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Evolving Concepts of Leadership and Influence in 21st Century Networking Organisations

By

Neil James McAdam (B.A. MBA)

Submitted in fulfilment of the requirements for the degree of:

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Introduction

A significant thrust within the literatures on organisational design, leadership and influence over the last quarter of the 20th Century signalled a fundamental paradigm shift in the way business will be conducted and organisations designed, managed and developed into the 21st Century. These diverse but interconnected literatures, underpinned by the philosophical development of post-modernism and humanism, predicted a more open, ecologically integrated, process-oriented and holistic approach to the leadership and development of individuals and organisations. Increasing complexity, discontinuity and turbulence in the strategic international environment, radical changes in information technology enabling knowledge-based enterprise and empowering "knowledge workers" and more deregulated and competitive socio-economic environments were some of the key drivers of these organisational trends.

One of the major elements of this broad paradigm shift focused on the growth and development of strategic networks and a theory of organisation based upon the "loosely-coupled" relationships said to characterise those networks. While several writers have contributed to this stream of thought, perhaps the most complete attempt to place this work within the historical context of organisational thought was produced by Limerick, Cunninong and Crowther (1998). They called their approach the "Fourth Blueprint" of management drawing contrasts with previous blueprints, including the Scientific Management, Human Relations and Systems schools of thought.

A central element in most of these theories of loosely-coupled, post-modern forms, but perhaps best developed by Limerick et al (1998), is the concept of the "Collaborative Individual" as the new prototype human "exemplar". These are typically highly qualified specialists who are "emancipated by discontinuity, empowered by knowledge and driven by values." (Limerick et al, 1998: 111) Such workers drive the emergent thrusts within their organisations rather than being directed by them and are creative, risk-takers tolerant of ambiguity, individually responsible and proactive and yet collaborative and supportive of their fellow network members. This package implies a markedly different mental model and psychological contract with the organisation than that which characterised earlier blueprints more focused on control and defined goals.

The questions at the centre of focus for this thesis target the character of this prototype "Collaborative Individual" and the psycho-dynamics of leadership and influence that
bind "loosely-coupled" groups and networks of such empowered individuals. More specifically, are the personality styles and types that will people the new organisation markedly different from those most successful, productive and adjusted in previous blueprints? Also, are the leadership styles and levers of influence needed in the 21st Century network setting different to those that pertained in the more control- and performance-oriented paradigm that preceded it? Further what relationship exists between the personality styles and the characteristics required of the "Collaborative Individual" and how, if at all, do those personality styles relate to the various leadership styles that have been identified, measured and researched within the literature to date?

These specific questions received some introductory and exploratory attention from Limerick et al (1998) and elements related to them have received similar surface level treatments from other theorists in this domain. However, searches of the appropriate databases suggest that no major theoretical explication of the issues raised by the questions or empirical evaluation of them within the networking setting central to the Fourth Blueprint has yet been undertaken. Further, post-modern theorists (See eg: Hecksher, 1994; Weick, 1990) note the fundamental difficulties pertaining to the empirical, positivist research thrust being strictly applied in ephemeral, socially and collaboratively constructed environments.

So at this stage in the development of research on these issues, there seems to be significant space for what Weick (1990: 516) refers to as theory building through "disciplined imagination" using "mapping, conceptual development and speculative thought". Thus Stage 1 of this thesis will be directed at an examination of the nature and structure of the central questions outlined above, using techniques of conceptual mapping of theories and concepts drawn from the relevant organisational, leadership and personality literatures. The intention is to build detailed models of the concepts relevant to our central focus and the relationships among those concepts that seem relevant to the dynamics driving learning, development, performance and adjustment in the Fourth Blueprint. More specifically, the output of this process of creative theory building will be models of the brain styles (personality types) suggested as most likely to produce effective and ineffective contributions to the learning, leadership, influence and adjustment processes critical to successful transition to Fourth Blueprint regimes.
These models are intended to make a significant original contribution to knowledge in their own right as well as providing a clear conceptual and interpretative base from which to better plan, design, evaluate and apply the related empirical study forming Stage 2 of the thesis. Stage 2 will then focus on a series of supplementary questions. These questions go to the issue of whether the current and prospective pools of high potential aspirants for senior managerial roles display the style/type profiles that are suggested, from the Stage 1 study, to be more or less likely to facilitate transition to and success with Fourth Blueprints. Variables such as gender, occupation and national origin will be examined through literature search and an exploratory empirical study to see if they assist differentially targeting of those sub-clusters that are more or less likely to be effective and adjusted in Fourth Blueprint settings. While extensive empirical research will be canvassed in preparing the ground for this exploratory study, its specific sampling, variable mix and analytical design settings are such as to once again constitute a further original contribution to the literature in its own right.

However, the results of the empirical study will then be interpreted through the filter of the more detailed and integrated theoretical framework that our model building in Stage 1 has provided and further questions and domains of inquiry will be suggested. Equally, the theoretical models will themselves be reviewed to establish what elements of the formulations seem more or less credible in the light of the findings from the exploratory study. Finally, we will consider both the practical application of the findings in both stages for the further development and refinement of Fourth Blueprint theories and organisational vehicles, and the issues related to research methodologies and strategies for post-modern organisational settings.
Chapter One

Evolving views of the managerial role: Creative and integrative managerial styles for the network organisations of the future
"In contrast to conventional organisations, the new, post-corporate, network organisation:

- has evolved to deal with a new era of change;
- reflects broader patterns of social change;
- has a radically different pattern of organisation;
- has a subtly different corporate culture;
- requires a new, strategic mindset; and
- is participant focussed, not manager focussed.

Clearly, organisations that have these characteristics also have new forms of management. To us, management in the new organisation is process oriented rather than structurally oriented; it is ecologically driven rather than hierarchically driven; it is value-added rather than competitive; and it is holistic rather than functional."

Limerick, Cunnington and Crowther (1998: 3-4)

"Mead stressed intelligence as the key quality of mind for industrial society. But we seriously question whether this is the quality of mind that is most critical in PI (post-industrial) society. . . . . The true PI 'mind' must have the capacity to imagine scenarios that have not occurred, to envision new ways in which relationships and patterns of social organisation can be restructured. These are the attributes of creativity not intelligence. What is creativity? Or more profoundly, what is the difference between industrial minds and PI minds? For us, these questions represent the keys to a theoretical understanding of PI society."

Hage and Powers (1992: 70)

The research issues that are the focus of this thesis are broadly captured in the above quotations. A weighty, diverse and growing literature in the last decade has presaged a fundamental paradigm shift in the way 21st century business will be done and organisations will be managed, at least in advanced western societies. As Limerick, et al (1998) note, this involves a more open, ecologically integrated, process-oriented and holistic approach to management. They have labelled this emerging approach the 'Fourth Blueprint' of management theory and have extensively explored its implications for management theory and practice in contrast to previous management 'blueprints'.

Other theorists proposed similar trends moving towards more open, flexible, interactive and 'connective' organisations. Thus, concurrent with Limerick and Cunnington's first edition in 1993, Hastings (1993) published a similar text on the operation and management of networking using a UK and European perspective. Savage wrote of 'Fifth Generation Management' (Savage, 1996), with the title coming from the evolutionary stages of information technology (IT) but the organisational design
message being essentially the same as that of Limcrick and Cunningham. Miles and his colleagues in the U.S.A. have written on network, 'cellular' or 'spherical' organizations (Miles & Snow, 1994; Miles, Snow, Mathews, G., & Coleman, 1997) A related body of theory clusters around headings and concepts such as 'post-bureaucratic' (Heckscher & Donnellon, 1994) or 'post-industrial' (Hage & Powers, 1992) organisations.

There are several developing bodies of literature that, although slightly more removed from network organisation theory are still directly relevant to the forces driving flexible, open and uncertain organisational environments. They include "New Leadership" (Ray, 1993; Wheatley, 1992), "Organizational Learning" (Field & Ford, 1995; Senge, 1992), "Ambidextrous Organisations" (Tushman, Anderson, & O'Reilly, 1997), "Increasing returns to scale" (Arthur, 1996; Senge & Carstedt, 2001) and "Hypercompetitive Organisations" (D'Aveni, 1994; Ilinitch, D'Aveni, & Lewin, 1996; Thomas, 1998). While the varying versions of the 'New Organisation' theme all have their own signature characteristics, they commonly see the future of organisational life becoming more uncertain, discontinuous and, thus, to use Weick's term, requiring 'loosely coupled' integrating mechanisms (Orton & Weick, 1990).

These theorists also have a view of the internal dynamics of organisations as moving towards a more interactive, emergent and contracting style requiring collaborative rather than directive approaches to the construction of meaning, leadership and change and they commonly refer to the need for new 'mindsets', or 'mental models' if we are to survive and prosper in this complex, uncertain world of 'emergence'. Also, often a list of the behavioural or personal characteristics that are felt to capture the essence of the 'new employee' or the 'new leader' is presented. However, reference to new mindsets aside, there seems only limited consideration of the specific underlying mental or cognitive dynamics that need to change, both within individuals and across the polity, if we are to reach a positive and confident adjustment to the new post-industrial world.

Thus the Hage and Powers quote above captures the essence of the research question that will be a primary focus of this thesis. That is: "What are the key cognitive and/or personal style settings that will underpin the most effective adjustment to a post-industrial, networking organisational reality?" However, the quote also typifies the relatively superficial consideration that this issue has so far been afforded in the literature. The only extended consideration given to the appropriate personality,
cognitive or managerial style for the new reality has come from Limerick, et al's (1998) attempt to articulate the details of the "The Fourth Blueprint of Management". Thus, for the sake of focus, they will be referred to extensively, though not exclusively, in this first chapter as we build a picture of the critical contextual and dynamic factors confronting managers in the new environment as identified by writers on networking.

1.1. The managerial environment of the 21st Century

From the advent of field theory of organisational, social and individual functioning, (e.g: Lewin, 1951) organisational and strategic theory has focussed on the environment within which an actor or organism was functioning as a key causal and explanatory variable. This was particularly true of the open systems theories of organisational functioning (See e.g. Ashby (1956) for the 'Law of requisite variety' specifying the need for internal variety in systems to match the variety within their environment. Also, Emery & Trist (1978) for an early analysis of the 'causal' impact of environments, and Lawrence & Lorsch (1976) for the relationship between environmental uncertainty and the processes of 'differentiation and integration' within the organisation.)

While the 'new organisation' theorists view the nature and dynamics pertaining to current and projected environments somewhat differently, they share in common with past 'environmental contingency' theorists the view that the individual or organisational transaction with its environment is a highly significant and causal one. However, the 'new' theorists hold the view that the environment is a more ephemeral and 'constructed' entity than previously thought. Nonetheless, it is still perceived as quite determinant and central to the strategic, structural and developmental concerns of future organisational actors. Thus, the rest of this section will briefly trace the key issues held to characterise the managerial environment, and our interaction with it, into the coming century.

1.1.1 Environmental uncertainty, complexity and discontinuity

"What led to these newer forms of organisation?....at the heart of (it) was one phenomenon - discontinuity. The idiom that 'the only constant thing in the world today is change' turned out to be the ultimate illusion. Even change changed! ... (Ansoff, 1988) argued that what was needed was an organisation that could cope not so much with an extraordinary degree of change, but with a different kind of change. It had to be able to deal with discontinuity."

Classifying organisational environments according to the degree of uncertainty (sometimes called dynamism or rate of change) and complexity (sometimes called diversity or magnitude of change) has become a commonplace since Duncan suggested the formal fusion of the two variables into a four-quadrant matrix (Duncan, 1972). An important element of his contribution was his concept of managerial task uncertainty, as a variable based on perceptions within the mind of the individual or collective actor(s). The arrow in Figure 1.1.1 below illustrates his view of how this variable increases as the environmental settings change.

Managerial task uncertainty is a perceptual variable; a 'construction' within the mind of the actor implying their level of felt uncertainty. Galbraith (1973) operationalised the concept as the difference between the amount of information necessary to effectively complete a task and the amount already possessed by the organisation in advance of task execution. He nonetheless acknowledged that it exercised its impact on performance and behaviour within the mind(s) of the actor(s). Galbraith used the concept to examine the organisation as an information processing system and to design the appropriate (alternative) organisational structure for handling high levels of uncertainty in the operating environment. One of the critical insights from his analysis was that increased levels of task uncertainty in the operating environment necessarily imply extra costs and, thus, lower efficiency. That is, 'slack resources' are the pre-condition for survival, or at least adequate continuing performance, in high uncertainty environments. We will return to these concerns below.
Around the same time as Galbraith, Basil & Cook (1974) presented a sociological analysis of change processes throughout history. One of their key analyses related to the trajectory of forces for change within the immediate past, then current reality and projected immediate future. Their analysis is presented in Figure 1.1.2 below.

