective coincides with its structural nature also.

In this approach there is a capacity to explore the organisation as a normative individual within a complex plural environment, the norms arising from the body of the social collective. Just like any individual, the normative individual has legitimate/conformative (and

indeed by implication illegitimate/non-conformative) behaviour that is facilitated, constrained or amplified by organisational structure, strategic perspectives that include ethical and ideological positioning that are part and parcel of its "normative personality", and knowledge that underpins its capacity to perform.

The traits of each system of the suprasystem mind orient and dominate the way in which it does what it does, and provides the basis for expectations in behaviour under known contexts and in determinable situations, and are discussed in some detail in Yolles, Fink and Dauber (2011). The *cognitive orientation trait* arises from cognitive and social psychology (Van Liere & Dunlap, 1981; Menary, 2009), is existentially connected with cognitive self-reference (Hannah et al, 2010), and maintains a relationship with cognitive intention (Freeman, 2008). Taken as a trait variable, it might involve the effective the realisation of potential recognising social and political structures and the associated constraints imposed on the agency. The *figurative orientation trait* has both cognitive and evaluative aspects, is influenced by attitudes and reflection, and connects with cognitive purpose and processes of cognitive self-regulation. This trait maintains an interconnected set of more or less tacit standards which order and value experience, determines the way an agency sees and values different situations, and how instrumental judgements are made and action is taken. The trait facilitates how an agency as a decision maker observes and interprets reality, and establishes decision imperatives about it. As such the trait regulates the appreciations and resulting goals of the organisation with respect to its intended operations, the potential for social interaction, and the ethical positioning that may occur as a response to opportunities provided or indicated by the social environment.



Note: *Pi,j*(where pathology type *i=1,4* and order *j=1,2*) refers to type pathologies that can arise through both *intelligence limitation* and impeded *efficacy*

Figure 2: Socio-cognitive Agency Model as a suprasystem of the agentic personality and its cultural system, connected with the operative environment, and illustrating the pathological delimitations that can occur in the intelligences.

Cultural, figurative, operative and social intelligences are also explicit parts of the collective mind, while emotional intelligence is rather an implicit component of the figurative and operative intelligences. The bars indicated in the intelligences and their positive or negative adjusting feedback imperatives are indicative of the pathologies that can develop. A detailed exploration of these intelligences and the pathological delimitations that can develop within them can expose the autopathic and sociopathic consequences concerning the corporate body. Within the more detailed context of the collective mind in Figure 1, figurative and operative intelligences have a finer interpretation than they did for the higher level model in Figure 2.

At this level of consideration, operative intelligence manifests figurative thematic information and decision imperatives through a selectable network of processes to the collective mind's operative structures in relation to a specific suprasystem context. This plays a facilitating and condition role for any strategic, ethical or ideological decision behaviours that might develop. The figurative information comes from a set of figurative schemas like

mental models and abstractions, and other forms of appreciative information and decision imperatives, and the operative information is set into operative collective mind's structures that condition decision making behaviour. Operative intelligence manifests figurative information into the operative personality system to enable thematic decisions to be made in relation to interactions in the environment that facilitate behaviour. Operative adjustment imperatives to the figurative personality system are used to either re-emphasize available figurative images (including mental models and abstractions) or to adjust/reformulate figurative structures. Operative intelligence is a form of first order autopoiesis (Schwarz, 1997; Maturana & Varela, 1987) which explains how a "living system" self-produces its core relational explanations of reality that influence behaviour. This defines for the group its own boundaries relative to its environment, develops its own unifying operational code, implements its own programmes, reproduces its own elements in a closed circuit, obeys its own laws of behaviour, and potentially satisfies its own intentions (Jessup, 1990). It also self-produces the network of processes that enable it to produce its own personality components that exist in cognitive, figurative and operative bases. *Figurative intelligence* helps to construct strategic, ethical and ideological figurative schemas that defines a potential for decision making behaviour, and contributes to the solidification and formation of personality as a whole. It decides what kind of information assembled through operative intelligence will be considered to be conceptually significant and thematically relevant, or whether conceptual adjustments should be made to its patterns of knowledge in its cognitive base. Where conflicts arise, imperatives can be directed to the operative couple that is responded to by operative intelligence, enabling figurative and operative structures to be adjusted. Figurative intelligence can be taken as a form of second order autopoiesis called autogenesis (Schwarz, 1997) through a higher level of processes or meta-processes that may be represented for instance as guiding convictions, principle influences, or even spirit. It occurs when a selectable network of these meta-processes (like principles) is able to project into the operative couple a set of espoused values as attitudes and mental schemas and operative personality patterns. Figurative intelligence will reflect on operative couple information by relating it to its cognitive base and the patterns of feelings, beliefs and knowledge held there. It is thus able to integrate precise adjustment imperatives into its cognitive base of information about states of reality provided by the operative couple. Figurative intelligence has the thematic responsibility of creating, through its information imperatives, a capacity to

reflect significant cognitive elements for a given suprasystem context and interaction set. Here, emotional intelligence considered earlier is taken to be part of figurative and operative intelligence, where: (1) figurative emotional intelligence is charged with the control of emotional arousal, and (2) operative emotional intelligence controls emotional arousal through feelings.

