Understanding Organisational Intelligences as Constituting Elements of Normative Personality[1]

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Purpose:
Intelligence and inefficacy set limits to the capabilities of achieving high levels of performance in organisations. Several forms of intelligence are widely referred to in the literature: intelligence at large (general intelligence), cultural, social, and emotional intelligence. As a figurative frame of organisational intelligences, a theory of normative personality is developed by using a cybernetic frame of reference, drawing on socio-cognitive and trait theory. The outcome of this approach illustrates the control processes through which an organization operates and the importance of organisational intelligences.

What is original/ what is the value of the paper?
A new cybernetic approach is developed called Organizational Orientation Theory that for the first time illustrates the interconnection between intelligences in the organization.

Design:
Concepts of cultural, figurative, operative and social intelligence are embedded into a ***theory of organizational orientation***. Emotional intelligence and its relation to the other four forms of intelligence are considered. In a final chapter, some empirical approaches to organisational intelligence are listed without further comment.

Findings:
Cultural, figurative, operative and social intelligence are defined. In follow up studies, their relationship can be explored and their impact on performance discussed.

Research Limitations/implications
The arguments provide part of a theory-building endeavour, not yet empirically supported. Cultural dependence of intelligences needs to be specified. It is not yet clear whether and in what way intelligences are culture dependent, i.e. in different cultures may act differently.

Practical implications
With the development of future empirical explorations, the theory should be capable of exploring the intelligences of organizations, offering the potential of delivering predictions of aggregate performance and/or the emergence of pathologies within the organization. Methods of research into intelligences and efficacy need to be explored more deeply.

Keywords:
Cybernetics, organizational intelligences, organizational orientation, efficacy.

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[1] An earlier version was presented at IACCM 2011 annual conference at Ruse, Bulgaria. We thank two anonymous reviewers and Jacob Eisenberg for some challenging comments, which were helpful to clarify our position.

1. Introduction

Intelligence is the ability of an agent to appreciate and harness its own knowledge as information about its environment, to construct new knowledge converted from information about its experiences, and to pursue its goals effectively and efficiently. Intelligences enable the consideration of the interests and influences of the external environment (stakeholders, institutions, counterparts in the task environment), an agency's own goals, and the goals of others, and facilitation of the development of ideas about the possible reactions of others in relation to the action taken by the agency.

In a way the intelligences are the driver for and the constraints of the achievements that an organization may be able to materialize: without intelligences there are no achievements; with low levels of intelligence poor results develop; and with high levels of intelligence good results can be achieved. Several forms of intelligence are widely referred to in the literature: intelligence at large (general intelligence), cultural, social and emotional intelligence. In the context of strategic thinking and operational activity, we may further distinguish between figurative and operative intelligence. It is also known that gaps between desired and actual efficacy impact on work satisfaction and emotions, i.e. impact on emotional intelligence. Since these various concepts are only loosely related to each other and also hardly link to the different classes of organisation theory and to various approaches of organisational culture theory, we undertake the effort of defining a new theory based on the notion of normative personality, with particular emphasis on the role of intelligences.

A seemingly promising route to connecting distinct organizational theories and concepts of organisational intelligence comes from the field of organizational culture. This describes the psychology, attitudes, experiences, beliefs and values of an organization, concerns the norms that are shared by people and groups, and the controls that relate to how they interact with each other in and beyond their organization (Hill & Jones, 2001). A demonstration of the utility of this approach comes from Dauber et al. (2010) with the creation of a coherent model that arises from the synergy of a number of organizational modelling approaches. One approach that may be classified as part of this, because of its concern with the psychology of organizations, comes from Weick (1969 & 1995). It adopts a corporate personality metaphor used to model organizations so as to make them seem "compact, intelligible and understood" (Cornelisson et al., 2008). This metaphor is well known (e.g. Olins 1978; Davenport et al. 1997; Gindis 2009; Barley 2007).

In the remainder of this paper, when we refer to normative personality, we shall mean the development of the collective mind and its *emergent* normative personality. It is related to the notions of cognitive learning theory (e.g., Miller & Dollard, 1941; Miller et al., 1960; Piaget, 1950; Vygotsky, 1978; Argyris & Schön, 1978; Bandura, 1986 & 1988; Nobre, 2003; Argote & Todorova, 2007), where "learning is seen in terms of the acquisition or reorganization of the cognitive structures through which humans process and store information" (Good and Brophy, 1990, pp. 187). Set within this is *cognitive information process theory*, where the collective mind is seen as an information system that operates through a normative set of logical mental rules and strategies (e.g., Atkinson & Shiffrin, 1968; Bowlby, 1980; Novak, 1993; Wang, 2007). These rules and strategies depend on organizational intelligences, and they may fail when pathologies (that affect the intelligences) develop.

With this paper we address the issue that so far there were no clear links established between the theories and empirical findings about organisational intelligences, organisational culture theory and organisational theory. Our attempt is of importance because without well-defined links between the seemingly unrelated classes of theory it is not possible to make adequate diagnoses of the state of organisations. A major issue is that due to restricted views and small numbers of variables what very often is considered as 'clear evidence' may rather be spurious regression due to omitted variables.

The cybernetic approach is of importance for building a theory, which at the next step can be empirically applied and deliver insights into the relation and the intra-organizational dynamics between organisational culture and worker satisfaction, between management action and worker loyalty, and, finally should be able to indicate emerging pathologies within organisations.

The paper is structured as follows: First, we offer a brief overview about selected concepts of assessment and measurement of intelligences and efficacy in agency traits. Next, as a frame of reference we are modelling the collective agency. After that we discuss intelligences and efficacy, emotional intelligence, and the relation between emotions and feelings. A summary concludes the paper.

Assessment and Measurement Intelligences and Efficacy in Agency Traits

In the literature we find a variety of attempts to measure ***organizational intelligence,*** which largely have no systematic link to most of the different classes of organization theory dealing with strategy, structure, operations, organizational culture or the organizational environment as identified by Hatch and Cunliffe (2006).

Piaget (1950) attempted to measure ***general intelligence in children*** using cognitive testing approaches to assess their concrete and formal operative strategies. In the context of children, the distinction between figurative and operative intelligence is simply shown in a map of cognitive development by Demetriou, Doise & Van Lieshout (1998, p. 186). The Piaget tests were designed to look for particular types of understanding and/or reasoning (Bybee & Sund, 1982). Outside the child learning context the concepts of figurative and operative intelligence have not been been used. Within the context of organization theory, an equivalent to Piaget's examination of intelligence is the use of ethnographic methods. Interestingly however, operative and figurative intelligence may be connected with an empirical approach (based on a fluid mechanics metaphor from physics) that distinguished between ***fluid and crystalline intelligence*** (Hooper, Fitzgerald & Papalia, 1971; Schonfeld, 1986). Here, operative intelligence involves the fluid ability of logical thinking and the formulation and elaboration of relations, while figurative intelligence involves the crystallized ability of everyday learning that reflect recordable experience. Measures for both fluid and crystalline intelligences have been proposed by Cattell & Butcher (1968), Cattell (1971) and Cattell, Barton & Dielman (1972) that may contribute to a more comprehensive approach in measuring organizational intelligence.

Drawing away from this approach, a capacity to measure ***general organizational intelligence*** has been proposed by Albrecht (2003) and used by others (e.g., Yaghoubi, Moloudi & Haghi, 2010). Albrecht created a model of seven key dimensions of an organization, which were adopted as independent variables on which organizational intelligence depends.

(1) strategic vision,
(2) shared fate,
(3) appetite for change,
(4) heart (giving more than contracted),
(5) alignment and congruence (relating to team-working),
(6) knowledge deployment, and
(7) performance pressure (which everyone owns with operational imperatives for shared success).

Gonyea & Kuh (2009) use three core dimensions of ***organizational intelligence***:

(1) technical and analytical intelligence;
(2) intelligence of understanding procedural problems;
(3) and context intelligence.

These have also been related to the notions of Erçetin et al. (2000) by Potas, Erçetin, & Koçak (2010), from which the following set of independent variables arises:

(1) promptness in action and reaction;

(2) adaptation to changing situations;
(3) flexibility and convenience of operations;
(4) ability to detect prudence and being prudent;
(5) ability to use imagination;
(6) effective communication with stakeholders.

To some extent, these approaches can be connected with ***cybernetic intelligence*** as described by Schwaninger (2001), for whom (consistent with agency theory) the intelligent organization has:

(1) adaptability;
(2) effectiveness in shaping its environment;
(3) virtuosity (the ability to create a self-reconfiguration in relation to its environment);
(4) sustainability (the ability to make positive net contributions to viability and development of the larger suprasystem in which the agency is embedded).

Kihlstrom & Cantor (2000) provide a useful review of the notion of **social intelligence** and its relation with other theoretical constructs. Thorndike's (1920) sees social intelligence as 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.

Cantor and Kihlstrom (1987) define social intelligence 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. Weinstein (1969) sees it as the ability to manipulate the responses of others.

Kihlstrom & Cantor (2000) further argue that ***social intelligence*** cannot be evaluated abstractly, but rather with respect to *context* and in relation to the *purposes* it serves from the agent's perspective.
This sets up criteria for the assessment of social intelligence through the use of empirical psychometric tests. For instance, Kosmitzki and John (1993) identified **18 features of social intelligence** including the core attributes of:

(1) understanding people's thoughts, feelings, and intentions well;
(2) being good at dealing with people;
(3) having extensive knowledge of rules and norms in human relations;
(4) being good at taking the perspective of other people;
(5) adapting well in social situations; being warm and caring; and
(6) being open to new experiences, ideas, and values.