![Figure 1.1.2: Basil and Cook's (1974) Model of the Dynamics of Environmental Change](image)

The colour and structure relationship between Figures 1.1.1 and 1.1.2 is deliberate and designed to encourage comparison. The four headings in Figure 1.1.2 imply differential environmental states suggested by Basil and Cook based upon a magnitude of change and rate of change, 4-quadrant plot differing only marginally from the uncertainty and complexity plotting in Figure 1.1.1. The 'vector' of change (as Basil and Cook called it) is now the subject of the arrow. It was firmly heading into 'Turbulence' in their view some 20 years ago. Basil and Cook also articulated a model of changes in 'dominant eras' which argued that the stage of critical change immediately preceding a major paradigm shift was always protracted and disrupted. It displays many minor reversals of vector and rear-guard skirmishes before the new paradigm is entrenched. Basil and Cook drew on Emery & Trist's (1978) theories about "the Causal Texture of the Environment", which were well established by the mid-1970's. Miles (1980) presented a table clarifying Emery and Trist's 4 environmental types and their dynamics. It is reproduced as Table 1 (a). A critical element in Table 1 (a) is embedded in the concept of 'connectedness' - or 'Interconnectedness' as it was originally called. Miles (1980: 204) states:

"Interconnectedness reflects the extent to which elements in the external environment are linked in such a manner that a change induced or emitted in one affects the others.... Environments that are
high on interconnectedness are composed of elements that are tightly linked. They cause considerably greater decision-making uncertainty because they must be comprehended and dealt with multilaterally."

Table 1.1 (a). Relationships between Environmental Types, "Causal Texture" and Broad Coping Stance.

<table>
<thead>
<tr>
<th>ENVIRONMENTAL TYPES</th>
<th>&quot;CAUSAL MOVEMENT&quot;</th>
<th>TEXTURE: CONNECTEDNESS</th>
<th>APPROPRIATE COPING TECHNIQUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Placid</td>
<td>Random</td>
<td>Tactics</td>
</tr>
<tr>
<td>II</td>
<td>Placid</td>
<td>Clustered</td>
<td>Strategies</td>
</tr>
<tr>
<td>III</td>
<td>Disturbed</td>
<td>Reactive</td>
<td>Operations</td>
</tr>
<tr>
<td>IV</td>
<td>Turbulent</td>
<td>Mutual-causal</td>
<td>Multilateral Agreements</td>
</tr>
</tbody>
</table>

Thus, tight linkages between a diversity of actors in the operating environment lead to 'managerial task uncertainty' due to what most organisational theorists would recognise as the complexity of the strategic environment. The other key definitional variable in Table 1 (a) is 'movement' which is synonymous with 'rate of change' or, more simply, the uncertainty variable. Table 1 (b) again is drawn from Miles (1980) but the main source of content for this table comes from (Thompson, 1967). It examines the perceptual frames and decision-making processes within individual or collective management in the face of each environmental type and it captures the intellectual and emotional challenges to those groups as they follow the arrows of Figures 1.1.1 and 1.1.2 towards the upper right quadrant.

Table 1.1 (b). Relationship between Environmental Types, Managerial Decision States and Problem-solving Strategies

<table>
<thead>
<tr>
<th>ENVIRONMENTAL TYPES</th>
<th>MANAGERIAL CAUSATION</th>
<th>DECISION STATES</th>
<th>APPROPRIATE PROBLEM-SOLVING STRATEGIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Certain</td>
<td>Certain</td>
<td>Computational</td>
</tr>
<tr>
<td>II</td>
<td>Certain</td>
<td>Uncertain</td>
<td>Inspirational</td>
</tr>
<tr>
<td>III</td>
<td>Certain</td>
<td>Uncertain</td>
<td>Inspirational</td>
</tr>
<tr>
<td>IV</td>
<td>Certain</td>
<td>Uncertain</td>
<td>Inspirational</td>
</tr>
</tbody>
</table>

The concern was always about the issues of coordination and control. Ashby's (1956) law of requisite variety clearly specified the imperative of significant internal diversity in systems in the face of high levels of environmental variety. However that inevitably posed the major dilemma of how to maintain internal coherence and control. It was to this dilemma that Lawrence and Lorsch's work on differentiation and integration was directed. Consistent with Ashby, they found that increases in environmental uncertainty
required higher levels of internal differentiation (Lawrence & Lorsch, 1967). They also found it required higher degrees of integration (or coordination). In Weick's vernacular (Weick, 1995), that meant 'tight-coupling' not loose-coupling and networking.

We can now revisit the quote from Limerick et al (1998) that opened this sub-section. The implication is that the 'discontinuous' environment is something more than just one characterised by 'an extra-ordinary degree of change'. What was that something more? They cite Igor Ansoff (1988: 92) as follows;

"A change is discontinuous whenever it does not directly follow the historical logic of the firm's development....One test of the degree of discontinuity is the extent to which the firm makes a departure from the market needs it knows how to serve, from the technology on which the firm's product are based, or from the geographical, economic, cultural or political settings in which it knows how to do business."

Limerick et al (1998) then add; "...an organization is facing discontinuous change when its past does not prepare it for its future." (emphasis added) To some degree then, this is 'affirming the consequent', in that it is focussing on the firm's behavioural response to the environment rather than the environmental texture itself. So how might we conceptually locate Limerick et al's "discontinuous environment" in Figures 1.1.1 or 1.1.2. The simple answer is: "In the upper right or 'Turbulent' quadrant." The justification for that answer relates to the complexity variable in Figure 1.1.1.

In the Limerick et al quote, the emphasis is on 'rate of change' (or uncertainty, from Figure 1.1.1.). However, it is the interactive impact of the high levels of complexity in the operational and strategic environments at the turn of the 20th Century, with the increasing pace of change, that is the critical source of discontinuous, as opposed to evolutionary change. A central feature of this increasing complexity is the emancipation of 'independent', empowered agents within the ambient environment nationally and globally who, notwithstanding their legal and resource-based independence, are now 'interconnected' parts of the web of life that confronts us all. It is to an understanding of how that complexity explains why "change changed" that we now turn.

1.1.2 Complexity and Chaos: Positive Feedback, 'Emergence' and Paradox.

"Miller (1990) demonstrates how companies that build on their strengths eventually move along trajectories that take them either to states of explosive instability or to states of stable equilibrium. In both states they ultimately fail: that is they do not innovate and transform and therefore they become out of tune with a changing world. Pascale
(1990) shows how companies that succeed are ones that sustain contradictions: contradictions generate tensions; tensions create energy; with such energy, organisations innovate and transform themselves, so holding on to the prospect of continued life. Pascale explains success as operation in a state of non-equilibrium where companies follow circular, dialectical processes of rearranging paradoxical forces.....Miller and Pascale are saying that failure flows from stability and success flows from some form of instability."

*Stacey* (1993: 209)

Stacey considers the implications of Complexity and Chaos theories for management. The views of Miller and Pascale, as cited in the quote, are his bridge from the previous 'Open Systems' paradigm into the new interactive, emergent world of chaos and complexity. Some of the key dynamics of these phenomena need to be visited and contrasted with the old paradigm in order to understand the fundamentally different challenge managers face in the new world. Stacey (1993) provides an extended list of the paradigm logic and key features underlying Complexity theory as applied to organisational systems. The four dot-points below provide a summary rendition:

1. All human organisations are systems, open to and interconnected with their environment, that are subject to both positive and negative feedback loops triggered by non-linear processes. Thus small changes in initial conditions can escalate into large consequences;

2. The feedback loops between the organisation and its environmental elements are such that it does not simply adapt to the environment but actively 'co-creates' it. However, the connections between cause and effect are distant in time and space making precise situationally specific predictions problematic, if not impossible;

3. The complex systemic nature of the organisation results in the 'emergence' of unintended and unexpected patterns of behaviour.

Managers in these circumstances have to use templates or archetypes and reason by analogy. They also need to expect and tolerate contradictions and paradox in organisational life;

4. In uncertain, ambiguous and paradoxical situations, organisations have to rely on self-organising forms of relating and controlling; giving up on directing but managing 'the boundaries around instability'. Thus, political negotiating and active and iterative learning strategies are critical to effectiveness in these environments.
In terms of the source of discontinuity discussed above, the critical issue is positive feedback. The previous paradigm was of open systems in dynamic homeostasis. That is, maintaining equilibrium (e.g.: Katz & Kahn, 1966: 23). The key control mechanism for that is negative feedback. However, as indicated by Stacey (1993), Complexity theory allows for both positive and negative feedback. While negative feedback ensures ongoing iterative adjustments to maintain behaviour performance within a narrow range around a prior-specified standard, positive feedback takes small, and often quite random, variations in initial conditions and exponentially amplifies them till the system finds itself, 'far from equilibrium'. At some point in this process, the flexible capacity of the system to adapt within its current identity and resource is exhausted and it either transforms itself or explodes. In the meantime, in the lexicon of Complexity theory, the system operates on the 'edge of chaos'. Stacey (1993: 212-213) explains the underlying dynamic as follows;

"...when a non-linear feedback system is driven away from the peaceful state of stable equilibrium towards the hectic equilibrium of explosive instability, it passes through a phase of bounded instability in which it displays highly complex behaviour, in effect the result of the system flipping randomly between positive and negative feedback...When the system is in the border area it never behaves in a regular way that leads to equilibrium. Instead, it generates patterns of behaviour that are not only irregular but absolutely unpredictable."

We should now return the Emery and Trist 'environmental types' analysis. Following Stacey's logic, we see the natural movement from increasing turbulence, characterised by fast change among a vast constituency of relevant and empowered strategic players in the highly 'interconnected texture' of the environment, to a state of 'discontinuous' change and inherent paradox. The concept is illustrated in Figure 1.1.3, adapted from Stacey (1996: 47). The implications of the concept for the very essence of innovation and change are profound. Stacey (1993: 213-214) makes the point with emphasis:

"...dynamic, non-linear feedback systems generate completely unpredictable behaviour at a specific level over the long term. The long-term future is not simply difficult to see; it is inherently unknowable. And it is so because of the feedback structure of the system itself, not simply because of changes going on around it and impacting on it. Nothing can remove that unknowability and it follows that, if an organization is operating in the border between stability and instability, as it must if it is to innovate, then any decision-making process that involves forecasting, envisioning, future states, or even making assumptions about future states will be ineffective."
We will consider in later sections the specific trends that promoted the move towards a perception in managers of the discontinuity and uncertainty in the current and future strategic environment. The point to note here is that Complexity theorists insist that it is inherent and unavoidable. In fact, it is essential if our organisations are to innovate and transcend their current limitations. As noted by Aram & Noble (1999: 327-328);

"A complex system is one in which a large number of agents interact with each other.... All these systems are adaptive in that they do not simply respond to events, but evolve and learn. Complex adaptive systems are spontaneously self-organizing. ... These characteristics of adaptation and self-organization create a distinctive dynamic within and among these systems. (This dynamic is) one of tension and paradox: of competition and cooperation for supremacy and for survival; of dominance for the currently fittest; and retention for redundancy in the sustaining of recessive systems, a redundancy that sustains the potential for novelty. Finally, complex adaptive systems are most alive at what has become known as the 'edge of chaos', a space where order and disorder co-exist."

![Figure 1.1.3: Control, Chaos and Living 'on the Edge']

Figure 1.1.3 has been adapted from Stacey (1996: 47). It charts the conditions for managerial decision-making according to a cross-plot of two variables:

- Whether the decision-making coterie is close to, or far from agreement, and;
- Whether or not the decision-makers can be relatively certain about the facts and causal links on which a decision is to be based.

At the lower left of the chart the manager confronts an environment that is certain and peopled by constituencies very close to agreement on the key issues to be decided. At
the right top, the environment is sufficiently turbulent and complex to be far from both certainty and agreement. Figure 1.1.3 shows 'the Edge of Chaos' towards the centre right of the map in Region 4. Yet the dominant style, culture and practice of management would seem firmly anchored in Region 1 with some reluctant incursions into Regions 2 and 3 as ambiguity and dissent force the exploration of alternative routines to rescue implementation. This is even true of the radical economic and technological competition theorists we will visit below who emphasise the importance of continual creativity and innovation while at the same time exhibiting a time-urgency and obsession with performance management that, if anything, puts Scientific Management to shame.