Intelligence delimitation in the connection between traits can result in inefficacy in the mapping of information between the systems of the suprasystem. This can lead to corrupt and sociopathic organisations (Yolles, 2009a), or more broadly agency misconduct (Greve et al., 2010). The *operative orientation trait* provides the ability of an agency to be able to durably maintain a separate mode of operative existence while coping with unpredictable futures. Its nature may vary, but one possibility is that it will show the characteristics of flexibility to effectively respond to environmental challenges or those that emerge from the social system. The trait is responsible for the way in which data is structured as appreciative information enabling adaptation, and facilitating personality responses to its social environment and predefine its behavioural penchant towards its operations. While these responses may arise through individuals acting independently, in healthy collective agencies these responses conform to normative agreements. The *social orientation trait* directs the normative personality towards modes/forms of action, interaction, and reaction that (re)constitutes the cultural environment in terms of (desired, welcome, undesired, not welcome) activities. Agency efficacy in relation to social orientation may contribute to the realising of its full social orientation potential, to engage with the environmental anticipations that it controls, and adjust its own operative processes. In contrast, in-efficacy may result in an agency inadequacy that can impact on its operative intelligence or the recognition of agency adjustment imperatives. This may occur through self-regulation and either the subordination to hierarchy or liberation away from power and bureaucratic regulations allowing normative rule obedience to be defined at a sub-agency level.

In the personality figurative system, political theory, ideology and ethics can be maintained as the theoretical basis for strategic mapping of operative behaviour, there are two components coupled together structurally (shown in Figure 3): legitimacy in operative conduct, and opportunity to engage in misconduct (see Yolles, 2009). Where no pathology has arisen, identifiable theoretical opportunities for an agency in a given context and environment is structurally coupled to what the normative personality considers to be legitimate conduct.

These two have in this case affected each other's history and will influence each other's future. Under connecting pathologies, however, misconduct can develop, when pathological delimitations occur in the forward and return coupling information flows thereby misinforming members of an organisation about what the nature of the constraints, amplifications and facilitations of potential for behaviour. A similar argument operates for the connection between ideology and ethics.

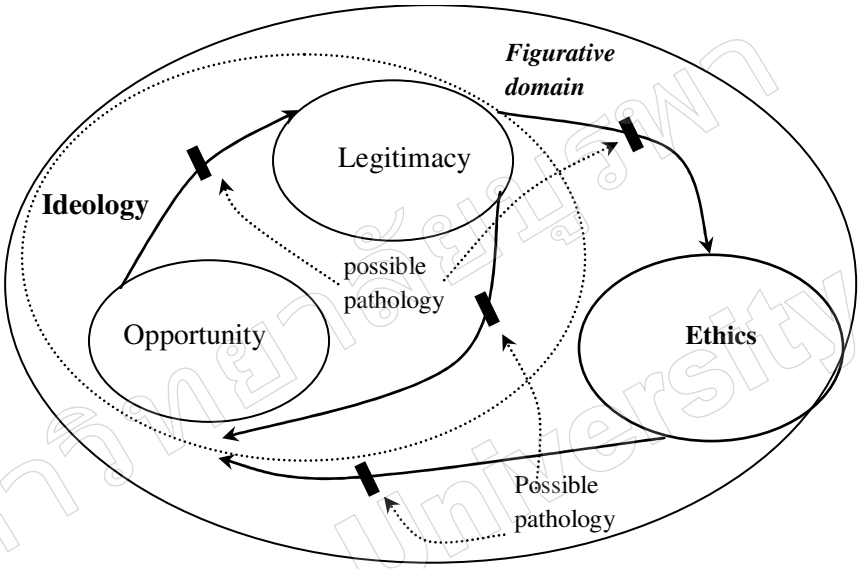


Figure 3: Relationship between the ideology of legitimacy and opportunity in relation to the potential for conduct, and ethics.

Autopathologies can result in sociopathologies, in particular when intelligence adjustment imperatives impact on consciousness. This is explained by Karl Marx (Pines, 1993) and later others including Horkheimer and Habermas, who indicate that people operate under a false consciousness about their actions and those elements that underpin their behaviour, and they do not recognise the impact that these have on the society around them. They need to become: conscious of: (i) the nature of the social pathologies that they engender through this; (ii) the social impact of the ideology and ethics that they support either actively or passively and directly or indirectly; and (iii) the social and technical factors that affect society. False conscious awareness can be explained by the idea that evident pathologies disappear into a structural horizon, enabling them to become lost from social consciousness. Ideologies that arise locally within a relatively stable social structure may embed these

structural horizons. Such false consciousness can create an impact on any intention for a group of agents to operate together with shared value.

Another sociopathology arises with ontologically differentiable agents in interaction that is manifested as conflict. Not only do they frame their realities differently, but they also have distinct epistemological boundaries that contribute to the definition of the issues of problem situations, and judgments about issues arise that reflect on ideological and ethical distinctions. Approaches to resolve such conflicts can be found, for instance, through the work of Ulrich (1983, 2002) (also see Yolles, 2001).

3. The Paradigm

While so far the nature of collective agency theory has been shown, no direct discussion has developed indicating the direct influence of chaos. This can be done by examining the nature of the paradigm and its processes of potential change.