Social perceptiveness is the capacity to be aware of the needs, goals, and feelings of others and the greater social environment, and this includes "multiple others" in the organization. High levels of social perceptiveness are useful for:

(1) accurately evaluating a social situation and
(2) determine the needs of the social context,
(3) being aware of their social environment and of the intentions and sensitivities of others.

Gilbert & Kottke (2009) adopt a model of social ability which has to include the core sub-dimensions of the concept of social intelligence

(1) social perceptiveness and
(2) social affordance seeking.

The concept of ***cultural intelligence*** (Earley, P. C., Ang, S., 2003) posits that understanding the impact of an individual's cultural background on their behaviour is essential for effective business. Earley and Ang suggest that it is possible to measuring an individual's ability to engage successfully in any environment or social setting and identified four basic aspects of cultural intelligence (see http://culturalq.com/fouraspects.html). Measures of cultural intelligence are provided by "The Cultural Intelligence Center" based in East Lansing, Michigan (http://culturalq.com/measure.html). These include the identification of intelligence as Cultural Quotients (CQ), and a number of

dimensions of these have been proposed that include drive, knowledge, strategy, and action, which are defined below.

CQ-Drive is the interest of an agent in experiencing other cultures and the extent to which one thinks to be capable of interacting effectively with people who have different cultural backgrounds. It includes:

- Intrinsic Interest - deriving enjoyment from culturally diverse experiences
- Extrinsic Interest - gaining benefits from culturally diverse experiences
- Self-efficacy - having the confidence to be effective in culturally diverse situations.

CQ-Knowledge is an agent's knowledge about how cultures are similar and how cultures are different. It includes:

- Business - knowledge about economic and legal systems
- Interpersonal - knowledge about values, social interaction norms, and religious beliefs
- Socio-linguistics - knowledge about rules of languages and rules for expressing non-verbal behaviours.

CQ-Strategy is how an agent makes sense of culturally diverse experiences. It occurs when people make judgments about their own thought processes and those of others. It includes:

- Awareness - knowing about one's existing cultural knowledge
- Planning - strategizing before a culturally diverse encounter
- Checking - checking assumptions and adjusting mental maps when actual experiences differ from expectations.

CQ-Action is an agent's capability to adapt verbal and nonverbal behaviour to make it appropriate to diverse cultures. It involves having a flexible repertoire of behavioural responses that suit a variety of situations. It includes:

- Non-Verbal - modifying non-verbal behaviours (e.g., gestures, facial expressions)
- Verbal - modifying verbal behaviours (e.g., accent, tone).

Given that wide diversity of approaches towards organisational intelligence, we aim at an approach that is capable to integrate the concept of organisational intelligence with different classes of organisation theory and organisational culture theory. The first step is modelling the collective agency.

Modelling the Collective Agency

Dauber et al. (2010) were interested in the dispersed classes of organizational theory contextualized through organizational culture studies. Drawing on ideas within the field of organizational culture, two modelling categories are identified: a dimensions approach (e.g. Hofstede et al., 1990; Sagiv & Schwartz, 2007), and interrelated structure approach (e.g. Schein, 1985; Hatch, 1993; Homburg & Pflesser, 2000; Allaire & Firsirotu, 1984). Linking such approaches with Hatch & Cunliffe (2006) and defining the relationship between strategy, structure and operations through a variety of works (e.g., Chandler, 1973; Schein, 1985; Child, 1972; Argyris, 1977; Galbraith and Nathanson, 1978; Fredrickson, 1986; Dodgson, 1993; Amburgey & Dacin, 1994; Harris & Ruefli, 2000; Whittington, 2001), a new culturally based model for the organization is created, which offers greater coherence (Figure 1).

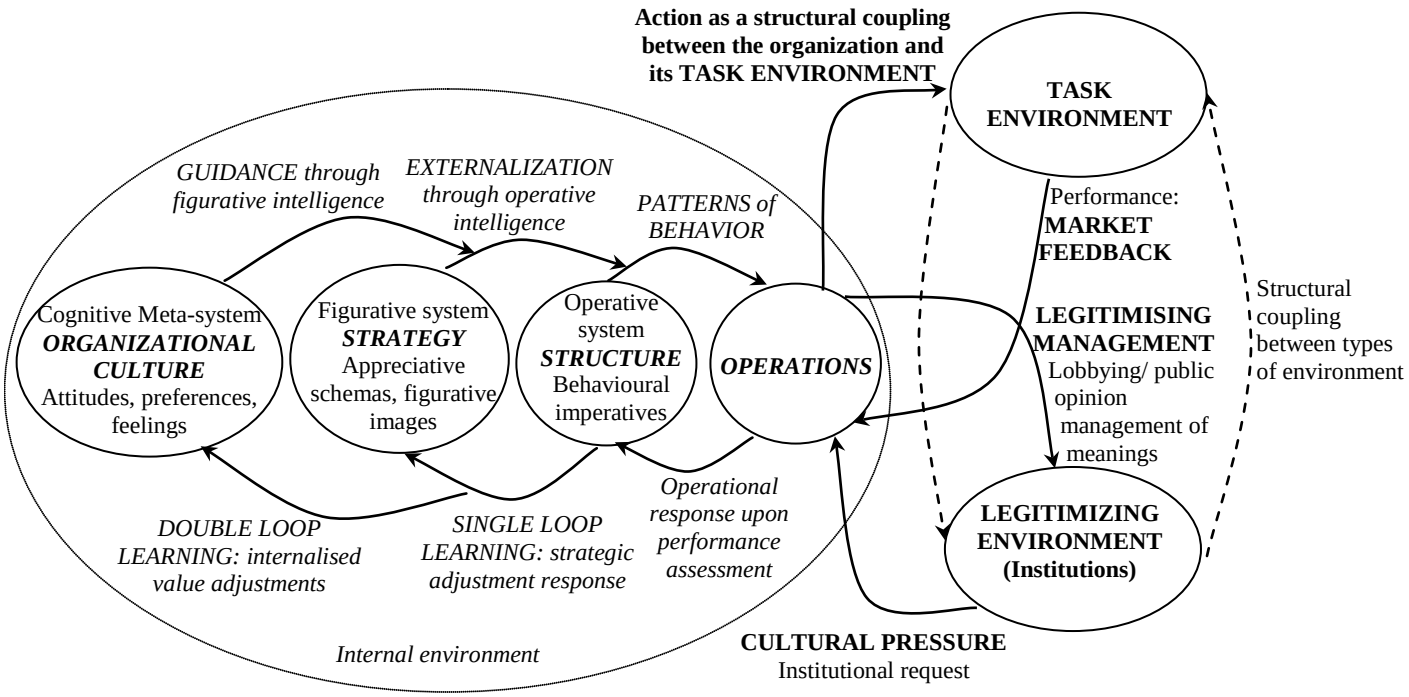


Figure 1: Model of Organizational Culture Connecting the Internal and External Environments (Dauber et al., 2010)

In socio-cognitive theory the mind operates as a complex system (Bandura 1999; Cervone et al. 2004). Socio-cognitive variables develop through socio-cultural experiences. They distinguish between cognitive capacities that contribute to personality functioning, including skills, competencies, knowledge structures that have been derived from experienced real life situations, self-reflective processes that enable people to develop beliefs about themselves within social contexts, and self-regulatory processes where people formulate goals, standards and motivations toward identifiable outcomes (Bandura 1986, 1999; Williams 1992). Performance involves the evaluation of directed behaviour and is related to the interaction between the behaviours, which are embedded in personality structures expressed in terms of systems, and the social environmental factors with which it is coupled. In each of these personality systems, orientations exist that define a set of traits which take on a regulatory function.

Here, a number of notions and terms are used:- The purpose of an agent is to create regular patterns of behaviour for its operations that satisfy its recurrent wants and needs. Patterns are only possible through formal or informal structure, which both facilitate and constrain behaviour through norms that define what is acceptable and what is not. Without structure no patterns of behaviour develop when an agent may be seen to operate/behave in arbitrary ad hoc ways. This can also happen when pathologies develop. The agent model in Figure 1 highlights these patterns of behaviour. It shows feed-forward processes that include guidance through intelligences. Through figurative intelligence, organizational culture guides strategy, structure and operations. Through operative intelligence, externalization processes influence structure and operations. Operations are instances of behavioural conduct that are hence both facilitated and constrained by structure.

Starting from operations and considering feedback processes, performance assessment creates demands on structure to ameliorate or amplify the morphology of the organization. The notions of single and double loop learning arise from Argyris (1977). S*ingle-loop learning* refers to processes of detecting errors and adjusting existing strategies to meet new requirements as might be dictated by the needs of organizational adaptation and response. *Double-loop learning* refers to a deeper process of learning that relates to value adjustment and the internalization of new knowledge. It is connected to

the demands for change in organizational culture.