The message of Complexity theory is that, if we want flexible, innovative strategic repertoires to characterise our operations, then the majority of our people will need to be predominantly working in Region 4 of Figure 1.1.3. To do so, they should be comfortable with paying attention rather than driving action; developing capability rather than assessing activities; and allowing new, jointly constructed realities to 'emerge' gradually from interaction and exploratory dialogue. They will also need to continually live with the paradoxical fusion of 'both/and' rather than the security of 'either/or'. In closing this section, we should note that Stacey (1993) suggested some of the key implications of complexity for management styles and practice to be as follows:

- **Analysis loses its primacy**: to be replaced by holistic pattern search and attention to emergent design principles.
- **Contingency loses its meaning**: by which he means to indict the more elaborate theories - such as the concept of organisational configurations (see e.g.: Mintzberg, 1975) or the generalised fitting of particular structures to specific levels of uncertainty in the environment.
- **Long-term planning becomes impossible**: for the obvious reason that the future is 'unknowable'.
- **Visions become illusions**: becoming at best 'statement(s) of already existing ideals...of current challenges or aspirations not linked to a particular future.' (Stacey, 1993: 234)
- **Consensus and strong cultures become dangerous**: because 'strongly shared cultures push an organization back to stability, while counter-cultures are required to sustain the dissipative structure far from equilibrium' (Stacey, 1993: 235)
• **Contradiction, conflict, dialectics and learning become essential:** as the
  *modus operandi* of the organisation rather than the occasional crisis
  intervention, and

• **Four proscriptions:** 'statistical relationships become doubtful'; 'probability
  only helps in the short run'; 'long-term forecasts and simulations are
  impossible'; and, 'requisite variety loses its usefulness': all as a result of the
  underlying linear logic of their construction.

We will return regularly to the implications of these themes throughout the thesis.

**1.1.3. Key trends in the socio-economic, technological and competitive environment of the 21st Century manager**

Thus far we have concentrated on some generic trends in the perception of the
environment's nature or 'texture' as it challenged the manager/actor confronting it.
However, according to Limerick et al (1998), there were numerous and various
indicators of key trends in the socio-political, technological and competitive
environment of the 1980's and 90's that both demonstrated, and to some degree, drove
the changes that were central to the new organisational forms. Limerick et al (1998: 6)
suggested that the total impact of such changes was of *'a single paradigm shift*
*(requiring) a corresponding shift in cognitive maps or mindsets (particularly relating to) accepting discontinuity.'* They emphasised that this changing mindset was part and parcel of the move from an age of mass production to an age of brainpower.

Even the core strategic drivers were seen to be changing. By the late 1980's Peters
(1987: 4) the popular co-author of *'In search of excellence' was arguing that:

*'Excellent firms don't believe in excellence - only in constant improvement and constant change.' That is, excellent firms of tomorrow will cherish impermanence - and thrive on chaos.'*

Similarly, Naisbitt (1982) produced a list of ten 'Megatrends' that closely mirrors the
core themes of uncertainty, inter-activity and knowledge creation at the centre of the
new organisation literature today. They are summarised in Figure 1.1.4 below.
However, though a huge variety of trends, impacts and concepts seem to relate to the
emergence of the new organisation, Limerick et al (1998) concentrated on 'three
broad streams of thought' they saw as central to the new direction, including:

• postmodernism
- neohumanism and the new millennium, and
- disorganised capitalism

Figure 1.1.4: 10 'Megatrends in Society: Predicted in the early 1980's by John Naisbitt (1982)

- From:
  - an industrial society to an information society
  - a forced technology to a high-tech/high-touch (humanised) technology
  - a national economy to a global economy
  - the short-term to the long-term
  - centralisation to decentralisation
  - institutional help to self-help
  - representative democracy to participatory democracy
  - hierarchies to networking
  - the ageing 'rustbelt' industry of northern US to the revitalised south; and
  - either/or thinking to multiple options

They note that there are many common themes and foci shared by these three schools but, nonetheless, see key stand-alone messages emanating from each. This list can be supplemented by:

- Increasing returns to scale and the rise of 'knowledge industries'
- Hypercompetition and creative destruction.

The specific import, of each of these theoretical thrusts, for the development of the 'new organisation' will be briefly addressed in turn.

Postmodernism.

"Postmodern theory is emancipatory. Individuals are freed from the imperatives and restrictions of structures, because they have been discredited and demolished.... They are free of constraints imposed by recorded social and cultural history, free of artificial hierarchies and structures and free to be different, to be themselves. Lyotard, in particular, is one theorist who stresses the role of information technology in allowing persons to be free, to create their own local knowledges."


As Limerick et al (1998) note, postmodern theory is neither a unified body nor, at first glance is it much concerned with the grounded practicalities of day to day managerial life. However, they stress that the key message; that "we construct 'realities' between us with the language we use" and, thus; "truth and order are not immutable" is central
to the changing challenges confronting 21st Century managers and to the essential features of the new organisation. As the quote above implies, a postmodern world enhances and focuses upon individual freedom from constraints to choice and action. Limerick et al (1998) stress the effects of these changes in perception are profound. They note that ‘these are the employees who can say no to organisations’ and state the important issue for managers as follows: ‘if individuals are now free, especially from hierarchies, how can they be managed?’ And while such a state seems intuitively empowering for individuals and groups within society, Limerick et al (1998: 13) also address its ‘dark side’

“There is often something quite pessimistic and haunting in postmodern literature – the lost, reactive individual in society that has lost order and meaning.”

Likewise, Hurst (1986: 26), in a plea for enhanced managerial attention to the softer intuitive and feeling elements in strategic management, makes a similar point on the loss of meaning as a central element of strategic management and development:

“This loss of meaning is not restricted to business organizations. It pervades our social institutions, churches, governments, universities, and families. We have the answers but we have forgotten the important questions. This ‘freedom’ from the important has made us slaves to the urgent. Too many managers have lost the vision of what they can become, of their sense of purpose.”

Hurst sees the key to a more positive application of post-modern approaches to organisations in the full integration of emotional and intuitive creative processes into the strategic, operational and developmental elements of the managerial role.

The other critical issue of the postmodern revolution as it impacts upon management is the role of IT. As Lyotard (1984) predicted, freely and broadly available access through IT networks driven externally to the organisation or society in which the individual is embedded enables the alternative construction of reality previously stifled by lack of both information and the opportunity for collaborative dialogue with diverse perspectives. Censorship controls disintegrate and free reign of alternative perspectives leads to empowerment of minorities. The classic case study of these impacts ‘post-Lyotard’ was, of course, the breakdown of totalitarian structures and control in the USSR and Eastern Europe in the late 1980’s.

In reviewing the postmodern view of contemporary organisational realities, Limerick et al (1998: 14) note: “for good or bad, pictures such as these present enormous
challenges to managers who are accustomed to controlling people through corporate hierarchies or through controlling information flows." Thus we will require alternative means to engage and energise the workforce of the 21st Century. As we shall see below, Limerick et al (1998) construct a view of managerial role and style which is not just different, but runs counter, to the dominant paradigm of the late 20th Century.

Neohumanism and the New Millennium

"While both the postmodernists and the neohumanists see the present as the beginning of a new epoch of decentralised individuality, the latter are far more optimistic than are the former. For the postmodernists, individual empowerment is problematic, and may derive from, and contribute to, a 'me' generation narcissism that creates untold hardship, particularly for disadvantaged sectors of society. For the neohumanists, the new millennium is upon us; we need merely grasp it and join the conspiracy to empower others."


As the above quote implies, there are common themes associating postmodern and neohumanist views of the coming social dynamics of 21st Century organisations. The sense of power released through the emancipation of the individual is the centrepiece of that commonality. However, the long developing philosophical traditions distilled and re-invigorated in the 1980's by writers such as Ferguson (1980), place unequivocal focus on the positive aspects of released creativity, flexibility and positive motivation that is available in the flat, socially interactive and politically democratic structures that characterise empowered networks. As Ferguson (1980: 29) puts it:

"The paradigm...sees humankind embedded in nature. It promotes the autonomous individual in a decentralised society. It sees us as stewards of all our resources, inner and outer. It says we are not victims, not pawns, not limited by conditions or conditioning. Heirs to evolutionary riches, we are capable of imagination, invention, and experience we have only glimpsed."

Thus, neohumanists see the balance of these developments as offering immense opportunities for managers and organisations of 'the new millennium'. They concede that the old safety nets of legitimate authority and role prescription will definitely need to be foregone by managerial elites. However, the significant flowering of human productivity and creativity predicted to be released for organisational application is matched only by the wave of positive motivational energy that will attend the opportunities for 'self-actualisation' offered to the new millennium workforce.
Notwithstanding these aspirations, there is little consideration in this literature for the mechanisms needed to achieve co-ordination and organisational, institutional and societal coherence in a world driven by the released energies of millions of individual ‘points of light’. In such circumstances, not only strategic focus but also social equity, environmental sustainability and protection against systemic disadvantage can be sacrificed in the celebratory rush to spectacular individualistic performance. So, as Limerick et al (1998: 17) says;

‘..we are moving into an era of decentralisation which, used properly, can also lead to emancipation. This era will require a new kind of organisation, based on a different paradigm that can bring together the contributions of autonomous individuals in a socially sustainable way.’

**Disorganised Capitalism**

‘..Lash & Urry (1987) demonstrated that a number of Western countries...were moving into an era of ‘disorganised capitalism’. They identified a number of characteristics of this era. Central to them is a deconcentration of economic activity into world markets consisting of smaller, fragmented, decentralised business units that engage and compete with each other through flexible specialisation.”


Lash and Urry were observing the outcome of some major changes over the 1980’s and 90’s in both technology and work content on the one hand and strategic choice about ‘make or buy’ decisions on the other. The initial drivers for these changes related to a profound invasion of the domain of repetitive, manufacturing-based work by electronic automation. This led to the shedding of significant proportions of the manufacturing and heavy processing workforce. While the initial shed was in unskilled areas, as the revolution gained pace it was the semi-skilled and skilled technical categories that were replaced by CAD/CAM technologies. This lead to a flat or falling total workforce in all areas of manufacturing, heavy industry and logistics and a corresponding exponential growth in the proportion of the workforce engaged in service industries.

As these effects consolidated and the automated systems and electronic monitoring technologies made similar incursions into the routine, repetitive elements of service work, the intensively specialised and trained expert knowledge worker became the most significantly expanding sector of the workforce. Their primary added value was often delivered in the process of consumption of the good or service. Also they usually provided that value in collaboration with other specialists (rather than in pre-designed
routines). However, because of the crafting of many knowledge-intensive goods, a radical increase was occurring in the complexity of the options offered and the resulting mix of different professionals required for the creation of each product/project.

These trends led to the emphasis in the 90's on the 'core competencies versus flexible response repertoires' debate on whether to hold skill assets in-house or engage them on a flexible networking basis. The strategic alliance and networking approach represented far lower 'sunk capital' in a world that was moving to the view that the key asset was knowledge or 'intellectual capital' (see e.g. Roos, Roos, Dragonetti, & Edvinsson, 1997). It also allowed for the flexible fusion of key but changing skills across a range of value chains in a fast changing array of projects, products and processes. This was vital in a world in which humans still had a critical contribution to make, as the value added component of pre-designed, repetitive material output shifted to automated systems.

However, as Lash & Urry (1987) documented, these trends also led to a significant net decrease in the average size of business units and production plants (measured by total internal workforce numbers) and a substantial increase in the average value added from sources outside the lead firm for any project/process. This loosely coupled, 'disposable' approach to the acquisition and use of critical skill resources also posed problems for strategic control and coherence and organisational commitment. Limerick et al (1998: 17) cite, with approval, Italy's Emelia-Romagna region in which 'rapid economic growth has been generated by small autonomous companies networking with each other, and sub-contracting for each other'. However, it should be acknowledged that the region has a left leaning, socialist government and the 'network' is characterised by strong social and community forces towards integration. Hence, the culture, texture and tone of network interactions are critical to maintaining the positive asset values of the pooled skill-base while still allowing autonomous action by each node in the network.

It should be noted that Limerick et al (1998) disagree with Lash and Urry about the implication of these trends. They see them as signalling the 'reorganisation' of capitalism rather than its disorganisation. To them, what is emerging is 'a new form of organisation based not on hierarchy but on flexible, collaborative networks'. (p. 18)

We shall be returning to this new organisational form and the 'loose-tight' balancing act it requires when we examine the key managerial characteristics of the 'Fourth Blueprint' in Section 1.2. Before that, we will consider the contextual impacts on the
managerial role that resulted from some significant changes in economic and strategic perspectives and technological capabilities that intensified throughout the 1990's.

Limerick et al's (1998) three themes outlined above surveyed some diverse but significant social, political and philosophical changes within Western society over the last 20 years of the 20th Century. The two bodies of literature briefly summarised below have in common their attention to various aspects of the positive feedback dynamics reviewed in Section 1.1.2 and the alternative strategies and tactics required in the resultant new and less stable competitive environment. In considering them, we will find key insights from both areas merging together into a coherent picture. The intention is to create an overview of the perceived challenges to managerial action in volatile, dynamic competitive environments where added value is based on the rapid turnover of products and competencies in radically discontinuous industries.