3.1 Nature of the Paradigm and it modes of Possible Existence

A paradigm is a property of a durable human activity "living system" group, and arises as a collective agency through its common knowledge and implicitly agreed norms. It is from these that collective ideologies and theories arise that are manifestations of the paradigm and its modes of conduct. The paradigm arises as a group establishes a durable culture from which develops a "collective psyche" (Jung, 1936, pp. 87-110) that constitutes its collective mind. Unlike Jung's collective consciousness - a common *universal* element of the psyche (Shelburne, 1988), the normative mind is rather seen as the set of norms that refer to a group *globally* and therefore relates to the collectively of the individual membership. It is associated with the group's culture that is part of the preconscious mental dispositions that entertain knowledge and emotional imperatives (Wollheim, 1999). The knowledge is tacit – that is, it is local to the knower, non-codified, has disembodied know-how, and is acquired via the informal take-up of learned behaviour and procedures (Howells, 1996), and hence it contributes to the formation of unconscious normative mind. It is also intangible and unexpressed, and includes intuitions, perspectives, beliefs and values that result from experiences. In contrast, explicit knowledge is symbolized (to convey explicit meaning) and as such formalized, and codified (to represent meaning) and thus expressed in systematic ways. This occurs through processes of reflection (Brown, 2000; Yolles, 2006) that engage

tacit knowledge, and its formalisation is expressed propositionally thereby giving it the same status as theory and an appendage to collective ideology.

For Kuhn (1970, 1977) the paradigm has four dimensions of common thought: common symbolic generalizations; shared commitment to belief in particular models or views; shared values; shared commitments of exemplars (concrete problem interventions), constituted as "the set of views that the members of a...community share" (Kuhn, 1970, p. 176). These norms can be represented in terms of the culture system that the group maintains through its values, beliefs, and belief potentials that are ultimately responsible for collective states of mind that reflect acceptable emotional and attitudinal conditions through the use of language. As an unconscious, it also maintains embedded patterns of knowledge. From these components are formed the collective subconscious rational mind with its manifest logical base of (ideological) theory, and its conscious mind that include modes of conduct that it considers important.

Paradigms only exist when the human activity groups that carry them are durable and thus able to survive. A group is durable in part because it has a culture which is subject to immanent change (Sorokin, 1962), as is therefore the paradigm. The nature of the group can be usefully understood from the socio-cognitive agency approach adopted by Bandura (2010). Here the group is seen as a cognitive agent that has intentional influences that are part of a causal structure, and involves processes of self-organisation, proactive ness, self-regulation, and self-reflection, and the agent may be an individual or a group, where collective endeavours require commitment to a shared intention and coordination, and effective group performance is guided by collective intentionality. This notion of agency is consistent with the idea that a human activity group is a living social system (Beer, 1980) that is autonomous and defines, creates and manages its own future. It is also able to self-organise and hence alter its own rationality. It produces the laws that rule it (Schwarz, 1997), and it does this because it is logically closed, a condition that occurs, according to Parsons (1937), when: all its propositions are interdependent in that each has implications for the others, and each of these implications finds its statement in another proposition of the same system. While the human activity group may be logically closed, it is also an open system in that it takes in resources from its environmental supersystem, and data that comes both from measurement, knowledge and narratives from experiences and other groups. Its outputs are knowledge, narrative and the resources manifestations. If the group is to be able to provide a narrative through its

advocates who adequately explain all of the inputs that relate to their interests and purposes, then its propositions must be able to conceptually respond to the inputs. Where it cannot do this, the group fails to survive. Some groups are so completely tied to their paradigm, that their survival is intimately connected with the survival of their dominant paradigm. This occurs where the identity of the group is greater than the group itself, e.g., where a company centres itself on a single product that gives it an identity and an ideology, and when the product fails so does the identity and the company.

Since the paradigm is a reflection of the collective group and its operative conduct, understanding the processes of corporate paradigm change has become a specific interest in the literature (e.g., Gladstone &, Reynolds, 1999; Factor, 2001; Govan, 2005), especially under chaos. Chaos refers to confusion and disorganization, where it is impossible to predict future behaviour with any degree of certainty. Here, the complex system demonstrates apparently random and unpredictable behaviour, where small changes in initial conditions can lead to very large changes over time. In the process of paradigm change, it is shown how the paradigm can pass through a number of stages of change through which chaotic develops. These stages are normal, post-normal, aleatory and transformative mode.

Kuhn (1970) argued that under change, paradigms pass from a *normal* mode through one of *crisis* and then to one of *revolution*. The normal mode is realist in nature (Rauterberg, 2000), and has its history in the ideas of Descartes who believed that foundational concepts are known intuitively through reason, and that truths can be deduced with absolute certainty from our innate ideas. In essence the development of normal mode embraces processes of continuous change in theory when the implications of its logical base pass through a morphogenesis. It operates in a thematic application domain that supports a dominant epistemology that allows for only a unitary perspective for the construction of knowledge. It also assumes certainty, and the possibility of making predications. The term *normal mode* refers to the routine work within a paradigm, slowly accumulating knowledge in accord with established theoretical assumptions. For Kuhn it involves puzzle-solving, through which it becomes enlarged as its frontiers of knowledge and techniques are pushed forward.