The two interactive environments shown are referred to as *task* and *legitimizing environment.* The task environment constitutes what the organization offers and delivers as its services. The legitimizing environment gives legitimacy to the conduct, goals and activities of the organization. The organization may also try to influence the legitimizing process (Anderson and Gray, 2006). Both are *structurally coupled* to the system of operations - thus having structure-determined engagement and a common history of interaction (Maturana & Varela, 1987).

This model in Figure 1 is associated with that of Figure 2, which arises from the principles developed in Yolles (2006), links closely with the cybernetic model of personality by Yolles et al. (2011), and acts as the basis for normative personality theory introduced here. Since the theory context is different, different terms have to be used. Figure 2 is a model of the organization formulated through three ontologically distinct domains: the existential, noumenal and phenomenal, each of which has distinct epistemic content and characteristics. In the existential domain there exists a collective *cognitive base* that constitutes the "truths" that form both its *epistemic base* of scientific beliefs, which form patterns of analytic knowledge. It also comprises the *cultural base* of cultural beliefs and values (including valued emotional potentials, Averill, 1980) that arise as normative standards of conduct, where both are connected with assumptions, beliefs and trusted propositions that arise within cultural development. The cognitive base may be seen as the result of cybernetic interaction (Maturana and Varela, 1987: 75) between the patterns of cultural and analytic knowledge, and these affect each other through their history of mutual influence, where cognitive intention plays a metasystemic role and creates a cultural orientation for the agency (Yang et al, 2009). Self-reference is an essential and establishes an agency identity (Hannah et al, 2008 & 2010). The underlying assumptions (Schein, 1985) contribute to organizational knowledge, where false knowledge (when embedded into the culture) results in myth. While Figure 2 is an amplification of the agent represented in Figure 1, it does support a distinction. Here an agent's operations conform to its interests, and the structure that facilitates this is relegated to a horizon of meanings.

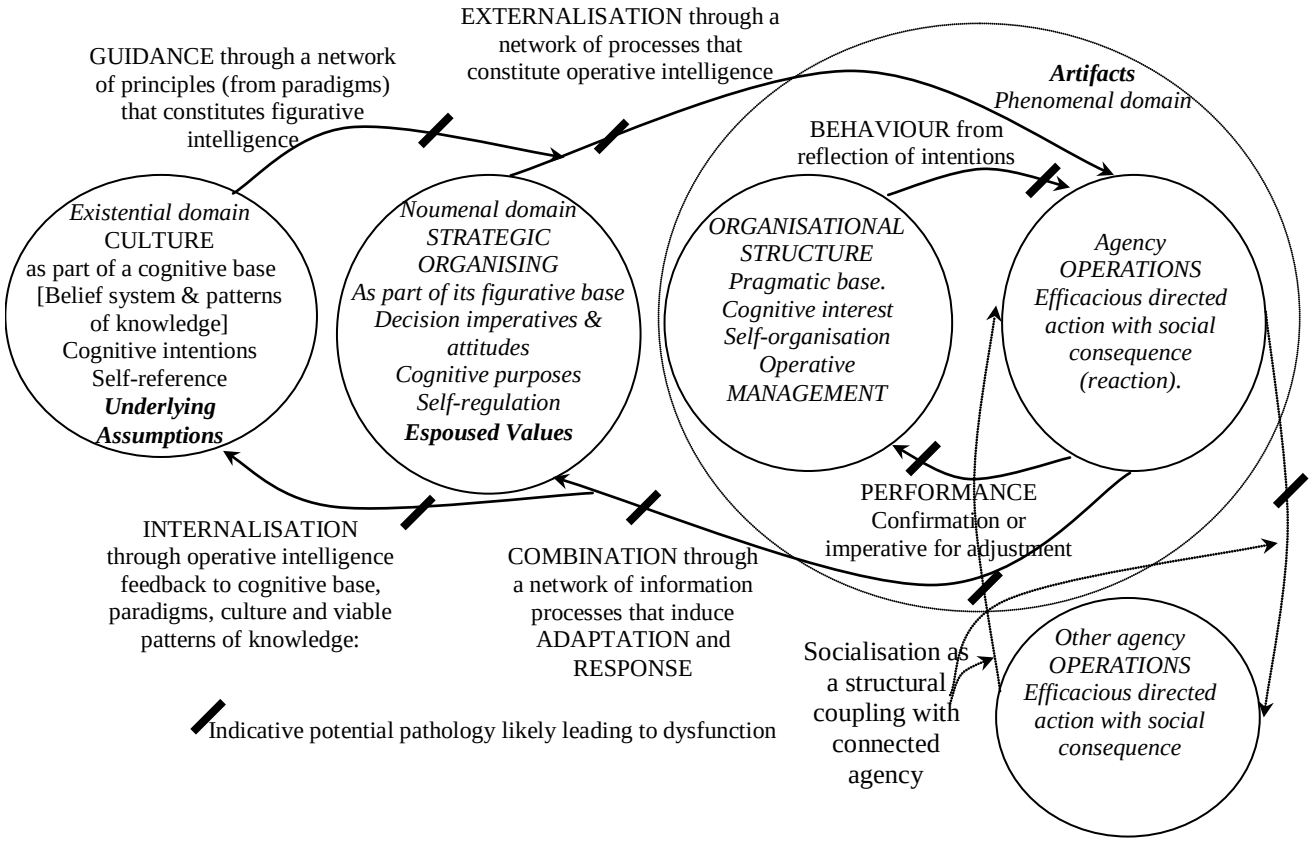


Figure 2: Model of a Social Agency

In the noumenal domain of Figure 2 there is a *figurative base* that is composed of relationships that can be construed with the sedimentation of information rich conceptual models from its cognitive base, with connection to cognitive purpose. It is the home of figurative elements like ideological and ethical structures that contribute to the political and moral functioning of the agency. This figurative part of the agency forms the strategic part from which arise regulation of information flows, decision-making and patterns of behavior, i.e. the 'internal allocation of tasks, decisions, rules, and procedures for appraisal and reward, selected for the best pursuit of […] [a] strategy' (Caves, 1980: 64). Cognitive purposes (Habermas, 1970) are linked to information and determine purposeful behaviour (Espejo et al, 1997). This is also the domain of attitudes, manifested from beliefs to create an "enduring organization of beliefs" around an object or situation predisposing an agency to respond to situations in some preferential manner (Rokeach, 1968). Values are culturally defined (Williams et al, 1992), and when espoused enable the distinction between observable and unobservable elements of culture (Schein, 1985).

The phenomenal domain is populated by artefacts (Schein, 1985) and is the place where organizational structure is maintained. Here there is a *pragmatic base* that is constituted by its normative modes of practice. Standards of validity constitute evidence, which are used for acquiring knowledge in connection with cognitive interest (Habermas, 1970). Self-organization is important to the survival of an agency enabling it to create its own order (Kauffman, 1993).

The network of processes of *internalization*, *externalization* and *combination* is often cited as being due to Nonaka & Takeuchi (1995). Interestingly, three of these Nonaka and Takuechi concepts arise in Piaget's (1972) learning theory, which explores cognitive development and the construction of knowledge. Piaget's work has been explained for a social context by Leman (1998). The process of *socialization*, through which explicit knowledge can be socially spread, occurs as a lateral (within domain) structural coupling (Maturana and Varela, 1987: 75) where they have a common history of interaction beyond the personality.

In Figure 2 we find normative personality intelligences. A normative agent can be said to function primarily through two forms of *intelligence, figurative and operative* (Piaget 1950; Yolles 2009). *Figurative intelligence* (a form of autogenesis: Schwarz, 1997) provides its core relational explanations of reality, and *operative intelligence* (a form of autopoiesis: Schwarz, 1997; Maturana and Varela, 1987) provides for its capacity to evidence its figurative base of information. Normative agents with poor figurative intelligence do not maintain good representation in their figurative or cognitive bases. Those with poor operative intelligence cannot adequately manifest elements of their figurative base pragmatically, so that they have limited capacity to turn their models into observable phenomena. To avoid the potential for confusion, it must also be noted here that our use of the term *figurative intelligence* has been extended beyond Piaget's original notion, making it an active rather than passive mechanism.

In normative personality the term *operative intelligence* refers to the capacity for attitudes and conceptual information to be assembled in a coherent way to form personality operations and decision making. Attitudes with their emotional enhancements are constituted as a set of beliefs or values that have been directed towards some object of attention and hence assume an operative function. *Operative intelligence* can condition trait structures and processes, which affect behaviours and hence agency performance.

The phenomenal domain involves an organization's operative system that are connected laterally (within the domain of observable phenomena) as a *structural coupling* with an environment with which it has a history of interaction, and within which it maintains performance. The transitive coupling between the distinct domains of the organization and its environment is cybernetic in nature, with feed-forward and feedback loops.

The noumenal domain of Figure 2 centres on information processes, and thus is constituted as the cognitive part of the organization if the processes do not perform appropriately, i.e. if their efficacy is impeded. As such we identify that this is the seat of any normative personality system that may emerge, and it is our intention to model this. In Figure 2, the bars lying across the connecting *intelligence* loops illustrate the possible pathologies that might arise in the organization (see for example Yolles, 2009a).

In order to understand more about the normative personality, we may find some direction from theories of the individual personality. Support for this comes from a number of sources (e.g. Bandura, 1999; Hofstede et al., 2002; Brown, 1961; Gindis, 2009; Barley, 2007), with agents behaving consistently as "legal corporate persons", and with a unitary rationality that can be explained. In Figure 3 we offer a model of normative personality. Here personality is taken to be socio-cognitive in nature. Both, emotions and feelings are manifested cognitively and figuratively.