Increasing returns to scale and the rise of 'knowledge industries'

*Increasing returns are the tendency for that which is ahead to get further ahead, for that which loses advantage to lose further advantage. They are mechanisms of positive feedback that operate within markets, businesses and industries – to reinforce that which gains success or aggravate that which suffers loss. Increasing returns generate not equilibrium but instability."

Arthur (1996: 100)

Arthur’s message is already clearly demonstrated within the compelling dynamics of the key, knowledge-based industries undergoing explosive growth into the 21st Century. His point is to contrast increasing returns with the equilibrium-based economic models of the prevailing paradigm – what he labels; ‘Alfred Marshall’s world’ - driven by assumptions of diminishing returns to scale and ‘characterized by planning, control and hierarchy’. (Arthur, 1996: 108) It is a world that depends on finite resources in an indifferent, if not hostile, environment. In contrast, he argues that knowledge is an infinitely expandable resource if imaginatively pursued and openly shared. Thus the increasing returns world is ‘characterized by observation, positioning, flattened organizations, missions, teams, and cunning. It is a world of psychology, cognition, of adaptation’. (Arthur, 1996: 108)

In this new milieu, competition differs because the economics of value creation are different. Shared information does not lose or depreciate its value. To the contrary, in the collaboration of diverse, specialised minds, the shared information leads unpredictably
but frequently to the breakthrough thinking that redefines the problem and produces ‘the Next Big Thing’ that moves the basis of competition away from previous, static advantages to new dynamic, fast evolving competencies. As Arthur stresses, competition becomes centred on ‘value-adding ecologies’, richly invested for both speed and impact, that then dominate the delivery systems for their technologies and solutions. As the new integrated ecology takes hold of the critical market share, it organically excludes other single focus competitors whose technology is incompatible with the new ‘dominant design paradigm’ and its associated delivery platforms. At the same time they spawn their own innovative applications in the interdependent ecology they have created.

There has been a major relative employment shift to the full range of service industries throughout the last half of the 20th Century but at an accelerating rate since the 1980’s. In examining the need for a new managerial paradigm, we should remember that, while the high technology, ‘knowledge sector’ will be directly effected, the predominant impact on human systems delivery will probably be in the service industries. In this regard, it is instructive to note Arthur’s analysis of service industries as positive feedback systems (Arthur, 1996: 107). Over time he notes a major shift towards increasing returns based primarily upon the enabling effect of electronic IT and shared processing routine. He concludes that while the services sector belongs to both worlds their ‘centre of gravity’ is moving towards increasing returns.

We can see from this analysis that the managerial cadre in service industries is facing the ‘edge of chaos’ world characterised by ‘the system flipping randomly between positive and negative feedback’ (Stacey, 1993: 212)). In this world, the absence of a sound base for quantitative planning and managerial and strategic control places a premium on the creativity and flexibility of management and workers alike.

**Hypercompetition and creative destruction**

"D’Aveni’s proposition is that in a hypercompetitive environment, sustainable corporate success will no longer be achieved by sustaining a unique competitive advantage. ... (Rather), strategy in hypercompetitive environments is about developing a series of temporary, relative competitive advantages. ...(meaning) a hypercompetitive firm not only has to constantly destroy (sic.) competitive advantages of opponents but also has to keep on destroying its own competitive advantages"

*Ruhl (1997: 380)*
While both Arthur’s approach, and the hypercompetitive theories considered here, challenge classical, equilibrium-based models of economic behaviour, they spring from different intellectual traditions. Hypercompetitive theory draws on a Schumpeterian or Austrian economic tradition (e.g.: Schumpeter, 1942) that emphasises the dynamic and discontinuous side of competitive behaviour in contrast to the classic, “static” view of balancing forces (see Porter, 1980). Thus, as Thomas (1998: 5) states;

"In the Five forces model, we are in a world of static... competition, with given strategic assets. The focus is on cashflows from higher prices and restrained costs, achieved by low rivalry among a given and clearly identifiable set of competitors. Competition is damaging to success in (this) world... rivalry unambiguously reduces the value of the firm."

The view from the Schumpeterian perspective is much more ambiguous and, in fact, is somewhat paradoxical. Porter’s classical view was that competition served to drive down the rate of return on investment. This would lead to a continual drive among managers to invest in new and profoundly disruptive technologies in the hope of finding an easy escape route from the rigours of genuine competition by creating quasi-monopoly rents through new products. In contrast, Schumpeter (1942) had argued that innovation was best advanced by reduced rivalry, meaning that large firms in highly concentrated industries would be more innovative, enabled by the cash reserves from effectively reaped monopoly rents. Thus, the effect that spurs further innovation was referred to as the ‘dynamic’ effect of competitive rivalry and the constraining effect of lost Return on Investment/cashflows is referred to as the ‘static’ effect.

Paradoxically, most recent ‘neo-Schumpeterians’ have proposed and, to some extent, demonstrated a contrary dynamic suggesting that levels of industry rivalry are positively related to both innovation levels and overall industry performance (see e.g: Thomas, 1998). They propose that static and dynamic effects are both at play in the same arena at any given time. At low levels of rivalry, dynamic effects on development dominate. Increases in rivalry to mid-range further spur dynamic strategies without significantly eroding cash reserves through static competitive effects. Finally, as dynamic effects of rivalry diminish at high levels, static erosion of cashflows takes over and produces the classic negative relationship between rivalry and innovation and performance. As Thomas (1998: 10) concluded:

"...as an industry undergoes a hypercompetitive shift, the source of corporate success moves internal to the firm, toward its ability to create new strategic assets as old ones depreciate more rapidly."
Finally, we need to consider the concept of 'Dynamic Resourcefulness' (DR) of an industry or firm. DR is defined as 'the innate propensity of an industry to create new strategic assets' (Thomas, 1998: 12). When DR is low, the creation of new strategic assets is difficult and competition is essentially static. At medium DR, rivalry will generate some dynamic effects but the value-rivalry relationship is still near to flat rather than strongly positive. It is in high DR industries that the distinctive, highly positive relationship between average firm value and increasing rivalry is observed until we reach very high levels of rivalry when static effects eroding cashflows take over producing an overall U-curve effect. These high DR industries are the ones referred to as 'hypercompetitive' in the literature. Thomas (1998) reported a study of a wide range of U.S. industries between 1958 and 1991 indicating a profound shift in the incidence of dynamic competition and dynamic resourcefulness within industries between 1968 and 1991. In 1968, more than 95% of the sample were showing relationships consistent with static competition whereas by 1991, the entire sample was showing 'a true inverted-U (relationship) as expected for dynamic competition'. (Thomas, 1998: 33).

Given the above review, we can now concentrate on the hypothesised implications of hypercompetitive environments for strategic and managerial behaviour. D’Aveni (1994: xiv) suggested: "Environments escalate towards higher and higher levels of uncertainty. Dynamism, heterogeneity of the players, and hostility." Thus, competition consists of a sequence of discontinuities; stable periods are rare exceptions. In this environment, static competitive positions are not defensible and intense, rapid and unexpected manoeuvring characterise strategic competition. As D’Aveni (1994: 217) says

"Hypercompetition may be viewed, therefore, as just a faster version of traditional competition. But that's like saying that a hurricane is a faster version of a strong wind."

As indicated in the initial quote in this subsection, the essential strategic logic underlying this theoretical approach remains with Schumpeter's theme of creative destruction. Thus, D’Aveni (1994) proposed his own alternative to the McKinsey '7-S' strategic framework (See: Peters & Waterman, 1982) based on analysing the firm, as well as it’s competitors, in terms of their ability to disrupt markets. So the prescribed response to a hypercompetitive environment is to pump even more uncertainty and complexity into the web of social interactions embedded in the market place.
Even the most cursory consideration of this School’s emphasis on rapid strategic obsolescence, competition based on time-urgent creative destruction and light capital investment compared with intense investment in product development highlights the competing objectives and unsolvable paradoxical demands confronting the new managerial elite as we plunge headlong into the 21st Century. This captures the essence of the perceived environment that is necessarily attendant on those who would seek to succeed in leading and developing organisations at ‘the edge of chaos’. It is to a consolidation of those challenges that we now turn.

1.1.4. The psychic challenges for the 21st Century manager

"Managing streams of innovation is about managing dualities: managing and embracing not efficiency versus innovation, not tactical versus strategic, not large versus small, not today versus tomorrow, but efficiency and innovation, tactical and strategic, large and small, today and tomorrow. Managing innovation streams is about consistency and control as well as variability, learning by doing, and the creation of luck. It is the crucial role of the senior team to embrace these contradictions and take advantage of the tensions and synergies that emerge from juggling multiple competencies simultaneously."

Tushman, Anderson & O'Reilly (1997: 19)

In summary of Section 1.1, the organisational environment confronting the turn of the century manager is:

- Uncertain;
- Complex;
- Turbulent;
- Discontinuous;
- With a future that is, in principle and practice, unknowable;
- requiring interactive and open dialogue to construct commonly agreed, congenial ‘fantasies’, that then will be;
- requiring negotiated and enabled joint action to facilitate emergence of strategically critical states facilitating temporary platforms for harvesting of joint value, and;
- in any case, sufficiently ephemeral as to require maximum diversity and flexibility, in both skills/knowledge and action repertoires, and loose-coupling in organisational systems and social relationships.
The summary list on pages 12/13 of this thesis, indicating the implications for the old managerial paradigm of complexity theory as drawn by Ralph Stacey, focuses on what doesn’t work in the new environment. That list includes rational analysis, linear, quantitative planning, driving operational action and evaluation by visioning and generating overly thick, focused cultures. It also makes clear that sensitivity to, and active engagement in, open, generative and collaborative dialogue with key constituents will be critical to success in the coming environment.

What, then, are the characteristic of our ‘new manager/leader’ in this heady, turbulent and challenging environment? The Tushman et al quote above gives something of a sense of the quality and texture of the ‘first cut’ responses that theorists in the field have given to that question. To characterise their view, the new millennium leader is ‘yin and yang’ in equal measure. They are all things to all people in all situations. They are not only blissfully tolerant of ambiguity and lack of structure but also acutely time urgent and driven by focus, efficiencies and controls while at the same time confidently investing immense capital resources in long-term research efforts on unauditable projects with sometimes surprising and often disappointing outcomes.

Perhaps, the D`Aveni script for the hypercompetitive warrior as outlined at the end of Section 1.1.3 provides the best practical example of the competing challenges for managers in the 21st Century. Thus, the required mental set is one of disassembly and temporary, disruptive strategic thrusts in public operations accompanied by a profoundly committed and richly invested, long-term knowledge and capacity building effort around the pursuit of highly speculative product and process developments. All this in a social milieu steeped in sensitivity for diversity on the one hand and coherent and focused unanimity on the other, requiring a facilitating, brokering and enabling leadership stance to mingle comfortably with directive clarity and firmness in action.

The integrated package amounts to a profound assault on the style of strategic thinking, managerial behaviour and organisational control that characterised high intensity, ‘static’ competition in the classic mode. While a strong case can be made that the hypercompetitive environmental press from globalisation and technological change make such an aggressively modular, temporary and warrior-like stance critical to survival and success, it has nonetheless caused significant disquiet. One criticism is that the prescribed behaviour itself creates more intense uncertainty, complexity and, potentially, chaos. If
we return to Figure 1.1.3 briefly, we can see that managers already facing an 'edge of chaos' (zone 4) environment who plunge time-urgently into first-mover initiatives in unfamiliar territory with stakeholder constituencies far from agreement are heading for –

Zone 5: "Chaos; Disintegration etc." As Zohar & Morgan (1998: 525) state:

"Creative destruction may well prove a powerful competitive strategy for a single, well-prepared organization seeking to outmanoeuvre a rival. But practised by many organizations, it can have disastrous systemic consequences, not least for the employees left riding in the back seat."

These broader, more systemic concerns are echoed by Victor & Stephens (1998) in an editorial essay for a symposium on hypercompetition entitled: "The dark side of new organisational forms". They note that, despite the theoretical enthusiasm for the empowerment, challenge and democracy alleged to attend the introduction of the new organisational forms, they appear to generate much 'justified fear and loathing'. They attribute this to the loss of the procedural justice that attached to bureaucracy and also note that Fromm (1941) pointed out that 'many if not most people thrive on predictability and routine'. (cited in Victor & Stephens, 1998: 516)

They also remarked on the lack of realistic equity in the psychological contract and the emotionally barren terrain on which the 'new warriors' waged their guerrilla campaign against the illusions of continuity. Thus, Victor & Stephens (1998: 517) comment:

"Flat organizations force interpersonal relations in more demanding and intrusive modes than ever before. Private self, benign eccentricities, and social warts become new terms of employment, even as we hope for a more diverse and unbiased workplace...No one can expect to escape the demands to interact and be interactive. Even the values of the employees are offered up as fodder to be transformed by management for organizational ends. Yet these high-velocity, high-commitment workplaces – flash-in-the-pan collectives – offer no ongoing relationships, no safe haven, no personal space."