While the normal mode of a paradigm can be described as the place for its equilibrium development, it is also the relatively simple narrative mode created through epistemic imperatives that drive stories as songs that rise and fall to the academic niche *music of the spheres*[8]. The songs maintain their own dynamic, where incremental changes enable the

equilibrium to move linearly. Even so, they maintain inbuilt limitations driven by the ideological dogma that creates the paradigm in the first place.

The concept of *post-normal mode* created by Funtowicz and Ravetz (1993) and elaborated on by Funtowicz and Ravetz (1994) and Funtowicz, Ravetz, Shepherd and Wilkinson (2000), connects epistemology with governance, and is concerned with the rise of uncertainty, value loading, and the plurality of legitimate perspectives. However, interest here lies significantly beyond the policy making processes within the sphere of science that are the interests of these authors, and is rather seeking to generalise the notion in line with the modern theory of complex systems beyond governance. The post-normal mode is essentially constructivist, and this does not adhere to the traditional assumptions of normal mode positivism that theoretical constructions are both certain and value-free. In science these theoretical constructions may be seen to take the role of a formal ideology for the human activity group that supports a given paradigm, and such ideologies also develop for the corporate paradigm. The function of an ideology is to direct policy initiatives, and to orient the structures of the group that both constrain and facilitate types of behaviour. The idea that the development of such formal ideologies are subject to post-normal mode is implicitly supported by Kuhn who had already emphasized the important role of human factors, such as intuition, imagination and receptivity to new ideas in the exercise of scholarly activities, and Weick's article on 'Theory Construction as Disciplines Imagination' in the 1989 Academy of Management Review special issue proves as a perfect match with Kuhn's ideas.

In contrast to the normal mode, the *post-normal* mode is concerned with complexity and has interests that relate to uncertainty, assigned values, and a plurality of legitimately argued perspectives. These attributes are antenarrative in nature, from which narratives may arise, and where a plural collective co-construction of multiple voices develop, each with a narrative fragment and none with an overarching conception of the story that is becoming. So, "Feminist Organizational Theorizing", "Postcolonial Analyses", and "Actor-Network Theory" are useful examples of this provided by Calás and Smircich (1999). The post-normal mode may also be linked intimately with Boje's (2001) notion of antenarrative where a constellation of paradigms exist in an incoherent disjoint discordant space.

The *aleatory* mode is a condition in which paradigmatic narrative reflects the crisis that the paradigm is passing through, and is thus incapable to hosting coherent stories. By aleatory is meant *aleatory variability* that pertains to stochastic (non-deterministic) events, the

outcome of which can be described using probability. It arises from the Latin *alea* - a game of chance as in the throw of dice (Kelly & Smith, 2011). In contrast epistemic uncertainty is the antithesis of aleatory variability and pertains to exactly predictable (or precise) processes, the outcome of which is known with certainty if the inputs are known with certainty.

Aleatory variability is a boundary condition of *crisis* for transformation and a prerequisite for Kuhn's revolution, and is a mode within which those in a group become estranged from their paradigm. As the crisis deepens, carriers of the paradigm are subject to pressures of change and commit themselves to some concrete proposal for reconstruction to a new framework. Where different frameworks exist, communication fails and semantic content is lost as polarization develops (Hatch & Cunliffe, 2006) and members of the different camps become constrained by the boundaries of their own paradigm. Crisis is closely related to the 'incredulity toward meta or master narratives-and to a continuing question of *how to write* legitimate knowledge' (Calás & Smirchich, 1989, p. 664).

For Fischer (1992), crisis corresponds to an unstable cognitive strategy that oscillates between the constraint of normal science and a search for a better frame of thought - one that might allow a novel integration of fragmentary representational structure that exist across a plurality of paradigms on a higher level of abstraction, differentiation, and integration. It is here that the social forces of unity, consensus, and commitment become more fluid, and new social ties, circles, and networks form, while new virtual paradigms may rise or fall. A virtual paradigm is not existent as such, but is rather a "candidate" that arises around a set of ideas as a formalized non-normative or semi-formalized set of shared worldviews, and it may or may not become solidified into a paradigm (Yolles, 1999), a notion that appears to be a partial reflection in Fischer's (1992) idea of the pre-paradigm.

The revolutionary mode discussed by Kuhn refers to a *transformative* mode for paradigms, and within the context of science is connected with the idea of scientific revolutions. To reach revolution a paradigm has passed through the prerequisite sense of crisis. The revolutionary mode is consistent with confusion within a framework of presuppositions about what constitutes a problem, a solution, and a method, and where the rationality of issues is replaced by emotionality. Settlements do not occur by logic, syllogism, and appeals to reason, but by irrational factors like group affiliation and majority or 'mob rule' (Casti, 1989, p. 40). In the *transformative* mode paradigms take on pre-narrative condition, where new virtual paradigms may arise or old paradigms may be reborn, though they might

not necessarily be in conflict with any of their predecessors. In this mode two forms of conceptualisation may develop in the paradigm: (a) lateral, that enables the identification of phenomena to occur that has not been previously known; and (b) transitive, where a higher level of theory (referred to as meta-theory) than those known before arises that may be linked to a whole group of lower level theories without substantially changing any. As such, for Fischer (1992) a crystallization of support for a new paradigm occurs when the emergence of a new cognitive consensus becomes concretized.