Personality assessment differentiates between personality structures and behavioral orientations. The internal structures are assessed through an examination of a system of interacting psychological mechanisms (rather than a set of independent variables as in trait approaches). In social cognitive theory, assessments capture not only current psychological tendencies, but also personal determinants of action that contribute to development over the course of time. Evaluations are made of individual differences and of the psychological attributes that contribute to personal identity. Ways in which the structures of personality come into play are illustrated as agents interact with the settings and challenges that make up their day-to-day lives. Social cognitive personality assessment seeks to explore agential personality coherence. Assessments explore the cognitive structures that are used to interpret events. They self-reflect and self-regulate, but also induce change through self-organization.

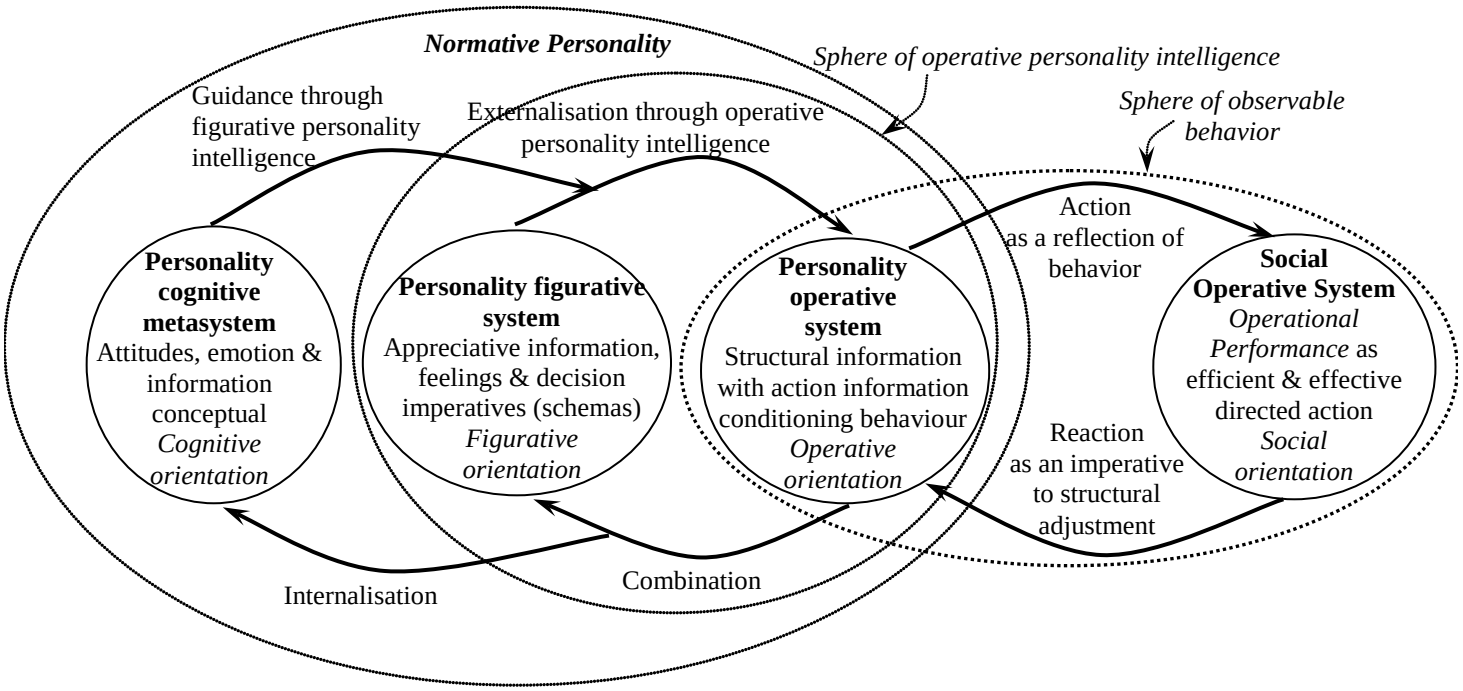


Figure 3: Normative Personality as a Cognitive System with Figurative and Operative Intelligences, seated in the Noumenal Domain of the Organizational Agency

Intelligences and Efficacy

In the first paragraph of the introduction, we defined intelligence as the ability of an agent to

appreciate and harness its own knowledge as information about its environment, to construct new knowledge converted from information about its experiences, and to pursue its goals effectively and efficiently. We also stated that intelligences enable the consideration of the interests and influences of the external environment (stakeholders, institutions, counterparts in the task environment), an agency's own goals, and the goals of others, and facilitation of the development of ideas about the possible reactions of others in relation to the action taken by the agency.

The bi-polar approach to intelligences is of importance. The organisation has to weigh own knowledge with information from the environment. Following C.G. Jung's theory, this bi-polarity is a central characteristic of personality (Blutner & Hochnadel 2010). E.g. Jung had stated that individuals either rely more on thinking or more on feeling, and either more on sensing or intuition. The preference for the one or the other pole indicates a personality type, e.g. the thinking type or the feeling type. However, there is another crucial assumption: The alternate pole has a supportive function for the dominant pole: For the thinking type there is need that feeling supports the thinking, and for the feeling type thinking supports the feeling. This bi-polarity allows measuring these characteristics as bipolar traits. These structural features of Jung's personality theory explain why the MBTI has a preference for even number Likert scales. There is need to identify the type, and to identify the auxiliary role of the alternate pole. More balanced personality has more balanced scores, closer to the theoretical mean, pathologic personality has extreme scores for one pole of a trait and neglects the other pole, i.e. the auxiliary function of the other pole (Blutner & Hochnadel 2010).

In the model, ***intelligences*** are constituted as a network of first or higher order processes that each couple two ontologically distinct trait systems. These networks of processes manifests information through semantic channels thereby allowing local meaning to arise from the manifested content in the receiving trait system. *Operative intelligence* is a network of first order processes called autopoiesis (or self-production) that creates an *operative couple* between the figurative and operative systems. It consists of a network of personality processes, which operatively manifests significant figurative information. It also creates improvement imperatives to adjust the figurative system. Connected with the network of processes that constitute operative intelligence is the capability of operatively manifesting feelings (or reactions to feelings). This capability can be called *"operative emotional intelligence"*. Here it is worth mention that in the modelling context emotional intelligence can be considered to be related to both, figurative and operative intelligence.

The network of processes is itself defined by its appreciative schemas, the decision imperatives in the figurative system and the improvement adjustment imperatives that arise from the operative system. *Figurative intelligence* is a network of second order processes called autogenesis or self-generation that *projects conceptual information into the operative couple*. Connected with this network is the capability of manifesting emotions into the operative couple, a capacity that can be called *"figurative emotional intelligence"*. However, this couple also creates improvement imperatives to adjust the cognitive meta-system, from which figurative intelligence emanates in the first place. This meta-system is composed of attitudes, emotions and conceptual information that are harnessed to identify the network of meta-processes that define it, permitting significant conceptual information to be manifested in the operative couple. Intelligences are structured through personality perspectives and preferences. *Personality perspectives* arise in the personality meta-system from attitudes, emotions and conceptual information, and are influenced by the adjustment imperatives carried through figurative intelligence from the operative couple. The perspectives are manifested across the personality through perspectivistic information carried by its intelligences, to be integrated into schemas in the figurative system, and structured into the operative system. *Personality preferences* define a personality's intended trait orientations. In an empirical model, as a variable this is determined by the score that the trait takes. The score of a trait may itself be conditioned in some way by the information carried by the intelligences.

We may speak of "*intelligence limitation"*, if the selection of information to be manifested by the intelligences become uncoupled from the perceived organisational preferences and unrepresentative