This captures some of the starkest concerns about the vision of the new millennium as seen by the hypercompetitors and loose-couplers. They are concerns for the human suitability and survivability of these new organisational ecologies. They are, in a very real sense, questioning whether the new trends represent systemic progress to a higher form of 'organisational society' or, rather, regression to a frontier mentality subject to the worst excesses of aggressive dominion. In further commentary, Victor & Stephens (1998: 518) suggest an expanded research agenda which should include questions such as; "How can
companies assist surviving workers in making the transition to the brave new workplace? How can stress be minimized, rather than accentuated, in the ambiguous form? And, most importantly, what is to become of the superfluous downsized workers?"

Some of the dark and dysfunctional themes canvassed above certainly engaged Limerick, Cunnington and Crowther, particularly in their 1998, second edition. However, in common with many other late 20th Century organisational theorists and researchers, they appreciated the critical need for more creative, ambiguity-tolerant and proactive competencies among the many managerial cadres they observed as a pressing imperative from the environment rather than as a peulanten unwillingness to exercise due control. Their exploration of the organisational design implications of the 'brave new world' has a paradoxical and complex character as a result of their sensitivity to these competing concerns. Perhaps Zohar & Morgan (1998: 525) best summed up the meta-logic of this more connective perspective in the following quote.

"There can be little doubt that we are entering an era of hypercompetitive environments, or what Emery and Trist (1978) described as 'turbulent fields'. (However)...complex social environments are characterised by forces of both positive and negative feedback. While the former destabilize, the latter stabilize. One can stimulate and escalate the destabilizing forces or one can stimulate counter patterns of connectivity that shift a system into new configurations. Emery and Trist's call for domain-based 'referent organizations' and strategic alliances that can moderate competing lines of action in pursuit of shared values and objectives provides an example of strategy designed to deal with hyperturbulent conditions."

It is upon a similarly complex, paradoxical and negotiated view of the building blocks of the new organisation form that Limerick, Cunnington and Crowther (1998) have based their description of the 'Fourth Blueprint' and it is to this that we now turn.

1.2 A blueprint for the new organisation.

As the environmental trends outlined above were unfolding throughout the 1980's and 1990's, the various aspects of networking and strategic alliances were receiving increasing research focus. One of the major efforts in this regard was from a team based in Australia, including David Limerick and Bert Cunnington from Griffith University and various other colleagues at different times during the 15 or so years of their program starting in the early 1980's. In the best traditions of post-modern research, Limerick and Cunnington let the key themes that were to underpin their later
theoretical formulations emerge from the impressionistic interview and focus group data and refined their elements in collaborative dialogue with their subjects.

However, the task of this thesis is to focus on the implications of theory for the required stylistic emphasis in leaders in the new organisation. With this in mind, Section 1.2.1 below briefly summarises, the key planks of the Limerick et al analysis and identifies the critical propositions that relate to the nature and sources of effective leadership styles within the 'Fourth Blueprint' organisation.

1.2.1 Limerick, Cunnington and Crowther's four blueprints

"Management scholars have long recognised various 'schools of management thought, such as the 'classical', 'human relations' and 'systems' schools. Managers, too carry in their heads 'cognitive maps' or 'mindsets' that profoundly affect their managerial actions. We have come to call these mindsets, managerial 'blueprints' in order to stress that they are not just passive ways of understanding the managerial world – they are images of the way organisations ought to be managed, and they directly affect managerial choice....Each blueprint is deeply related to a set of social and economic conditions."


Limerick et al. based their formative theoretical analysis of the new management upon an historical review of the dominant managerial paradigms that had progressively occupied centre stage as the discipline of management was born, developed and reached maturity more or less within the currency of the 20th Century. As the quote above implies, the three blueprints that Limerick et al saw as preceding the recent advent of the 'new organisation were, in temporal order:

- **The Classical School**: including classic bureaucratic models springing from Webber, 'Scientific Management' from Taylor (1947) and the administrative theorists, but particularly Fayol (1956)

- **The Human (Relations) School**: stretching from Mayo (1933) and the Hawthorne experiments in the 1930's, through Maslow (1970) Barnard (1948), McGregor (1960) and McClelland (1985), Likert (1961), Argyris (1964) and Bennis (1969), to Burns & Stalker (1961) and the early contingency theorists who formed the bridge to;

- **The (Open) Systems School**: based on the further elaboration of later contingency theorists such as Galbraith (1973), Lawrence & Lorsch
(1967), and Thompson (Thompson, 1967), the Open Systems theorists such as Emery & Trist (1978) and Johnson, Kast & Rosenzweig (1967) and, in the Corporate Policy arena, the advocates of rational analysis and divisionalisation such as Andrews and Christiansen (1969).

It would be unnecessary and distracting, in the context of this thesis, to elaborately recite the historical analysis undertaken by Limerick et al in relation to the above three Schools. The essential features that require our attention are presented in Table 1.2.1 below, taken from Limerick et al (1998). The general thrust of the first three Schools listed in Table 1.2.1 will be quite familiar to the serious scholar of the history of managerial thought. Perhaps the most useful additional insight we can add to the analysis is to chart the relative position of each School with regard to it’s ‘best fit’ with a particular environmental ‘texture’ as illustrated in Figure 1.1.2 above. The positioning is presented in Figure 1.2.1.

### Table 1.2.1 The four managerial blueprints

<table>
<thead>
<tr>
<th>Organisational forms</th>
<th>First Blueprint</th>
<th>Second Blueprint</th>
<th>Third Blueprint</th>
<th>Fourth Blueprint</th>
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<td>Classical</td>
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<td>Contingency</td>
<td>Collaborative Organisation</td>
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<td>Functional</td>
<td>Interlocking</td>
<td>Divisional</td>
<td>Loosely Coupled Networks and Alliances</td>
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<td>Management principles</td>
<td>Hierarchy</td>
<td>Supportive</td>
<td>Differentiation</td>
<td>Empowerment &amp; Collaborative Individualism</td>
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<td>Managerial processes/form</td>
<td>Management functions</td>
<td>Democratic leadership</td>
<td>Open systems analysis</td>
<td>Management of meaning</td>
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<td>Managerial Skills</td>
<td>Person – to –</td>
<td>Goal setting</td>
<td>Rational/</td>
<td>Empathetic</td>
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<td>person control</td>
<td>Facilitation</td>
<td>Diagnostic</td>
<td>Proactive</td>
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<td>Managerial Values</td>
<td>Efficiency</td>
<td>Self actualisation</td>
<td>Self-regulation</td>
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<td>Productivity</td>
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<td>balance</td>
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</table>
As for Figure 1.1.2, in Figure 1.2.1 Managerial Task Complexity increases from low at the bottom of the circle to high at the top and uncertainty increases from low on the left to high on the right. According to Limerick et al, the relevance of Classical models is limited to the lower left quadrant where a simple, certain environment allows extensive pre-design and pre-scheduling of both output and process. As the uncertainty derived from social diversity and individuality intrudes, but still in a strategically simple, single-focus operation, we encounter the rich insights of the Hawthorne experiments and the Human Relations theorists. The more scope that can be provided for directed work behaviour to be moderated by micro-group processes and ‘local democracy’, the more likely we are to be able to maximise performance against agreed objectives.

The move from the Human Relations emphasis to the Systems School is interesting, and its timing is significant. While many of the insights of the Systems School had been published and actively advocated during, and immediately after, World War II, the move to paradigm status for this School started in the 1960’s and consolidated over the next 20 to 25 years. It was in this time that Western democracies dropped the Bretton-Woods agreement on the gold standard and moved to floating currencies and open economies. In such environments, the range and diversity of empowered competitors accelerates exponentially. At this time the impact of technological change, especially upon fluid access to information and on micro-processing control over repetitive tasks also escalated. Hence, as a first transformation, the potential complexity of competitors and stakeholders increased intensively while work design simplified and automated.
At the same time social democracy proliferated in the Western world and the message of the Second Blueprint was, in many states, receiving legislative support. Managerial environments were becoming significantly more complex though not initially more uncertain as the West, anchored by US dominance, geo-politically, technologically and economically, intensified its marginal returns from the old mass production paradigm. The first defence against the increased managerial uncertainty that came from this complexity was to divisionalise, using Strategic Business Units (SBU’S). As indicated by the arrow on the right of Figure 1.2.1, this led to a wave of corporate devolution and performance-based audits of SBU’s but didn’t necessarily increase workplace democracy. In fact, as Limerick et al (1998) note, it led the move to interdependent and cohesive teamwork as a performance control system in lieu of direct hierarchy. So while group-based ‘work autonomy’ increased, strategic empowerment may, in practice, have decreased and mechanisms of social, interactive constraints proliferated.

With the accelerating impact of technology and social change on the openness of process and the redefinition of human work, this state of large systems maximising output of current goods while minimising both employment and innovation was never likely to remain in balance for long. It is to Limerick et al’s analysis of the transition from the third to the fourth blueprint that we now turn.

1.2.2 From open systems integration and responsiveness to loosely-coupled strategic networks: Towards the “Fourth Blueprint”

“The increasing rate, frequency and severity of discontinuous change... triggered a transformation in organisational configuration, a punctuation in the gradualism of everyday management. For, as Ansoff (1988: 22) observes, such discontinuity ‘will require revisions in the culture, power structure, systems, organisational structure and rewards/incentives within the firm’. This revision was towards entrepreneurial structures and systems that could deal with random, episodic, discontinuous change. There is an essential conflict between the entrepreneurial culture of the Fourth Blueprint and the competitive culture of the Third.... The more incremental, extrapolative, market-reactive, intra-firm, participative nature of the competitive culture can conflict vigorously with the more discontinuous, outward-looking, opportunist, vision-creating style of the entrepreneurial culture.”


As Limerick et al note, both the Classical and Human Relations Schools founded themselves upon contrasting views of the ‘one best way’ to manage with a strong internal
focus. The Open Systems School, on the other hand, based itself on an emphatic attention to the evolving competitive environment and an acknowledgement of, and responsiveness to, the variability in that environment. They cite Burns & Stalker (1961) as the exemplars of that School in arguing that there was no optimum system of management. Rather they emphasised that the appropriate system was contingent upon the degree of stability or change in the environment. The various constructive theorists of this contingency view (see Galbraith, 1973; Lawrence & Lorsch, 1967; Thompson, 1967) then further elaborated the description and analysis of the contingencies that might be seen as relevant. This introduced a significant level of complexity into the specification of both the ‘fitting’ organisational design and the managerial repertoire needed to service it.

These formulations were all driven and constrained by the open systems logic of the firm as a responsive organism seeking ‘best fit’ with the dynamic features of its operating environment. It also saw the managerial role as involving rational diagnosis of the ambient environment and logical design and building of organisational features to differentially fit those environments. The strategic challenge was then to identify the appropriate focus and targets to ensure maximum strategic impact upon the competitive environment in the light of the opportunities and threats that rational analysis highlighted. According to Limerick et al (1998: 41) the ‘Third Blueprint’ arose from this integrated systems/contingency analysis. It was driven by six critical assumptions:

- interdependence;
- openness;
- unity;
- rationality;
- objectivity; and
- the importance of teamwork and cohesive groups.

Limerick et al (1998: 42) noted the ways their research program, starting in the early 1980’s, cast doubt upon the continuing validity of those underlying assumptions. These issues are briefly summarised below.

- **Interdependence**: While this implied tight coupling, their subject organisations were moving towards ‘chunking’—smaller business units with significant operating autonomy. Interactive collaboration was now the dynamic glue achieving integration not pre-designed structures.
- **Openness:** While recognising the need to import energy from the environment by open transactions, Limerick et al emphasised the proactive rather than reactive attitude of their CEO’s. They were not simply seeking to fit their environment to ensure the flow of resources. They were often seeking to change either their environment or their location within it, to better release the unique talents of their organisation.

- **Unified systems:** While Open Systems theory emphasised unified responsiveness, the research organisations, and especially their senior executives, tolerated and even encouraged pluralistic diversity of internal characteristics while recognising their need to emphasise political dialogue directed at achieving an evolving unity of purpose and intent.

- **Rationality and objectivity:** Limerick et al’s (1998: 42) CEO’s were ‘disillusioned with the excessive focus on (rationality). They were more concerned with the non-rational, with the empathic processes of motivation, with the symbolic processes of corporate culture and the non-rational problems of vision… with the management of meaning.’