3.2 The Nature of Paradigm Change

The idea that paradigms may survive different modes of existence, from normal to post-normal and through aleatory crisis to transformation, raises the question of how this occurs. To approach this, one needs to appreciate the distinction between the processes of change that a paradigm goes through when it is part of these modes, and in particular normal and post-normal mode. From Kluver et al. (2003), one can highlight their distinction through the realization that in normal mode there is the tendency for paradigms to change incrementally, beginning with rather simple models and developing complexity. In contrast, the post-normal mode lies near the edge of transformation, embracing the early capture of as much of the complexity that a conceptual framework is capable of.

A paradigm that survives over time, and is thus durable, may be said to be *viable*. While a human activity group that is viable refers to its durable survival (even under conditions of a changing cultural system), the viable paradigm is rather tied to the ability of the cultural *identity* of a human activity group to durably survive. This is because identity is tied to culture, and culture is tied to the paradigm. When a group's stability is threatened it may develop an identity crisis (Jolton & Geisert, 2009; Stone & Heaney, 1984) that can thus also be represented to be a paradigm crisis. Hence, a paradigm is viable if the human activity group that carries it does not shift its identity during a process of change. Viable paradigms are able to survive both normal and post-normal mode group situations.

Whatever the philosophical basis of a paradigm, in normal mode, it changes through equilibrium processes. That is, it does so deterministically and reversibly, and randomness and irreversibility are exceptional (Prigogine & Stengers, 1984). However, when uncertainty occurs within the paradigm in relation to its paradigmatic cultural and knowledge inputs, a dominant paradigm shifts to a far from equilibrium state as the beliefs and patterns of

knowledge that create it are challenged. When these non-equilibrium conditions occur the human activity group is said to be dissipative (Sundarasaradula & Hasan, 2004). Here, the paradigm's logical structure defined by its propositions and principles is said to be dissipative and subject to fluctuation, and it is unable to provide a stable narrative that adequately explains its environment. Today the demand for phenomenon driven research is emerging (Cheng, 2007). New types of structures may therefore originate spontaneously as a dominant paradigm moves from organizational chaos to greater order, and the paradigm is seen to be viable.

The dominant paradigm is existential only through the cultural system and patterns of knowledge that arise through the group of people who maintain them, and the demise of a group that uniquely supports it is consistent with the demise of the paradigm itself. Paradigmatic systems are therefore reflections of the human activity groups that carry them, being both complex and adaptive, and able to maintain a separate existence within the confines of their existential or other constraints. They have an at least potential independence in their "self-processes" for regulation, organization, production, and cognition. According to Schwarz (1997), viable systems can pass through processes of emergence and evolution towards complexity and autonomy, though autonomy does not mean that there is no interactive influence from its environment. This occurs through the development of patterns of self-organization that accommodate phenomenal change in the paradigmatic practices and behaviours that paradigm holders pursue. It results in morphogenesis, which occurs with: the rise of new forms of complexity; patterns for long term evolution towards autonomy; and patterns that lead to systems functioning viably through their capacity to create variety that can respond to environmental situations with the matching *requisite variety* (Ashby, 1956). This latter attribute is required to maintain balance and enable a paradigm (through its carriers) to respond adequately to its environment.

The dynamic process that viable paradigms can pass through as they change is illustrated in Figure 4 and Table 1 (adapted from Schwarz, 1997). It explains the cycle of change for viable paradigms that are able to survive by transforming their natures, initially by developing through normal mode, experiencing uncertainty, and moving into post-normal mode and hence to metamorphosis. During these process, a non-viable paradigm deceases, while a viable paradigm will become more complex (complexified) as it develops more attributes and explanatory power in its theory. The non-viable paradigm is one that has no characteristics that can be maintained through aleatory variability, and may be replaced by a

virtual paradigm that becomes existent during the aleatory mode. However, a viable paradigm has characteristics that can be retained in some form, though this form will be transformed. It may be noted that the paradigm cycle in Figure 4 may be seen as a generator of corporate life cycles, as discussed for instance by Quinn, & Cameron (1983), hence overcoming the limitations of portraying them as deterministic (Levie & Lichtenstein, 2008; Sundarasaradula & Hasan, 2004).