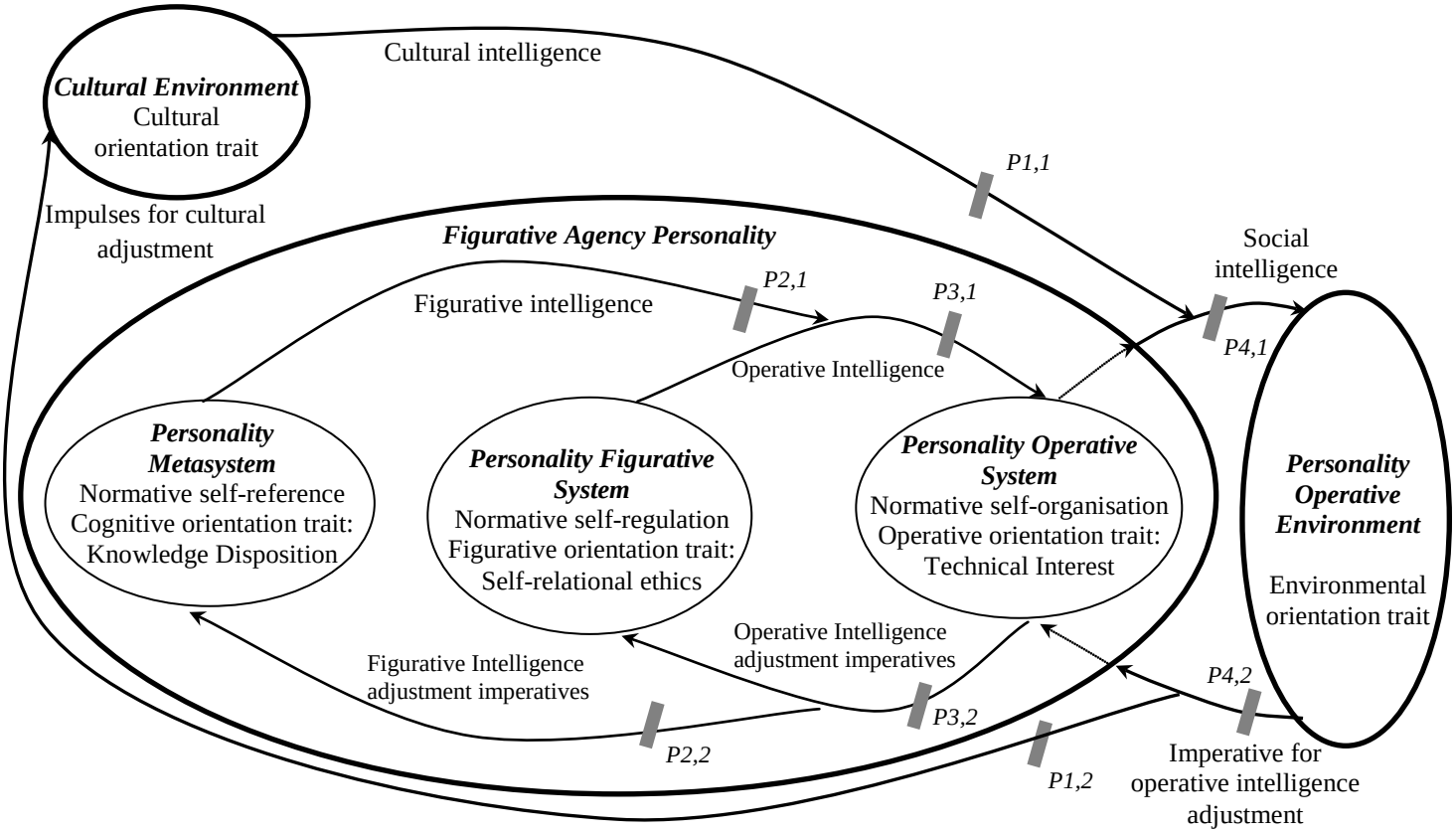
of the perceived intended perspectives. This lack of representation occurs when not all of the perspectivistic information is represented. Under such a condition the personality may: (1) have its capacity reduced to conceptualise, schematise or apply perspectivistic information; (2) have the orientation of its traits perturbed; and (3) can be drawn towards un-preferred or unintended conduct that may even "corrupt" its proprietary strategic, ideological or ethical orientations. When any of these conditions occur it is because *pathologies* have developed. Pathologic shifts in trait orientations may adjust perspectives that support these pathological developments (Figure 3).

Piaget's operative intelligence, which we have been using as a representation of autopoiesis, is constituted as a network of (first order) processes of the personality that is able to manifest information between its trait systems. Coupling Piaget's and Bandura's terminology, ***operative intelligence*** has the efficacious capacity of a normative agent to create a cycle of activity that manifests figurative projections as operative objects. In other words, operative intelligence occurs in a personality as the capacity of a network of processes to efficaciously migrate appropriate information content between two analytically distinct traits, in relation to the beliefs that the agent has in this regard. This now leads us to the realization that it is efficacy that factors pathology, a notion to which we shall return later.

The notion of figurative intelligence (as adapted from Piaget, 1950) is a representation of autogenesis, and is constituted as a network of second order or meta-processes (like cognitive principles) that efficaciously enable and contextualize operative intelligence. It connects *identity* with *self-processes*, a notion indirectly supported by Markus and Nurius (1986) who proposed a theory of "possible selves" which explains how the agent develops a connection between present self, motivation, behaviour and possible or future self. In addition, it connects with Identity Process Theory (Breakwell 1986; Sullivan 2000; Twigger-Ross et al. 2003) where the conceptualization of identity is seen to involve four distinct principles of identity (self-esteem, self-efficacy, distinctiveness and continuity) that together enable the maintenance of a positive self-view.

Now returning to Figure 2, this is a model of the agency in which there exists a strategic organising component that, under the condition that the organisation is seen to have a collective mind, represents its normative personality. The figurative base shown here, which constitutes the personality's resources, enables a capacity to adequately reflect the cognitive base of the agency's paradigm and maintain pragmatic interpretations constitutes its figurative intelligence (Piaget 1950; Piaget and Inhelder 1969; Montangero and Maurice-Naville 1997). ***Figurative intelligence*** can now be defined as providing precise information about states of reality, and involves all means of representation used to keep in mind the states that intervene between transformations, i.e., it involves perception, drawing, mental imagery, language and imitation. Hence, figurative intelligence will be a reflection of patterns of knowledge, and will exist through figurative imagery and patterns of information. In terms of the organization's paradigm the figurative base is composed of models, which entail structured relationships and both epistemic and informational properties.

As we show in Figure 4, the coupling connections between personality and the social system are controlled by ***social intelligence***. It is the network of operative processes that enables a personality to manifest its decisions from its *'technical-interest/power trait'* to be manifested socially as observable phenomena. Indeed, as far as other personalities in the social environment are concerned, the only observable phenomena are created through technical-interest/power. The coupling between the cultural environment and social intelligence (the latter occurring as a migratory dialogue between the personality and the social) is controlled by cultural intelligence.



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 4: Socio-cognitive Trait Model of the agency connecting normative personality with social and cultural systems.

Cultural intelligence, according to Earley and Ang (2003: 3) is defined as the ability of an agency to successfully adapt to a change in cultural settings attributable to cultural context. In cybernetic terms, it can be taken as "the manifestation of the cognitive base as patterns of cultural knowledge" (Thamas and Inkson, 2009). This definition requires a plurality of cultural beliefs, attitudes and values, which are in interaction and create a plural figurative base that implicitly has some level of cultural conflict within it. However, where there is no such conflict, then cultural intelligence simply reduces to "the manifestation of the figurative base as patterns of cultural knowledge". Properly speaking this is actually what we might call "figurative cultural intelligence" - the capacity to represent the cultural belief system (of values, attitudes and beliefs) as a coalescence of normative ideological and ethical standards of the culture that ultimately defines what constitutes legitimate modes and means of social behaviour.

A normative agency is normally interested in a desired level of performance that is context specific. Performance is ultimately determined by the ***efficacy*** of the migrations of information between trait systems for given personality types. So any normative personality interested in changing preferences will also consistently want (at some preconscious level of awareness) to modify the efficacy by which cognitive information is migrated from one cognitive state to another (e.g., self-relational ethics to technical-interest/power or vice versa).

The efficacy of personality processes is important. Bandura (1986) defines the ***collective efficacy*** of the agency as the shared belief that a collective can, as a whole, attain goals and accomplish its desired tasks. The efficacy of agencies relates to "the soundness of their thoughts and actions, and the

meaning of their pursuits, and they make corrective adjustments if necessary" (Bandura 2006: 165). Efficacy involves a belief or perception that efficacious collective actions are possible in relation to a social need. Problems with the cultural cohesion of an agency may affect its performance through lack of confidence in individual agencies and/or perceptual differences in collective efficacy (Bandura, 1995). It can be related to the cohesiveness or coherence of a collective agent, and thus can be indicated by a measure of degree or a measure of entropy of the agent. The efficacy of an agency will influence its ability to communicate, to set goals, and to persevere during adversity. Efficacy is conditioned by emotive imperatives (deriving from emotions in the cognitive domain and feelings in the figurative domain) that can be controlled (Adeyemo, 2007) by emotional intelligence (Salovey & Mayer, 1990). Efficacy therefore 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. He also refers to ***perceived collective efficacy***, by which 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, which promote group attainments.

Operative intelligence may be seen as the migration of information between analytically distinct traits of personality. *Migratory effectiveness* relates to how well information is migrated from the figurative to the operative, and this is likely to be connected with knowledge and understanding. As an illustration of this, e.g., how well does a normative personality manifest its self-relational information about ethics (the ethics trait) in the technical-interest/power trait information, and how well is its technical-interest power trait information manifested as a set of social events? In contrast, *efficiency* relates to the *capacity* of the channels through which the migrations occur in relation to the *resources* that are required to manifest the information as social action. These resources may be at some level of awareness inherently or intentionally limited. Hence in any personality the migratory capacities of each process channel may be more or less efficient, and when inefficiencies occur they will result empirically in different scores of the trait variables. From these variable scores we can derive information about preferred or predominant personality type.

Empirically, efficacy can be strong, modest or weak. Scores on a scale indicate the degree of perceived efficacy/inefficacy that an agency might have. Perceived efficacy has an impact on the choices people make. Normally, with high efficacy status impediments to achievement will be seen as surmountable through improvement of self-regulatory skills and perseverant effort. Low efficacy status can negatively influence an agency's ability to communicate, to develop appreciations, and to set goals and cite tasks. It happens because of the way efficacy conditions the manifestation process and hence drives both local development and the adjustment imperatives for improvement. Efficacy can affect an agency's feeling, thinking, motivation, behaviour, and performance - including how it perseveres under adversity. Practically it is the *perceived efficacy* that moderates the agency towards operative performance progression and hence achievement, and the adjustment imperatives that indicate the capability of this progression. The notion of efficacy assumes that every organization maintains some level of emotive impulse control, which might either dampen or enhance on the emotive impulses. Blocked or perturbed information processes (Pi,j in figure 4) contribute to the formation of pathologies. They indicate the limited capacity of the agency to generate requisite responses to its perceived needs for achievement under environmental circumstances. The bars (Pi,j) of the intelligences shown in Figure 4 are indicative of emerging pathologies. Given combinations of these across the personality may well generate distinct personality dysfunctions.