- **Cohesive teamwork:** While the Third Blueprint focused on developing cohesive teams, the research executives were far more concerned with ‘the development of mature, proactive individuals who had the capacity to act on and transform systems’ (Limerick et al, 1998: 43)

Limerick et al articulated the essential elements of the emerging Fourth Blueprint as;

- **Discontinuity:** in the social, economic and technological environment,

- **Loosely coupled systems:** focused, ‘chunked’ units with significant levels of operational and strategic autonomy,

- **Synergies and alliances:** both within and across organisational boundaries,

- **Collaborative individualism:** a culture emphasising ‘autonomous, interdependent, proactive, empowered, collaborative individuals’,

- **Social sustainability:** driven by the principle that it should contribute to the social fabric from which it draws its strengths,

- **Holism:** emphasising the ‘essential interdependence between the organisation and its social context and achieving coherence by the impact of common cultural themes within its strategic and operating processes,”
- **Leadership diversity**: emphasising the broad distribution of leadership roles and processes necessary to the dynamic functioning of collaborative networks, and

- **Participant-centered**: encouraging active and generative input from all network members and shaping and evolving the network's character and purposes consistent with the needs and commitments of its membership.

Limerick et al (1998) equate the most elaborate, 'open systems' version of the culture that developed in the journey through the first three blueprints with Ansoff's 'Competitive Culture' (Ansoff, 1988) and identify Ansoff's (1998) 'Entrepreneurial Culture' as best capturing the challenge of the Fourth Blueprint environment. These contrasts are summarised in Table 1.2.2 below, adapted from Ansoff (1988).

<table>
<thead>
<tr>
<th>Competitive</th>
<th>Entrepreneurial</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Change</strong></td>
<td></td>
</tr>
<tr>
<td>Serial</td>
<td>Change</td>
</tr>
<tr>
<td>Incremental</td>
<td>Random</td>
</tr>
<tr>
<td>Continual</td>
<td>Episodic</td>
</tr>
<tr>
<td>Goal driven</td>
<td>Discontinuous</td>
</tr>
<tr>
<td>Optimise profitability</td>
<td>Opportunity driven</td>
</tr>
<tr>
<td>World view</td>
<td>Optimise potential</td>
</tr>
<tr>
<td>Intra-firm</td>
<td>World view</td>
</tr>
<tr>
<td>Intra-national</td>
<td>Multi-industry</td>
</tr>
<tr>
<td>Values</td>
<td>Values</td>
</tr>
<tr>
<td>Economic rewards</td>
<td>Economic rewards</td>
</tr>
<tr>
<td>Power</td>
<td>Personal fulfilment</td>
</tr>
<tr>
<td>Conformity</td>
<td>Deviance</td>
</tr>
<tr>
<td>Stability</td>
<td>Change</td>
</tr>
<tr>
<td>Skills</td>
<td>Skills</td>
</tr>
<tr>
<td>Participative</td>
<td>Charismatic</td>
</tr>
<tr>
<td>Goal setting</td>
<td>Vision creating</td>
</tr>
<tr>
<td>Extrapolative planning</td>
<td>Creative planning</td>
</tr>
<tr>
<td></td>
<td>Novel problem solving</td>
</tr>
</tbody>
</table>
Limerick et al (1998: 45) note that all previous blueprints saw the organisation as ‘caught in a dilemma between centralisation and decentralisation’. The Fourth Blueprint seeks to transcend this dilemma by generating a mindset that ‘calls simultaneously for both loosely coupled structures and higher levels of synergy’. This is essentially paradoxical, requiring the actor/leader to be conscious of and comfortable with, the tensions of ‘both/and’ dialectics rather than either/or resolution. Their model of ‘Organisational Choice’ for the First to Third Blueprints is arrayed along an axis from stability to change where the essential design choice is between efficiency and responsiveness. Conversely, The Fourth Blueprint design sought to maintain efficiency in the face of increasing demands for speedy responsiveness to discontinuity.

The vehicle designed to transcend the Third Blueprint model of organisational choice was networking and the central dynamic maintaining coherence and direction was the continuing empowered dialogue of collaborative individuals. Limerick et al (1998: 62) draw distinctions between ‘internal’ and ‘external’ networks but acknowledge that, in a world lacking clear boundaries, the distinction lacks formative substance. As they note, networks come in a variety of shapes and sizes including “internal networking, subcontracting, strategic alliances, franchising, strategic networks, ‘hub’ organisations, ‘solar system’ organisations and the like.”

So the specifics and peculiarities of each type of networking are less important to the focus of this thesis than an appreciation of the general dynamics that drive them. An important concept in this regard is that of ‘social architecture’ suggested by Ram Charan to replace the harder and more rigid concept of structure. He explains his distinction as follows Charan (1991: 107):

“Organisational structure refers to the systems of vertical power and functional authority through which the routine work of the organisation gets done. Social architecture refers to the operating mechanisms through which key managers make trade-offs and to the flow of information, power and trust among these managers that shapes how the trade-offs get made.”

Structure depends on the articulation of role scripts for all players and a set of prescriptions or rules specifying the reciprocal rights and obligation among the roles. Social architecture, on the other hand, concerns what happens in the dynamic interaction between players and is a summary of the observations of that emerging, and thus continually evolving, dynamic. It is in this distinction that we can more clearly see
the contrast between the Third and Fourth Blueprint implied by their positioning in Figure 1.2.1. While both blueprints encompass complexity, the Third Blueprint response is to reduce the resulting managerial task uncertainty by design through business specialisation, operational delegation and strategic centralisation and control. Conversely, the Fourth Blueprint accepts the uncertainty and seeks to manage it by genuine strategic devolution and the engagement and harmonisation of strategically autonomous contributors through active dialogue in process.

Thus rather than attempting to pre-design a 'best-fitting' structure and enforcing its enactment, social architects seek to immerse themselves in the unique interrelating patterns of the network and maximise open communication amongst its nodes. The approach assumes that this will optimise responsiveness to its changing environment and promote internal harmonics based upon continual dialogue and mutual adjustment. In such a responsive 'flow' state, the maximum benefit can be derived from diversity of the skills, talents and commitments of individuals in the network while still ensuring strategic and organic coherence. Charan (1991: 107) clarifies these dynamics.

"A robust social architecture does not imply absolute harmony among peers. Indeed, the single most important role of networks is to surface and resolve conflicts – to identify legitimate disagreements between functions, regions and business units and to make difficult trade-offs quickly and skilfully. (It) encourages members.. to become mature and constructive in their approach to conflict, to direct their energies toward the substance of disagreements rather than toward personal clashes and politics, to search for creative solutions rather than look over each other's shoulders, and to identify new challenges."

This quote captures the essential challenge of the Fourth Blueprint social architecture. To be able to actively surface and stimulate the fundamentally conflicting perspectives that are necessarily arrayed to meet the diverse and fast evolving demands of a hypercompetitive, turbulent environment while maintaining positive, creative and integrative internal alignment to a coherent strategic direction. The challenge had been met in a quieter world by pre-designed structure and process and proscribed and delimited role scripts that constrained individual expressiveness in favour of group control. In the new world we canvassed in Section 1.1, the full value of the individuality and diversity within our human resources will need to be harvested in the service of both productivity and creativity, both focus and flexibility and both strategic integration and broad repertoire.
It is the almost heroic dimensions of these competing demands that prompts networking theorists such as Limerick et al (1998) to accord such a central place in their thinking to the “Collaborative Individual”. Thus, it is to a more detailed understanding of this concept and the dynamics that will be needed to achieve the essential dialectic outlined above that we now turn.

1.2.3 The collaborative individual and distributed leadership in the Fourth Blueprint

“...the new organisation accepts neither autonomy nor togetherness on their own. It is when autonomy and collaboration are brought together in the same moment that we achieve the spontaneous combustion of the Fourth Blueprint....The new organisation is not uncoupled; it is not populated by self-acting individuals who bear no relationship to each other. Nor is it tightly coupled, binding individuals together until they lose their autonomy. It is loosely coupled – and that is a positive interactive strategy that transcends the benefits of autonomy and empowerment on the one hand and collaboration on the other.”

Limerick & Cunnington (1993: 230)

“Collaborative individuals are emancipated by discontinuity, empowered by knowledge, and driven by values. They collaborate with others because they agree with their values and the joint mission, and not because of their commitment to the organisation.”


The individualistic versus collectivist cultural dimension as a single continuum is a well established concept in sociology generally, and in organisational sociology in particular. Measurement of the dimension is well developed – especially in cross-cultural managerial studies (see e.g: Hofstede, 1980) – where Western, and especially Anglo-Saxon cultures, clustered towards the individualistic end of the continuum while Eastern cultures, and especially those from Northeast Asia, were collectivist.

It would be easy to assume that in Collaborative Individualism we simply have another attempt at ‘both/and’. In one respect, that is correct – we are seeking both individual expressiveness and distinctiveness at the same time as we achieve group coherence. However, the advocates of the Fourth Blueprint definitely do not equate collective and collaborative processes. Their collaboration is the mature, reflective and empowered action in concert of autonomous individuals or units, not the pre-designed coherence of bureaucratic compliance or the socially orchestrated harmonics of the cultural clan. The
acid test of this type of collaboration is the quiet, firm but determined withdrawal from engagement by the individual when conscious that their self-interest or values are no longer served by further involvement in the network. In fact, it is this fundamental ‘right of withdrawal’ element that gives collaborative individualism its sharp edge as a philosophy of organisational engagement. As Limerick et al (1993: 119) put it:

“Collaborative individualism asserts that the individual is the basic building block of the organisation. Network organisations are no longer seen as being made up of interlocking teams and committees to which individuals are assigned in order to achieve organisational goals. They are made up of mature, autonomous, pro-active individuals who collaborate to achieve personal and organisational goals and, through this collaboration, create what we call the organisation”

Thus, the essence of the psychological dynamics characterising the relationship is freedom of the individual; freedom from groups, organisations and mid-range institutions – such as unions, churches and political parties. Table 1.2.3, from Limerick et al (1998: 108) summarises the essential character of the relationship between the organisation and the individual in the Third and Fourth Blueprints.

Table 1.2.3 Differences in world views between Third and Fourth Blueprints

<table>
<thead>
<tr>
<th>Corporate Citizenship pre-1980 (Third Blueprint)</th>
<th>Collaborative Individualism post-1980 (Fourth Blueprint)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Identity</strong></td>
<td></td>
</tr>
<tr>
<td>Role as continuity</td>
<td>Self as continuity</td>
</tr>
<tr>
<td><strong>Psychological Contract</strong></td>
<td></td>
</tr>
<tr>
<td>Lifelong employment</td>
<td>Issue-related contract</td>
</tr>
<tr>
<td><strong>Values</strong></td>
<td></td>
</tr>
<tr>
<td>Loyalty</td>
<td>Integrity</td>
</tr>
<tr>
<td>Service</td>
<td>Maturity</td>
</tr>
<tr>
<td>Field integration</td>
<td>Field Independence</td>
</tr>
<tr>
<td><strong>Processes</strong></td>
<td></td>
</tr>
<tr>
<td>Commitment</td>
<td>Negotiation</td>
</tr>
<tr>
<td>Career the responsibility of the organisations</td>
<td>Career the responsibility of self</td>
</tr>
<tr>
<td>Relating to the system</td>
<td>Traversing many systems</td>
</tr>
<tr>
<td>Membership of middle-range organisations</td>
<td>Collaborating with others on issues</td>
</tr>
</tbody>
</table>
As Limerick et al (see 1998: 115) acknowledge, our new age, emancipated warriors could also be very lonely souls, depending on their specific needs and personality styles. However, the other side of this coin is the freedom to explore the development of ‘an emancipated identity’ constructed by self in dialogue with whatever elements of the networks appeal to the individual’s values, interests and talents. Among the psychic debris of the old system is the concept of the lifetime employment contract between the individual and the firm that characterised the most socially evolved of the Third Blueprint companies. But what are the critical characteristics of the effective and well adjusted Collaborative Individual? Limerick et al (1998:120-121) suggest they are:

- **autonomous and proactive**: emphasising both the voluntary nature of the relationship and the responsibility that that places on each individual in the network to be proactive in both generating creative responses and actively communicating those initiatives to colleagues;

- **empathetic**: stressing the need for an open, sensitive appreciation of the alternative, and often diverse, frames of reference driving potential and actual network partners;

- **intuitive and creative**: pointing to the essentially novel repertoire that is critically required in the discontinuous, turbulent environment described in Section 1.1 above;

- **transforming**: in the sense of being open to, and capable of, profound change in the fundamental approach to the way things are done and the values underpinning work and relationships. Limerick et al expressed some profound reservations about the ‘leader-centered’, charismatic style of transformational leadership they saw as the focus of much of the literature but we will discuss those concerns immediately below;

- **politically skilled**: in being an effective agent of influence and power broker within the key constituencies and coalitions forming or effecting the organisation – with a continuing, if apologetic, focus on the effective manipulation of power relations;

- **networking**: involving being able to see the broader picture encasing the web of relationships within the network and having an empathetic sense of, and appreciation for, the sub-cultural textures that contribute to the network’s value in diversity – a skill seen to be less concerned with
structural power and political process and more to do with symbolic expression and social and inter-personal process;

- **mature**: requiring the development of a clear and robust, if evolving, sense of personal identity, and recognising that this is most challenging in typically individualistic, atomistic western cultures where the individual has historically been regulated by role scripts and hierarchy rather than their own developed self concept and sense of integrity; and

- **lifestreaming**: a term coined by Burgess-Limerick (1995), emphasising that the development of the self, the career and the life of the individual is an interwoven ‘work-in process’ requiring complex, conditional and responsible decisions that must ultimately rest in the hands of that individual, rather than (the) organisation(s) or the state.