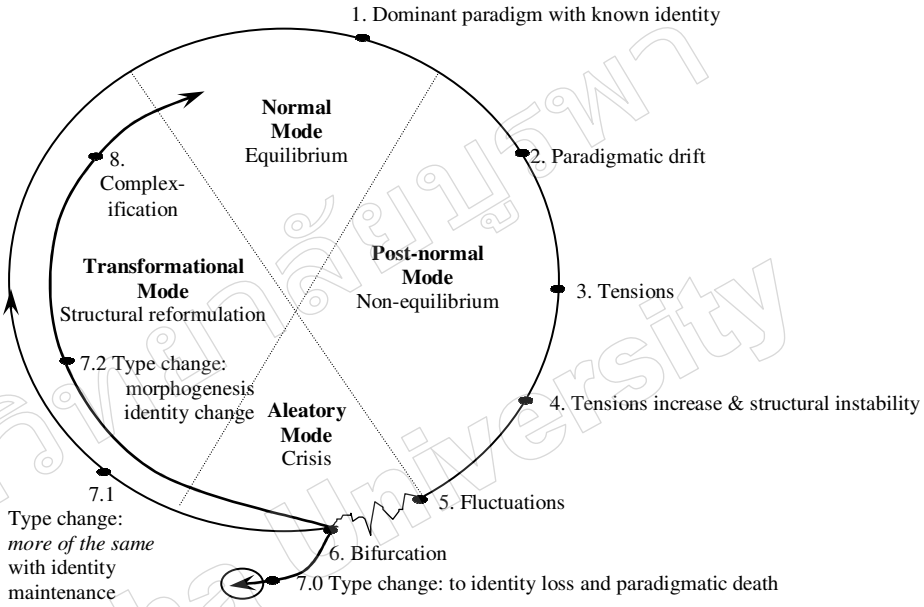


Figure 4: Cycle of Paradigmatic Change, and the Relationship between Four Modes of Science

Table 1: Explanation of the options for paradigmatic change

Paradigm Mode	Step	Movement towards evolution
Mode 1: Normal	Stabile equilibrium	The paradigm exists with a stable belief system and logical base, though during normal development the base may change its form (morphogenesis). Here the paradigm is dominant and has developed a cultural identity which it maintains. Where there are too many distinct narratives with competing stories, the dominance of the paradigm and hence equilibrium is lost.
Mode 2: Post-normal	Paradigmatic drift Tension development Tension increase and structural criticality	Antenarrative develops as dissipative processes are introduced and a constellation of paradigms result in a cacophony of voiced stories. In a complex application domain, drift enables unexpressed potentials to be actualized. The drift takes the paradigm away from its stable position and gives rise to tensions between its ability to explain and predict, and questions about its methods in relation to observations.
Mode 3: Crisis through *alea*	Fluctuations	The tensions, following the tropic drift that moved the paradigm away from its stable narrative position, are leading it to structural criticality. If the paradigm loses robustness, fluctuations are amplified. Fluctuations occur internally, or in the environment as noise. Through amplification of fluctuations due to tensions following uncertainty drift, a discontinuity occurs in the causal sequence of events/behaviour. This likely will be accompanied by debates about utility of the epistemological basis for the paradigm.
	Bifurcations	When bifurcations occur the paradigm is able to take a variety of possible paths in its pragmatic behaviours. At this point three options are possible.

Paradigm Mode	Step	Movement towards evolution
	7.0 Paradigmatic death (post-narrative)	In type 7.0, decay represents a process of disorganization, regression, or extinction of the paradigm, ultimately leading to the possible loss of group member carriers. This can be seen as the start of a catastrophe bifurcation. This is consistent with its identity loss.
	7.1 Type 1 change	In type 7.1 the process of change begins with "more of the same" small changes that maintain its current state but do not resolve issues. Complexification of the logical base and modes of practice can occur during a process of iteration. This is consistent with the development of a re-affirmation and continuity of cultural identity.
Mode 4: Trans-formation	7.2 Type 2 change	In type 7.2 change, metamorphosis occurs through emergence that begins in the logical base of paradigm, and is amplified within its critical structure leading to a new logical base of propositions that induce new forms of practice. This is referred to as morphogenic change, occurring through amplification and differentiation. It is a relational process that develops in the paradigm through positive and negative feedback, and integration, when and the new cognitive base is manifested figuratively and pragmatically. Here the paradigm develops a new cultural identity.

4. Reflections

The 2011 *October revolution* became an expression of protest against the banks and financiers responsible for the 2008 global economic crisis. It was the first global mass display against the current corporate paradigm that supports profits at all costs. There have been other calls for a new corporate paradigm, but not so much in the public view. These highlight need for sociocentricism, as a response to the excesses of corporate bodies that flow against voices like that of Milton Friedman, effectively calling for the maintenance of corporate

geocentricism, and through his Individualism perspective voicing that the concern of business cannot be social responsibility but is rather towards a consuming passion for increased profits. One truth of Friedman's view is an implicit recognition that social responsibility and profits are quite distinct entities and not immediately relatable. Social responsibility arises from cultural values that impact on corporate attitudes and feelings, ideology, ethics and strategy, while profits are a consequence of operative processes. However, like all narrow perspectives, Friedman's view is unable to take in the consequences of actions that emanate from a reality that is more complex than can be envisaged in the ideology adhered to by dedicated Individualists. Such a one dimensional perspective from such a notable is quite distinct from Piaget's (1977, p. 87) notion of *objectivity,* which arises through the coordination of a multiplicity of perspectives. Perhaps then this might be a basis for a *Complementaritism* perspective in which the dynamic interaction between the value bases of Individualism and Collectivism are coordinated in relation to context and perceived need, not as individual value systems in dynamic interaction, but rather through a framework of collective agency.