The notion of efficacy applies to the network of processes that constitute the intelligences of the normative personality that determines either preferences or pathologies/dysfunction. In our model, while the traits are concerned with control and the epistemic attributes of a personality (within the meta-system and figurative and operative systems), efficacy is a conditional connector of the ontologically distinct traits systems. *Espoused values* are manifested as preferences from which requisite efficacy arises in the agency. An agency intuits and appreciates what is requisite from an

understanding of its environment in relation to the imperatives from its values and attitudes and other emotive imperatives. Efficacy refers to the means by which figurative and operative intelligences develop, for instance through the coherence of a collective. Greater efficacy will result in more effective intelligence. The evaluation of efficacy could be done qualitatively through ethnographic qualitative or quantitative empirical techniques. Measures for perceived efficacy are provided by Adeyemo (2007), Alden (1986) and Lee (2005).

Since personality orientations are connected to both intelligences and efficacy it is now possible to collect our discussions as a set of proposition appropriate to the normative personality. We have already indicated that personality orientation arises through personality preferences. In the agency cultural/knowledge meta-system, espoused values indicate these preferences. These are manifested: (a) in the cognitive meta-system of the personality as significant attitudes, preferences and connected feelings, (b) in the figurative system as appreciative schemas, and (c) in the operative systems as structural/behavioural imperatives. These manifested preferences determine the set of trait orientations of the normative personality, which in the context of organizations we call organizational orientation. Preferences are thus responsible for the nature of a personality, being influenced by both its intelligences and efficacy, and indeed pathologies and dysfunctions. Pathologies Pi,j (Figure 4) that affect both, intelligences and efficacy, can fall into patterns that create agency dysfunctions.

Agency Emotions and Temperaments

It has been noted that ***emotional intelligence*** has an operative and figurative dimension. It is part of the network of inter-domain processes that relates selected emotional states from the cognitive domain to feelings in the noumenal domain. It is responsible for what information is selected and considered to be appropriate to a given context and also for what information is selected from feelings that will colour behaviour. The control of emotions and feelings is determined by the traits, since emotions and feelings are embodied in the states of the cognitive and the noumenal domain. The traits are not only concerned with rational structures and processes, but also through influences from social and cultural intelligence may direct the domains to one or another extreme of emotions and feelings or to a more balanced attitude. Here then, personalities may achieve a balance, e.g. between love and hate. It is the information transmitted between the domains that will define the "local trait contexts" in which love or hate will become dominant. Necessarily these balances will be informed by both cultural intelligence that manifests the potential for emotion, and social intelligence that manifests the social context for which balances or extremes of love or hate are deemed to be appropriate.

Emotions are responses organized through emotional intelligence that cross at least physiological, cognitive, motivational, and experiential personality systems, and are typically associated with internal or external events and may be take on a positively or negatively tainted meaning (Salovey & Mayer, 1990). It also includes the ability to regulate and alter the affective reactions of others. For Spering, Wagener & Funke (2005) there are **positive and negative effects of emotional intelligence** that can affect the traits (i.e., the strategic approaches) and solution quality of simple cognitive tasks in an agent's personality. Positive effects can result in flexible and creative thinking and the facilitation of efficient decision-making in more complex environments (Fiedler, 2001; Isen, Daubman, & Nowicki, 1987).

While emotions/feelings occur in the individual, they may also develop a normative dimensionality in a collective. In both cases emotions also can affect agency performance, but the nature of this performance is quite different when the agency is either an individual or a collective. In discussing this, however, it must be made clear how one can differentiate between emotions and feelings, and there does seem to be some confusion between these terms. For us a useful distinction between the two comes from Hansen & Christensen (2005:1426), who tell us that:

> "...neuro-psychologists, brain researchers and other behavioural scientists have strongly emphasised the importance of emotional response (Damasio, 2000; Le Doux, 1998). In this research, a distinction has emerged between feelings and emotions.…. Basically, emotions are thought of as very primitive,

> extremely fast, unconscious mechanisms controlling the individual responses to a wide variety of situations ranging from serious threats (for instance from an approaching car) to trivial decision making tasks (for instance choosing a coffee brand in the supermarket) (Heath, 2001; Franzen & Bouwman, 2001). Feelings, on the contrary, are those conscious and cognitive perceptions we use to describe our more primitive non-cognitive emotional control of what we do. We may talk about feelings of sadness, jealousy or happiness etc. Such feelings are much more detailed in nature than emotions and they can be described verbally in more or less precise terms by the individual experiencing such feelings"

The idea that organisations have collective or normative feelings is not new (Albrow, 1997; *Elfenbein*, 2007). Albrow (1997) argues that adequate organizational narrative needs to transcend the emotion/rationality divide, while *Elfenbein (2007)* explains how the emotion process begins with a focal individual who is exposed to an eliciting stimulus, registers the stimulus for its meaning, and experiences a feeling state and physiological changes, with downstream consequences for attitudes, behaviours, and cognitions, as well as facial expressions and other emotionally expressive cues. These downstream consequences can result in externally visible behaviours and cues that become eliciting stimuli for interaction partners. For each stage of the emotion process there are distinct emotion regulation processes, that incorporate individual differences and group norms and that can become automatic with practice. Elfenbein (2007:1) draws on the notion of *emotional contagion* for which:

> "Research has found that emotions - both upbeat [emotions] like enthusiasm and joy, and negative [emotions] like sadness, fear and anger - are easily passed from person to person, often without either party's realizing it. Emotional contagion occurs in a matter of milliseconds (Hatfield et al, 1994; Hatfield, & Rapson, 2004)…If you're the receiver, you may not know what exactly happened, just that you feel differently after the encounter than you did before."

Some yet empirically unsupported theory has also appeared that might have the potential to explain how normative emotional states might arise in the collective. *Deindividualisation theory* arises from LeBon's crowd theory (1895/1995), which proposes that the psychological mechanisms of anonymity, suggestibility and contagion transform an assembly into a psychological crowd (Postmes & Spears, 1998). However, while normative contagion theory may be linked to the creation of the emotional norms, there is a need to develop more theory to underpin this notion.

Thus, Mazhar (2011) recognises that emotion and culture are very closely linked through the formation of a "social mind" that according to Cooley (1962) is a unity, not of agreement but in organisation through the interactive influences that arise between parts of the social system that creates some whole. In particular Cooley 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: 4). For Jenkins (2004:63) 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 (2010:3) therefore 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, 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. Where emotion is the cultural product enhanced by interaction, emotional climate results. The idea of the social mind can now be extended 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), a pre-required conceptualisation for the existence of a normative/collective personality.

For Gordon (1989: 115) emotional climate is the patterns of meanings embodied in symbols through which people communicate, perpetuate, and develop their knowledge about and attitudes toward

emotions. More generally Fernández-Dols, Carrera, De Mendoza, & Oceja, (2007) define it as being constituted as an emotional atmosphere that provides *emotion accessibility caused by the priming of specific categories of emotion linked to culturally-based emotional conventions. De* Rivera (1992) indicates that emotional climate emerges because emotions have structures which may be specified in precise ways, this constituting a structural theory of emotions. Emotions are therefore always in a society - though the notion of 'society' may here may be reduced two only be two people, and may even be reduced to one person and an imaginary other.

Tran (1998) is interested in how an emotional climate arises, evolves and is maintained, and notes that emotionality and rationality coexist in organisational settings, and that while individuals have emotions, collectively these individual emotions create an emotional climate, which in turn will affect individual emotions. For de Rivera (1992: 7), emotional climate contributes to such facets as political unity and cultural identity, and emotional structural theory (de Rivera, 1977; de Rivera & Grinkis, 1986) shows how emotions may be conceived as various sorts of attractions and repulsions between people which transform their bodies and perceptions. Illustrations are provided of different types of climates. For instance a climate of fear comes about in certain political or economic circumstances, isolates people from one another, is not conducive to cooperative activity, and encourages insecurity in relation to an authority. In contrast, a climate of security might arise. Both might be measured through an instrument that evaluates how people in a given collective maintain relationships of trust of each other and of authority.

Climates of stability or instability may also exist, and measuring norms for *anxiety*, *aggression* or *synergy* might also suffice as a measures. Yet another concept of climate that de Rivera considers includes measures of confidence, satisfaction, hostility, solidarity, and hope. Ozcelik, Langton & Aldrich (2008) consider that emotional climate can be positive or negative, drawing on the relational systems framework of Kahn (1998) which sees organizations as on-going systems of work relations among employees who have varying emotional attachments to each other. Kahn proposed that relational systems can be functional or dysfunctional depending how members of a collective are emotionally bound to others "through experiences of feeling themselves joined, seen and felt, known, and not alone in the context of their work lives" (Kahn, 1998: 41). These relational systems routinely shape the interactions among organizational members and have a substantial impact on the way that organizations operate and perform. Ozcelik, Langton & Aldrich (2008) argue that organizational leaders may influence the relational systems in their organization by establishing and enacting norms for how organizational members should interact with each other.