It can be seen that the last four items from the above list involve skills or broad capabilities that can be trained or acquired. However, the first three and, arguably, the fourth can be construed as personal stylistic characteristics that, while modifiable in principle, are typically seen as long term cognitive or personality characteristics or predispositions. However, even the last two elements require an underlying preference for processing information and solving problems in the type of holistic, integrative style that is consistent with the empathy, creativity and proactivity at the top the list.

If these are the stylistic characteristics of the key contributors to the new organisation, how are we to lead them? As noted, Limerick et al (1998) expressed some doubts about the unreserved application, within Fourth Blueprint environments, of transformational leadership theory as it has been presented in the recent literature. The quote below (from Limerick et al, 1998: 125-126) encapsulates those concerns.

"Organisational transformations are usually sanctioned at the top. Some writers argue that that is where transformational leadership exists, and that below that level the need for transformational leadership diminishes .... Those in Fourth Blueprint organisations would be less than comfortable with the whole direction of the current debate....A model of shared leadership, or multiple leadership roles is far more congruent with collaborative individualism. While transformational programs are initiated at the top, many of those who implement them require similar transformational skills. And even after transformation into Fourth Blueprint organisations, the network organisation faces such a chronic state of flux and discontinuity that it makes constant demands on transformational capacities, on ‘leadership’ among a majority of its....(participants)."
Thus, the concept of ‘distributed leadership’. This sees the need for many and varied leaders at all levels of the organisation – although it also expects to see a significant decrease in the numbers of layers in the structure as the flat, web-like design of the network is progressively adopted. It further anticipates significantly more, and more frequent, rotations of who is actually driving the leadership dynamic within the group over time. Thus, our collaborative individuals are their own leaders – and must be comfortable with often being the followers as well. We are, in the jargon of the leadership theory field, more interested here in ‘emergent’ as opposed to ‘appointed’ leadership. In such a dynamic, personality characteristics – especially those related to risk-aversion, creative expressiveness, tolerance of ambiguity and need for control – will be crucial to fluidly moving through the various roles as they emerge and decay.

We will return to these stylistic issues in Section 1.3 and the implications of the Fourth Blueprint for leadership styles will be canvassed in Section 2.1. However, before we move on, we need to address an issue related to the implementation of network style principles in previously corporatised, Third Blueprint organisations.

1.2.4. Neo-corporate bureaucracy as ‘false consciousness’.

“(in follow-up research) ...we received a good picture of the dysfunctional nature of what we came to see as ‘neo-corporate bureaucracies’. ... These are not postcorporate organisations. They are a new form of corporatism, still embedded in the major paradigm, of the hierarchical corporate organisation but with an attempt to apply some of the precepts of the Fourth Blueprint... Managers become risk-averse and hold on to the form of organisation they know best – hierarchy. Yet they are simultaneously under pressure to decentralise in order to cope with increasing rates of change and in order to reduce the costs of their swollen central bureaucracies.”


After the publication of their first edition in 1993, Limerick and Cunningham undertook further research into the implementation of Fourth Blueprint principles in previously well-established corporate bureaucracies. This was a matter of their concerned focus in the revised edition (Limerick et al, 1998) for reasons articulated in the quote above. The model of organisational choice they had established had arrayed the previous versions of what they had styled; ‘Corporate Organisations’ along a continuum from stable and efficiency focused to change-oriented and responsive. The Fourth Blueprint,
entrepreneurial alternatives were all spread along an intersecting dimension driven by the realities of discontinuity and collectively labeled: ‘Postcorporate Organisations’.

What they encountered in their research suggested a management driven by a cognitive appreciation of the need for flexibility and responsiveness and enabled by developing electronic communication and record keeping technologies that were stripping layers from the hierarchical structure. They were also downsizing while at the same time introducing elaborate corporate control and accountability systems and commissioning complex process requirements to guide all the allegedly devolved strategic decision making in the distributed operations. More specifically, Limerick et al (1998: 85-87) identified the following dysfunctional consequences:

- **Delayering**: in which the number of staff handling growing workloads was slashed in the process of reducing levels of management, leading to work intensification and the resultant stress and alienation and encouraging staff to use limited and non-creative response repertoires as defensive routine;

- **Pseudo-devolution**: in which official decentralisation policies are subverted, by a top management that feels it might be losing control, using the proliferation of infinite processes/systems covering appointments, planning, operational reporting, training and so on; and

- **Politicisation and ‘outering’**: in which the bureaucratic dance is played out in endless elaboration of process. In such circumstances, the people most likely to ‘out’ themselves and sit on the sidelines are the genuine collaborative individuals with a strong focus on task-related values and commitment to spend their energies on substance rather than form.

In commenting on these dysfunctions, Limerick et al (1998: 88) note:

> "Fourth Blueprint, network management techniques cannot comfortably be partially lifted and applied within a different paradigm. The management of networks requires an internally consistent set of processes and capabilities."

We can sympathise with their frustration as the dysfunctions outlined above are not only inimical to the texture of any high performance organisation but strike at the core logic of networks designed to handle the discontinuity and turbulence of hypercompetitive environments. We should note, however, that these perturbations in application are apparently common and that they are not entirely inconsistent with rational self-interest from the perspective of those who have been intensively trained to implement objective,
rational, measurable systems designed to ensure productivity and control. In the parlance of the revolutionary, they are the symptoms of the ‘false consciousness’ of the unreconstructed. Thus, in Section 1.3 below, we will address the possible negative styles that might constrain the effective implementation of a fully empowering Fourth Blueprint regime as well as the more positive qualities listed in Section 1.2.3 above.

1.3 Locating and researching the post-industrial mindset

“We must develop a way of seeing that authentically grasps the emerging actual world with our imagination. Otherwise, not only shall we be surprised again by our failure, but we shall be without the ability to comprehend our own surprise. This means that (we need to) become self-critically self-conscious of the images, metaphors, paradigms, and language by which we see and describe our world. This is deeply personal work. One is learning about one’s self and one’s ways of being in the world; one is not merely learning about what is ‘out there’. Tragically, those who are best trained as managers and operators fit for industrial society are often least fit for such deeply personal work. They have been trained to strip their most personal selves from the persona they take to work.”

Nelson (1996: 37)

In our review of the issues thus far, we have encountered regular reference to the need for a new ‘mindset’ within those who are operating within the hypercompetitive, discontinuous environment now confronting us. When Limerick et al (1998) addressed the requirements through the concept of the ‘Collaborative Individual’, they also often referred to the need for a new mindset either directly or in quotes. So what is meant by a ‘mindset’? And how broadly do the applications of this concept run? Limerick et al’s (1998) list of characteristics of the Collaborative Individual covered both long-term personality and cognitive style factors and skills and competencies that can be, in principle, and often are, in practice, systematically trained over time. Others, such as Pascale (1990), have used it to signify a logically consistent and commonly held view of ‘what works and what doesn’t’ in a given strategic or operational setting. Still others prefer a narrower perspective and, like Ornstein & Ehrlich (1989), refer simply to new ‘Mind’ by which they mean the mental processes the individual utilises in assessing and interpreting the world s/he confronts.

Essentially, some definitions of mindset seem to include significant elements of content or the output of decision making while others restrict themselves to elements of the processes by which the world is constructed and decisions and actions derived. In this
thesis, we will explore a view of 'mindset' as the full package of pre-programmed personality, cognitive and emotional characteristics and biases that contributes to the way an individual perceives, interprets, judges, interacts with, and responds to his or her environment. We will also consider a dynamic view of the individual in interaction and integration with his environment in a 'mutually causal' flow. So there is no suggestion here that the 'pre-programmed' mindset cannot evolve in that interactive flow. To the contrary, we assume that the 'mindset' is in a constant state of emergence even though the degree of fluidity and openness displayed in various situations is also an important individual difference to be considered, particularly in hypercompetitive environments.

As noted in Section 1.2.3, Limerick and Cunnington and their various colleagues articulated a perspective on the 'Collaborative Individual' that:

- saw such a conceptual character as a centre-piece of any effective transformation towards the truly authentic post-corporate, Fourth blueprint culture;
- recognised the challenge that a proliferation of such characters would pose to the classic or even Third Blueprint manager; and
- placed some core elements of personal style such as empathy, intuition, creativity and transformative capability at the heart of their specification of the contrasting psycho-dynamics of this 'new age' actor.

Alternatively, the above quote from Nelson (1996) hints at the range of negative stylistic barriers that we may need to consider. He asserts that the prior training of what we now call Third Blueprint managers might militate against the development of an inquiring, reflective and powerful managerial repertoire in the face of the complex, urgent and discontinuous world we now face. This poses a rich variety of questions related to the interaction between the individual, the hypercompetitive operating environment and the managerial regime or blueprint we activate to handle the relationships involved.

However, in an extensive survey of relevant managerial, organisational, psychological and sociological databases, few studies were uncovered that directly addressed the personality or cognitive style requirements of living in the discontinuous, turbulent and loosely coupled world of the Fourth Blueprint organisation. Similarly there appears to
have been little specific focus on how the harsh and challenging realities of the 21st
Century managerial environment might interact with various different ‘types’ to
produce or inhibit the newly advocated stylistic patterns. Some of the key questions that
this line of enquiry might consider include:

- What are the personality or cognitive stylistic characteristics of the
  Collaborative Individual?
- Is collaborative individualism a gender issue?
- Are there systematic occupational or national differences in the naturally
  occurring incidence of Collaborative Individuals? And
- Given the intense nature of the hypercompetitive environment, how
  might situational pressure and stress effect the expression of behaviour
  consistent with the Fourth Blueprint?

We will now consider the dimensions of each of these questions to provide a sense of
the focus and scope of this thesis

1.3.1 **Personality type, brain dominance and the Collaborative Individual**

“The focus on the development of empathy and love in managers has
brought with it new areas of interest and lively debate in the
management literature. The 1980s saw re-awakening of interest in
the use of the Jungian personality typology, represented in the
burgeoning use of the Myers-Briggs personality inventory, and the
Hogan and Champagne Personal Styles inventory. Related in some
ways to the use of Jungian typology is the current interest in brain
laterality and personality functioning. A number of authors, after
surveying the evidence, have suggested that the right hemisphere is
primarily responsible for holistic, intuitive, empathetic processes,
while the left hemisphere, which tends to be dominant in most
people, is responsible for logical, analytical processes, including
speech. While it offers a potentially promising area of research, the
relationship between brain laterality and personality is so complex
that no simple generalisations can be made or accepted with
equanimity.”

*Limerick and Cunnington (1993: 138-140)*

Both the Jungian personality schema and the personality theories based on the brain
laterality concept constitute typologies. As such, each has an elaborate theoretical
structure underpinning it’s interpretation and driving the design of the relevant
instruments. Also, the key dynamic is the playing out of a set of competing ‘tensions’ or
yin-yang confrontations with the individual’s personality and/or cognitive style
representing their current point of resolution of the range of tensions in terms of their perceptual, judgmental or action repertoires. Further, the particular styles and emphases implied in the quote clearly speak to the characteristics of the collaborative individual.

As Fitzgerald (1997: 34) notes: "Reviewers of the extensive literature on leadership and personality...have typically expressed disappointment, or even dismay, about the array of confusing and contradictory results and have detailed once widely pursued but now outmoded approaches." Given the specific focus of this thesis, we can forego a detailed review of this protracted philosophical and scientific debate. However, an important issue from the area of general personality theory remains, related to the relative contribution of personal characteristics and the environment to an explanation of behavioural dynamics. Some consideration should be given to the dynamic complexity that characterises such interactions, especially in the ephemeral, mutually constructed world of post-modern theory.