The more recent recognition that corporations need to develop both social interest and responsibility coincides with the apparent public acceptance of the complexity perspective, as the world has moved into the 21st Century. The first formal if pragmatic support for this social movement seems to have been the rise of the FTE4good index, which implies the recognition for a more visible ethical standard in corporate affairs, and which hinted at the need for shared value. The related positions of Mary Beth McEuen and of Bob Diamond among others highlight the need for a new corporate paradigm in which shared value becomes a new cultural standard, with consequential adjustments to ideology, ethics and strategy. McEuen noted that this is connected with sustainability. Bandura (2006), in his consideration of sustainability, argues that the world is in danger ecologically and economically through the exercising of parochial interests, and which is seen here to be consistent with corporate egocentricism. He notes the need for innovative changes that fit evolving technologies and global marketplaces, and within the context of his agency theory, this can be best accomplished with a high sense of collective efficacy. This does not necessarily point organisations away from corporate Individualism towards Collectivism, but rather stands outside these cultural value sets, as a *Complementarity* that embraces core agency principles. Competitiveness, Bandura claims, raises value issues concerning the purposes to which human talent, advanced technologies, and resources are put. In relation to environmental

sustainability, he notes that the promotion of lavish consumption that neither uses our finite resources wisely nor leads to a better quality of life may be profitable, but they are environmentally unsustainable in the long run. Sustainability has become recognised as something that is desirable, especially for those organisations who are interested in their own corporate future viability. This has been extended to a call for a *sustainability* corporate paradigm shift (IISD, 1992). However, such recognition (let alone a paradigm shift) can hardly be arrived at as long as the normative corporate system is perforated with autopathic problems that impact on viability and performance, and for which no mainstream theory is available to diagnose and correct.

Many who have adhered to the cultural values of Individualism have believed that one of the panaceas for correcting poor performance in public organisation has been privatisation. It was introduced by Margaret Thatcher, Prime Minister of the UK during the 1980s, who perceived (quite correctly) that public hierarchic corporations were prone to particular forms of autopathology. Her idealistic resolution of this was to publically unveil privatisation, underpinned by her kitchen sink proposition that it would *necessarily* improve an organisation's efficiency and effectiveness. However, it is difficult to find an evidential basis for this belief. An evaluation of a wide variety of privatisations shows quite inconsistent outcomes, there clearly being other factors at work than whether or not a privatisation had been effected (e.g., Parker, 1992; Quiggin, 2002; McGowan, 2011). The curious consequential commitment by the World Bank and the International Monetary Fund to privatisation, especially for less developed countries, likely increased sociopathology globally since it provides greater opportunity for corruption, the relationship of which has been considered by Yolles (2009).

It has been noted already that the development of corporate pathologies can result in a reduced capacity for corporate bodies to engage in sustainability and an increased incidence of organisational misconduct. The application of good organisation theory should be able to correct this, but following Jeffcutt, current theory is incapable of helping since it is substantially composed of myth, and where good theory does exists it simply acts as a veil for the mythological core. Hence, the need for good theory is paramount.

Some brief consideration has been given to veils of existent theory. Works like that of Stacey and Argyris, while valuable in themselves, seem to be theoretical patches of complexity thinking that have not developed into full theories. As such they do little to help

organisations deal with complexity. In contrast, the cybernetic theory of Stafford Beer has a proven record in the diagnosis of pathologies in complex organisations. However, it has been marginalised by main stream theorists.

This paper has drawn from Banadura that a move through agency theory away from the Individualism-Complementarism duality continuum to a Complementarist view can help us understand how to a corporate paradigm shift can occur. The collective agency theory offered here can provide principles for the creation of innovative and other practice in complex situations, assist with the achievement of sustainability, and offer guidance for the development of a paradigm shift to encompass shared value, even under high levels of uncertainty and far from equilibrium conditions. Agency has in tentionality, forethought, self-reactiveness and self-reflectiveness, and within the context of the organisation with its collective mind, is a cultural entity that operates through a normative personality. This notion of the collective agency is orientated in its social and environmental supersystem by traits of its suprasystem that control who it is and how it operates, though this orientation can change with alterations in its trait values, perhaps under conditions of chaos. Collective agency theory is further able to explain the issues of autopathic and sociopathic organisations in a way that embraces complexity and uncertainty.

The corporation can now be seen as a collective agent composed of a group of interactive individuals who come together to form a culture (to create collective norms) and an emotional climate (that establishes the basis for a collective mind), which facilitate its operation (more or less) as a single entity with purpose, self-awareness, and various capacities for reflection, self-adjustment and improvement, and it operates as a whole through efficacious processes and with forms of intelligence. A number of forms of intelligence have been considered including operative, figurative, emotional social and cultural, all of which are part of the core nature of the collective agency and its information processing capabilities. Efficacy has also been considered, and connected to the notion of co-intelligence.

The agent is symbolised through its paradigm which is subject to immanent cultural change: this has an effect on the cultural orientation trait, which in turn impacts on its other traits which re-orientates the way in which the agency is likely to respond to contexts and the situations that develop within its supersystem, impacting on its modes of behaviour. The potential for changes in the paradigm is represented by the paradigm cycle, which explains how the agency moves through different exposures of uncertainty and instability. In particular,

it represents the difficulties that will be experienced as traditional corporate paradigms are challenged and transformed. This also points at the possibility of anticipating the development of crises given that tell tale signs arise, perhaps in relation to the stability of the traits. The chaotic passage of a paradigm is reflected through changes from normal to post-normal to aleatory modes, and finally to transformation. From exposure to the post-normal mode, a paradigm can experience a number of options for change, and only circumstance will determine how such change occurs. It is during this period that traditional ontological boundaries may become changes, particularly during the transformational mode.