Emotions and Feelings

We take emotions as states of mind, which are often associated with longer lasting mood, which we shall refer to as temperaments, and which are closely related to, though independent of, attitudes. Both can be seen as cultural knowledge based belief potentials that have been manifested as cognitive belief states in a personality that has an orientation towards some object of attention. The cultural elements from which emotions arise may be referred to as "emotional culture" that define the criteria of emotional competence that determines the self-regulation of emotions) and exposure to emotional episodes (Gordon 1989).

The intensity of this orientation is referred to as valence, which can be positive, neutral and negative (Hirschman & Stern, 1999).Temperaments and attitudes function with their own sphere of influence (Allen, Machleit and Klein, 1992: 492), and both have distinct effects on behaviour (Izard, 1977).

Temperament interacts with emotional activation or arousal (Hirschman & Stern (1999), citing Mehrabian and Russell, 1974). Emotional arousal is a relatively important area of study, in particular because of its perceived connection with memory in the individual. Thus for instance for Christianson (1992), perceptual, attentional, and elaborative cognitive processing - triggered by an emotionally arousing experience - can produce memory enhancements of details related to the emotion laden stimulus. The cost of this is less elaboration and consolidation of memory for the peripheral details. Positive temperament valence appears to enhance information processing ability (Isen, 1987) and reduce cognitive elaboration (Batra & Stayman, 1990), and the development of emotional arousal is

connected with the processes through which information is encoded (Sharot & Phelps, 2004; Ochsner, 2000).

When temperament and emotional arousal interact, the result is emotional feelings like tranquillity, delight, melancholy or panic. Hirschman & Stern (1999) propose a model that represents this relationship. It is adapted from Holbrook and Batra (1987) with antecedence in Russell (1980), and relates temperament with arousal. An adapted form of the model, represented in Figure 1, distinguishes between four *classes* of emotional feeling, making it easier to discuss theoretically the role of emotional feeling in an agent than when having to deal with innumerable different feelings. We refer to these feeling classifications as: *containment*, *stimulation*, *passive*, and *anxiety*. These can be seen as classes of feeling *tendencies*, developed through experiences of degrees of emotional arousal.

Hirschman & Stern (1999) note that an agent's willingness to take emotional risks is dependent upon the temperament valence that they have at the time. Thus, durable positive valence in temperament, as believed by an agent, will likely result in the agent taking more emotional risks, and those who believe themselves to be substantively in anxiety will make choices aimed at reducing emotional risks. Temperament interacts directly with attitudes, contributing to *cognitive responses* (e.g., attitude formation and recall) and behaviours. Thus Kahn &Isen (1993: 257) have found that temperament with positive valence improves an agent's expectations about the likely outcome of anticipated neutral or positive experiences or events, and prompts it to engage in more elaboration and thinking about neutral things in which they are interested.

Even though collectives are composed of individuals, resulting in a supposition that normative and individual personalities operate in a similar way, there are distinctions between the individual and the collective (Yolles, 2009a). The substantive difference is that while individuals may adhere *to* organisational norms, organisations operate *through* collective norms that develop from their coherent cultures. Unlike that of the individual, organisational personality processes are often both observable and measurable. While the individual's temperament, emotional feelings and emotional arousal will undoubtedly impact on the functioning of the organisation as a whole, normative emotional attributes (in the collective) will have a more profound influence on its overall functioning and coherence.

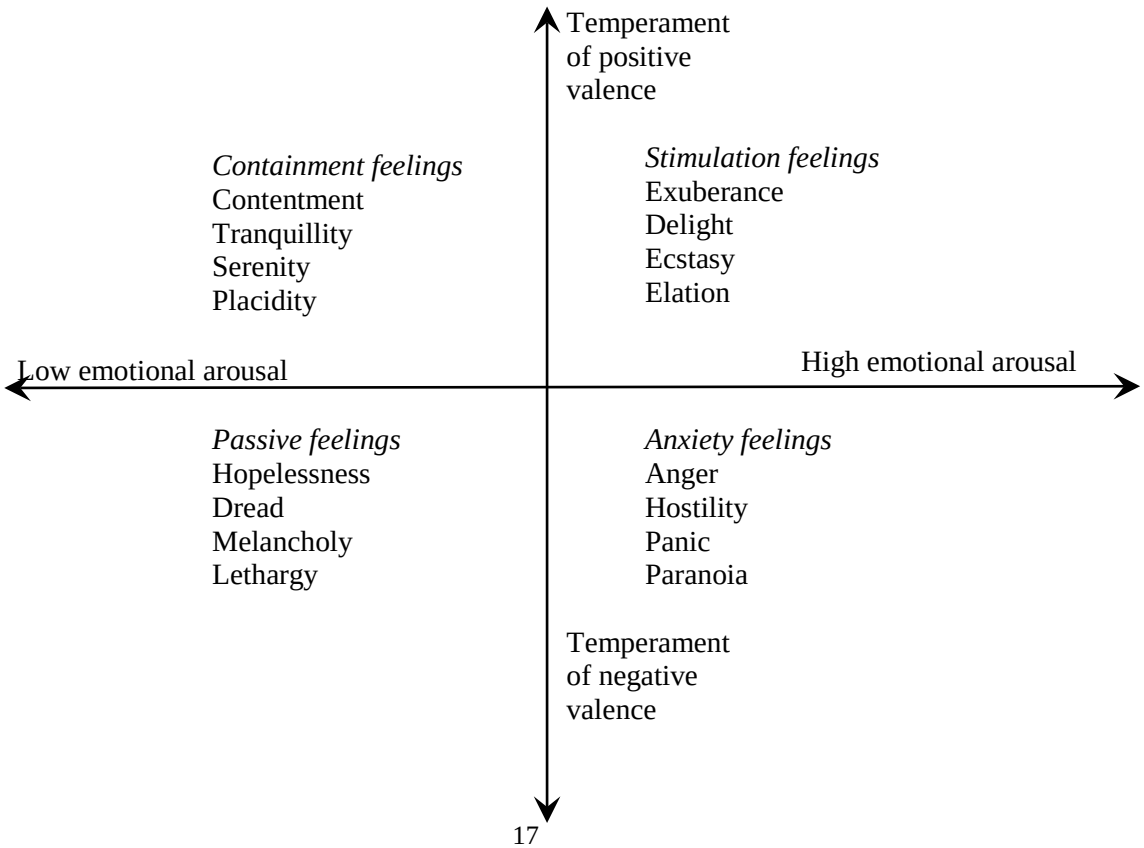


Figure 5: Classes of emotional feeling tendencies (containment, stimulation, passive, anxiety) arising with the continuously variable variables of temperament valence and emotional activation/arousal (adapted from Hirschman & Stern, 1999: 8)

The temperament/arousal model can therefore be represented in our organizational orientation model as shown in Figure 2. Normative temperament, just like normative attitude, is manifested through the self-creating network of second order processes referred to as figurative intelligence. There is a component of this that we shall refer to as figurative emotional intelligence that is charged with the control of emotional arousal. Where the controls are not effective, problems can arise in processes that involve strategic, ideological and ethical attributes. Similarly the first order network of processes of operative intelligence has an operative emotional intelligence that works to control emotional arousal in its region, and when this does not work as intended, operative system functions can be perturbed and for instance decision making behaviour can become misdirected.

Since attitudes and temperaments are both independent and interactive, they can be shown to reflect one on the other in the cognitive system through a structural coupling, where their histories and futures are intertwined. Temperament thereby modifies attitude (and vice versa), and establishes a projection that creates a "charge" of emotional arousal for figurative emotional intelligence.

This model can be further developed by referring to the Myers Briggs Type Inventory (MBTI) theory (Fudjack, 1999). Yolles (2009) has shown how the MBTI model can be related to organizational orientation theory, and Yolles and Fink (2009) have shown how MBTI links into a whole family of personality theories. Table 2 indicates the important type attributes of MBTI conceptualization (adapted from Yolles, 2009), and some of these are used in Figure 2. Within the context of this paper, while in the cognitive system of the personality *sensing* and *intuition* may be part of the personality process that defines types of behaviour, they are of less interest than *temperament* and *attitude* that rather for us define core properties of the personality – those principle elements that allow the purposes of the personality systems (cognitive, figurative and operative) to be satisfied and therefore on which they are dependent. The conceptual elements of collective thinking/feeling and collective judging/perceiving also appear to be core properties of the normative personality system, and are in addition susceptible to both individual and collective charges of emotional arousal. So, the figurative system can be described as having two independent interacting entities, normative emotional feelings and normative thinking which together maintain a structural coupling that explains their mutual interaction. Normative feelings affect operative emotional intelligence and its capacity for selecting and manifesting information from the figurative to the operative system. The type elements of introversion/extraversion are not seen as core, and hence are not currently of interest here. Normative emotional arousal that is part of figurative emotional intelligence is further maintained as a charge of emotional arousal on operative emotional intelligence, which is then responsible for manifesting feelings in the personality operative system, where both normative judgments and normative perceptions can be influenced. This in turn affects the way in which the agent operates in its social environment, as the emotional charge is transferred from the operative emotional intelligence to social intelligence.