The models outlined here are the result of a theory-building process (principally through the application of core principles coupled with observation) through its configuration models that are constituted as a multidimensional constellation of conceptually distinct characteristics that commonly occur together (Dauber, Fink & Yolles, 2012). Rather than intending to create and verify hypotheses, models, or frameworks, interest lies in improving their substance (Flynn et al., 1990). However, the models here are more than just theory constructions. They also have an empirical base that has arisen from an increasing number of works. Thus for instance Guo, Yolles & Iles (2011) used a development of the cultural model to explore the coherence and pathology of a number of Chinese commercial banks, developing empirical mechanisms to create statistical evaluations. Jirapornkul and Yolles (2010) explored the value coherence between different level of management and employees in a number of organisations in Thailand. The study found that: there are cultural distinctions across age groups and gender; and some of these have had an impact on the ability of the organisation to operate coherently, in the ability pass through desirable change, and in the practice of human resource management. Achakul (2011) undertook a study of personality profiling using a model related to Figure 3, linking it with motivation. He found consistent results in his data analysis indicating the utility of the approach, that personality profiles could be measured, and that personality characteristics tend to vary with the demographic elements of age and level of education. Manmuang (2011) undertook a study of the conflict in the south of Thailand, where Islamic insurgents were practicing acts of terrorism against the local population and the military and police. Adopting a form of the paradigm cycle in Figure 4, he was able to develop detailed explanations for the changing stability and nature of the conflict. In addition an Organisational Orientation, Coherence and Trajectory (OCT) project was recently started. Part

of this project centres on the empirical evaluation of corporate personalities, and in corporate life cycle processes.

It may be noted that the collective agency models offered here, that replace the partial explanations of corporate purposes and processes by Individualists, are not intended to address the specific problem of how a corporate paradigm shift will develop and what it will mean for the corporation or its hosting supersystem. Rather, a general structure has been presented that is capable to doing so. This would be done by elaborating on the current models in order to represent a situation of corporate plurality in a socio-economic and ecological supersystem in which shared value is core. However this would be something for the future.

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[1]www.hrsummitus.com/media/whitepapers/MaritzInstitute_HRUS.pdf

[2]The Friedman article can be found at www.colorado.edu/studentgroups/libertarians/issues/friedman-soc-resp-business.html

[3]Following Hoffman (1947), in the early 18th Century the corpuscular paradigm of light could be discerned arising from Newton's research, where light was seen to be composed of particles that were emitted in all directions from a source. In the late 19th Century, Young found from his experiments that light seemed to have properties that were exclusive to waves, for which Fresnel developed a mathematical structure, and for which Maxwell then formulated his theory of electromagnetism in 1873, and since this was largely ignored until 1885, except by a small group of advocates, it may be referred to during this time as the virtual electromagnetic paradigm of light. Neither paradigm could be proved to be dominant during this post-normal mode. During the chaotic period of paradigm change a wave-particle duality theory appeared. Published in the Journal *Nature* as the paper 'The Quantum Postulate and the Recent Development of Atomic Theory' in 1928, the paper first introduced and defined the concept of 'complementarity' and outlined the basic points of what was to become known as the Copenhagen interpretation of quantum mechanics. Bohr's proposition came to be known as the complementarity (interpretative) paradigm (Petruccioli, 1993) which maintained characteristics of both the corpuscular and electromagnetic paradigms, and which argued that distinguishing between the two paradigms was meaningless. Bohr's position was supported in due course by Heisenburg's uncertainty theory, which implied that it was fundamentally impossible to simultaneously measure the position and the momentum of a physical object with an arbitrary high precision.

[4]A description of the FTS4Good Index can be found at
http://www.ftse.com/Indices/FTSE4Good_Index_Series/index.jsp.
[5]BBC Today Business Lecture 2011,
http://news.bbc.co.uk/today/hi/today/newsid_9630000/9630673.stm
[6]Operational closure means the existence of closed loops in the network of its organizational processes that are driven by system itself. According to Luhmann (1995, p. 41), it is an operational mode of self-reference through which forms of causality that to a large extent reliably prevent a system from being steered from outside.
[7]For Piaget operative intelligence is the active part that involves all actions that are undertaken so as to anticipate, follow or recover the transformations of the objects or persons of interest. Operative intelligence is responsible for the representation and manipulation of the transformational aspects of reality. It is the active part of intelligence, that is, it involves all actions that are undertaken so as to anticipate, follow or recover the transformations of the objects or persons of interest. Operative intelligence frames how the world is understood and it is adaptive. It has two functions: assimilation and accommodation. Assimilation refers to the active transformation of information that can be integrated into existing mental schemes, and accommodation refers to active transformation of mental schemes, enabling referencing of individual interactions (Sternberg, 1996). Figurative intelligence is the static part of intelligence that derives their contextual meaning from the experiences of operative intelligence. It involves any means of representation that may be used to maintain mental states that intervene between transformations. Figurative attributes that occur in any personality may be seen as sedimentations of cultural and epistemic beliefs. Piaget's notion of operative intelligence is consistent within the context of the human activity system to the cybernetic notion of autopoiesis (Maturana & Varela, 1979).
[8]For an understanding what is mean by the term *music of the spheres, see for instance*
www.musicofthespheres.org/Whatismots.htm