Location	Attribute	Nature	Attribute	Nature
Personality Cognitive metasystem (gathering information)	Sensing	Preference is for sensing relating to the tangible and manifest. Concerned with data that is literal and concrete. Noticing that an object exists without its pre-evaluation.	Intuition	Connected to the unconscious. Comes from complex integration of large amounts of information. Consequence is to see the bigger picture, focusing on the structured relationships and connection between facts and finding patterns. Tends to accommodate the abstract and conceptual

				from information that is gathered. Connected to possibilities, patterns and inherent meaning in an object.
Personality Figurative system (decision modelling)	Thinking	Involves logical and rationality. Impartial based on normatively based ethical and ideologically based belief formulated by pre-defined rules.	Feeling	Involves evaluating information, and is associated with emotional responses. Connects with purely subjective perspective of situations, and orientated towards personal values. Involves subjective processes based on personal ethical and ideological grounds.
Personality Operative system (decision making)	Judging	Relates to planned processes and regulation. Highly structured, adhering to plans. Requires neatness, orderliness and pre-established structures, and settlement. Normative standards essential.	Perceiving	Are flexible in a spontaneous way, seeking to experience and understand phenomena rather than to control them. Energized by resourcefulness. More interested in their surroundings than by their own intentions. Looks for the open-ended.
Social Operative system	Introvert	Focus on the inner world of ideas and experiences, reflecting on thoughts, memories and feelings.	Extravert	Focus on the external world and participatory activities and actions within it. It is based on the internal world.

Table 2: Conceptual elements from MBTI, adapted from Yolles (2009)

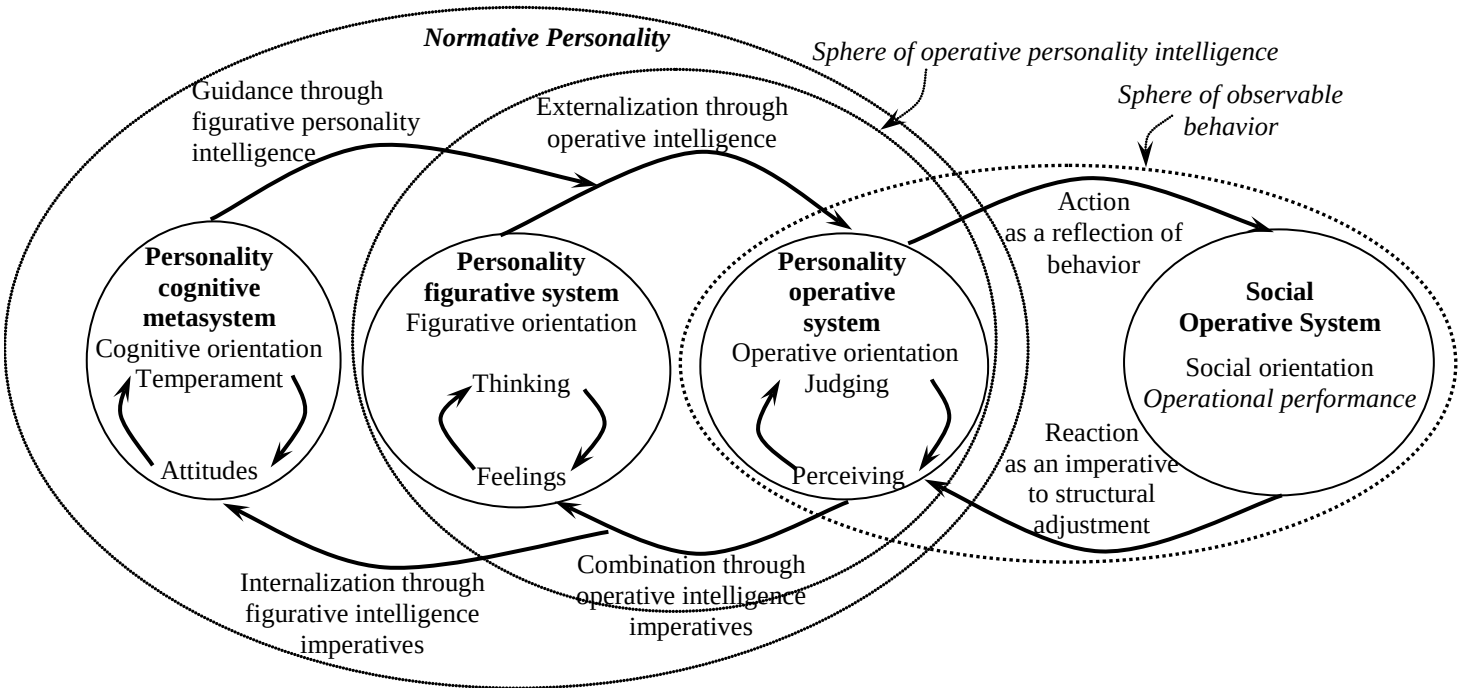


Figure 6: Model of the cognitive normative personality of a collective agent

The issue of emotional arousal affecting information encoding from a source system (like the cognitive system) and indeed information decoding by a target system (like the figurative system) that occurs as part of figurative/operative intelligence is significant for the organisation. When information encoding/decoding deviations occur from some expected norm due to emotional arousal, they can impact on not only role performance by an individual, but also the development of normative misnomers that can result in misinformation about the nature of situations and events, and misrepresentations or misunderstandings about the organization, its functioning, and the direction in which it strives. Encoding of information flows occurs in a source system of the personality, while

decoding occurs in the target system. Together with their capacity to harmonise their coding processes, this contributes important aspects of figurative and operative intelligence.

Differentiating between the individual and the collective leads to question of when and how individual emotional arousal becomes normative emotional arousal, and what this might mean for the organization as a whole? While there is little research on the area of collective processes in this area, studies on crowd behaviour (like the early work of Sigmund Freud) have the potential to shed some light, as does the notion of panic epidemics in crowds (also called the "madness of crowds", BMJ, 1970). However, the notion of emotional climate would seem to provide the greatest potential for both theoretical and empirical development.

It is clear that normative arousal and its interaction with temperament is likely to do more than just affect individual memory. Its equivalence in the organisation is that it is likely to affect the way collective knowledge and its management occurs cybernetically, and hence the development of understandings, strategy, ideology and ethics and their processes, and the use of these in an organisation's operations.

Conclusion

The intention in this paper has been to model the role of organizational intelligences within a coherent theory of organizational orientation. Using organizational culture theory, we model the organization as a psychosocial agent with emergent normative personality. As a means of controlling organizational complexity, we have formalized the idea of an emergent normative personality that comes into being when a durable collective develops a dominant culture, and is connected with the strategic modelling processes that an organization is involved in. A new cybernetic socio-cognitive trait model has been developed that draws on the concepts of intelligence and efficacy, and enables agent pathologies and dysfunctions to be explained in a new way.

Understanding organizational intelligence and efficacy, normative trait systems and their pathologies can lead to an improved understanding of the information processes that an organization has and how this affects its social behaviours. The theory that we have developed goes beyond the recognition by Van Egeren that traits may be viewed in terms of self-regulatory propensities or styles affecting how agents characteristically pursue their goals. Here, traits are seen as ontologically distinct, having different derivative natures. They have conceptual, figurative, operative, and event orientations. A network of processes is involved in migrating information from one trait to another. While the traits arise from a base of action related knowledge from which cognitive processes are derived, environmental orientation also has an embedded trait that is more connected with environmental knowledge relating to the structures, norms, and indicative behaviour observed there.

One of the conclusions drawn from the theory is that the value preferences of a normative personality not only determine its trait values (and thus the personality types), but ultimately impacts on its capacity to efficaciously and intelligently service the information needs of the trait systems. A need in agent analysis is to determine whether the value preferences are *requisite* in relation to the agent's environments and contexts. If requisite efficacy cannot be assured, pathologies emerge. Espoused value preferences are central in that they determine whether particular organizational traits arise from preferences or rather from the pathologies that determine dysfunction. Another useful attribute is the analysis of an agent's cultural and social intelligences, enabling determination of whether within a specific context the organization has an appropriate value preference or not. All forms of intelligences taken together therefore provide a picture of the preconscious processes by which an agent operates.

In the end, we have developed agency theory for normative personality to enable us to better understand the regulatory processes that occur within the organization, and this includes both traditional regulatory features that arise from socio-cognitive theory like self-organization, self-

reflection, self-reference and identity. Another form of regulation that exists occurs through personality traits that are responsible for stable patterns of conduct and behaviour. Given known contexts, particular instances of behavioural conduct are usually predictable. Stable patterns of behaviour are determined by the set of formative traits. In the modelling process here, we have recognized that organizations operate through formative orientation traits (cognitive, strategic, operative, etc.), and these have core characteristics. These orientation traits can be connected with other relatable theories, enabling us to provide an appreciation of recognizing patterns of behaviour and predicting instances of operative conduct and behaviour, and indeed misconduct.

Agency pathologies have at least one source, i.e. the inefficacies that impede transfer of information between organizational trait systems. Traits are indicative of pathologies which emerge when the actual efficacy of information transfer between ontologically distinct parts of the organization is not the required efficacy through which this should occur. It is this difference that indicates an efficacy deficiency.

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