Rather than the classic view of behaviour being determined by the 'persona within', or the mid-20th Century alternative view of the dominant role of the environment, more recent formulations take a fully interactive view of the relationship among all these concepts. Thus, Davis & Luthans (1980) identified the most popular interactive view as: 

\[ B = f(P;E) \]

the view that the interaction between the individual's current perceptions, needs, expectations and personality and the specifics of the environment surrounding her/him is more critical than either aspect separately. Davis and Luthans, however, went past simple interactionism to add Social Learning Theory (SLT) as the fourth, and most complete model. The essence of SLT is that we need to incorporate the interactive nature of all variables in the equation. SLT posits that the person and the environment do not function as independent units but instead determine each other as well as contributing to immediately responsive behaviour. It further asserts that it is largely through their actions that people produce the social environmental conditions that effect their continuing actions and that through their actions they learn alternative modes of being. That is: 

\[ E = f(B;P) \]
\[ P = f(B;E) \]

are also critical equations.

Thus, SLT would lead us to expect that any impact of personality style variables would be complex in its nature and interactive with both environmental and behavioural impacts. Such complexity tends to subvert the positivist methodology used to establish simple quantitatively based correlation and predictive studies. The other implication of
SLT for our exploratory search of the psychodynamic terrain is the suggestion that the
active dialogue of collaborative individuals will not be neutral as to personality type.
Rather, the aggregate weight of type within the group at any time is likely to be closely
reflected in such phenomena as the group climate and norms and their typical leadership
processes and responses to influence. Equally, given some stability over time in the
membership of groups, the evolving and complex challenges of the discontinuous
environment might be expected to promote some fundamental changes in repertoire of
stylistic responses. This theory appears to be:

- supported by extensive, well reputed research (see Davis & Luthans,
  1980) for a more complete outline of the empirical evidence;
- consistent with a strong tradition of research on the “social actor” issue
  including the ‘Hawthorne Effect’ and Heisenberg’s Uncertainty principle
  in nuclear physics;
- in accordance with the major tenets of open-systems theory on the
  interactions of bio-social systems with their environment; and,
- consistent with the more recent research themes of the organisational
  learning and “sense-making” theorists, such as Brown & Duguid (1991)
  and Weick (1995), in seeing organisational knowledge and perceptions of
  ‘reality’ as collaborative, interactive and continually changing products
  of alliances in ‘construction’.

Bearing those caveats in mind, the resulting broad question we are posing might best be
framed as follows:

In attempting to identify those most suited to the 21st Century
managerial environment within networking organisations, do we
find explanatory value in considering the various competing
personality and cognitive styles addressed and explained by either
Jungian Typologies or Brain Laterality models of personality
functioning?

Also, given the specific role of the distributed leadership process within the Fourth
Blueprint model of network management, a supplementary question might be framed
along the following lines.

In promoting the smooth and effective performance of distributed
leadership processes within the network organisation, do the
personality styles suggested by Jungian typology and Brain laterality
help us identify network members who will be comfortable and
effective as ‘distributed leaders’ and followers? Do they help us
differentiate them from those who would find the new roles difficult and stressful?

These two questions will form a core focus in this thesis and will be more closely examined in the light of a review of directly relevant literature on leadership processes and managerial and personality styles in Sections 2.1 and 2.2.

1.3.2 Demographic and situational correlates of the Collaborative Individuals

Early in Section 1.3, four guiding questions for enquiry were listed. The first – related to personality and cognitive style – was clarified in Section 1.3.1. We will now briefly clarify and scope the other three.

Gender and the Collaborative Individual

"The Western stereotype of the rational thinking-sensing manager has come under challenge as just that - a Western stereotype, and a male (one) at that...Moreover, the debate has highlighted the extent to which these functions are associated with gender stereotyping in the West. Males are seen as thinking-sensing, without much feeling or intuition. Females, on the other hand, are stereotypically permitted to be irrational, intuitive and dominated by feelings. (The) new focus on managerial empathy, (and)...affective personality functions, is helping to legitimate the role and presence of women in management."

Limerick & Cunningham (1993: 138-139)

The quote above speaks to a strong vein within the unfolding research literature related to women in management, which will be visited in more detail in Section 3.2.1 below. For now, it is sufficient to highlight the connection made between stylistic differences between male and female managers on typologies such as the Jungian and Brain laterality frameworks and the coming ascendancy that is predicted for the networking style of organisation. It will also be important for us to remember the cultural theme of a dominantly 'western stereotype' connecting males positively and females negatively with the image of a manager. However, this strand of research – originated by the seminal work of Virginia Schein and her later colleagues (see e.g: Schein, 1973) – is not directly relevant to our focus here. We will not be looking at stereotypes of managers/leaders held by others. Rather we will be asking whether the actual personality profiles of males and female aspirants for senior managerial roles will affect
their performance and adjustment in the 21st Century environment. For the moment, we can state our supplement to the core question at the end of Section 1.3.1 as follows:

Are there gender differences in the personality profiles of potential managers that would be consistent with the view that females would make more effective and better-adjusted Collaborative Individuals and Fourth Blueprint managers in the 21st Century managerial environment?

**Occupational Background and the Collaborative Individual**

"The (occupational) typology provides a tested scheme for interpreting how the new work opportunities benefit some occupational groups more than others. For instance, Realistic and Conventional workers are in a shrinking labour market. Their problems are compounded by their work environments that have encouraged dependent rule following and traditional thinking. Now they must find work in increasingly ambiguous and disorganised work environments, but their work has prepared them for life in a neatly structured situation. No one should be surprised that their mature dispositions are ill-suited for new kinds of work in a chaotic market."

*Holland (1996: 405)*

"By differentiation, we mean the difference in cognitive and emotional orientation among managers..(and staff) in different (functional) units."

*Lawrence & Lorsch (1976: 29)*

Limerick et al (1998) did not address the issue of the occupational background or functional experience of members of the new organisations. Yet, as the above quotes suggest, these factors may have a profound impact on the individual's adjustment and work satisfaction that may be quite challenging in discontinuous environments and loosely coupled and creative work organisations. The Lawrence and Lorsch quote reminds us that our focus, on the personality and cognitive style of aspirants to senior roles in Fourth Blueprint organisations, will benefit from consideration of the functional and occupational differences among those aspirants. The Holland quote refers to an extensive research program that clearly supports the following conclusions:

- Occupations can be usefully clustered into six ‘environments’ in terms of their common work elements, skill demand, value requirements and contextual pressures and supports;
- Personality can be classified according to a related set of 6 factors;
The occupational and personality clusters show systematic and predictable relationships in terms of both occupational membership and occupational and career adjustment, and

Career choice, based upon personality type, displayed significant stability over a 30+ year career span – at least in the days of Third Blueprint supremacy.

The quote suggests we need to consider the implications of those research findings for the challenges to adjustment of many of the most stable and effective members of the Third Blueprint workforce as they confront uncertainty and discontinuity. A more detailed outline of key research findings on the impact on style of occupational and functional background will be presented in Section 3.2.2. For now, we can state our supplement to the guiding question as follows.

*Are there differences in the personality styles of aspiring or actual managers with different occupational backgrounds and functional experience that would suggest the likelihood of their experiencing different levels of effectiveness and satisfaction in Fourth Blueprint environments?*

**National background and the Collaborative Individual**

"...the findings reveal that culture has an important impact on executive mindsets, as demonstrated by the fact that executives of different cultural background are not equally open to change in organizational strategy and leadership...(and also) that executives' views of appropriate leadership profiles reflect the imprint of cultural socialization more so than professional experience."

*Geletkanycz (1997: 615)*

"Schutz & Luckmann (1974) have proposed that a strong link exists between cognitive process and culture. Cognitive processes are based on authoritative cultural standards that individuals within a culture do not question because the cognitive processes help them be successful by making their behavior consistent with other members of the culture. While individuals do exercise free will in relation to their cultural norms, their cognitive processes are strongly influenced by their cultural background (Berger & Luckmann, 1967)."

*Abraham, Keating & Lane (1996: 125)*

While Limerick et al (1998) limited their comments related to cultural differences to some micro-level comparisons they saw as relevant to their US or Australian samples, they gave no attention to the broader research base relating to cross-cultural differences
in management. However, as noted in our discussion on the Collaborative Individual in Section 1.2.3, this broader debate clearly relates centrally to the contentious and somewhat paradoxical combination of individualism and collaboration.

This is particularly so in regard to Hofstede’s (1980) framework, which was the one used in the Geletkanycz (1997) study referred to in the first quote above. As indicated, the study found differences in the degree of “open(ness) to change in organizational strategy and leadership profiles” that related to opposing ‘mindsets’ on those key cultural dimensions. Clearly this finding relates to our interests in the dimensions of personality/cognition of the Collaborative Individual. It also speaks to themes related to discontinuity and the flexible responsiveness to change within the Fourth Blueprint.

The second quote reminds us more generally of the cognitive style issues we are dealing with. It cautions that we should bear in mind the strong interaction between those variables and national culture in both the design of our research and interpretation of the results. The more specific implications of that body of research on the cross cultural dimensions of managerial behaviour will be canvassed in Section 3.2.3 below. On the basis of the issues canvassed here, we can state our supplementary question as follows:

Are there national differences in the cultural dimensions of management that might effect the incidence of the personality or cognitive styles related to Collaborative Individualism? If so, are any of these national cultural differences likely to exert a direct impact or, in concert with gender or occupational background, have an interactive effect upon effectiveness or satisfaction within a Fourth Blueprint environment?

**Situational Stress and its Impact on the Fourth Blueprint culture**

The content and quotations we need to consider in order to frame the question(s) posed by situational stress for the Fourth Blueprint organisation, have already been presented. In Section 1.1.4 we considered the nature and demands of the 21st Century managerial environment and in Section 1.2.4 we looked at some of the unintended dysfunctions that came with the partial introduction of Fourth Blueprint principles in what Limerick et al labeled ‘Neo-corporate Bureaucracies’.

We noted, in Section 1.1.4, the turbulent, messy, uncertain, challenging and conditional nature of the 21st Century managerial environment as currently conceived. We also considered some profound criticism of post-corporate forms of organisations as ‘high-
velocity high-commitment workplaces – flash-in-the-pan collectives – offering no ongoing relationships, no safe haven, no personal space’ (from Zohar and Morgan, 1998). We uncovered the suggestion of Victor and Stephens (1998) that an expanded research agenda should include a focus on how stress can be ‘minimised, rather than accentuated, in the ambiguous form’.

Conversely, it is clearly Limerick et al’s (1998) intention that Fourth Blueprint organisations be designed to achieve a profoundly open, supportive and developmental community of practice as a central element of effective maturation. However, they acknowledge that, in the absence of such a positive, collaborative tone, significant dysfunctions can occur as stated in the following quote from Limerick et al (1998: 131):

"The flat organisational structures found in Fourth Blueprint organisations are fundamentally important to the life-stream compatibility of the organisation, for they give the individuals within them the capacity to participate in moulding (it) to their own circumstances. Much of the stress that is leading to burnout in so many workers today can be attributed to naive delayering. If you simply remove layers of people without simultaneously removing the hierarchical system, those who are left have to manage the hierarchy in addition to their usual roles. What is required is a transformation to a horizontal, empowered system compatible with their life-streams."

Thus, the negative reactions of the otherwise potentially well adjusted ‘Collaborative Individuals’ when they confront an incomplete rendition of the Fourth Blueprint redesign. The other side of the coin is the stress that could well attend the previously well-adjusted and high performing Third Blueprinter, with a strong analytical style, an intense need for structure and control and comfort and familiarity with performance audit systems based on tangible and pre-negotiated goals. How do they respond to the pressures of an environment of the type we described in Section 1.1.4? And would the introduction of a genuinely and fully implemented Fourth Blueprint organisational design help their adjustment or simply produce more stress as the demand for new ‘right brain’, relational and negotiative skills further exposes their insecurities?

A more specific and extended literature review relevant to these issues will be presented in Section 3.2.4 below. For the moment, the supplementary questions are as follows.

Are there any impacts on either network members generally, or variously on specific groupings with particular personality or cognitive styles, from situational stressors related to the 21st Century managerial environment? If so, are those impacts likely to increase...
or inhibit the incidence of appropriate Fourth Blueprint behaviours among senior managerial aspirants? Further, is the implementation of full, Fourth Blueprint organisation design likely to ameliorate or exacerbate the dysfunctional impact of the stressors?

Having clarified the content focus and scope of the questions that will drive this thesis, we now turn to the broad research strategy and methodologies to ensure they are sensitive to the post-modern concerns at the heart of this area of scholarly interest.

1.3.3 Theory-building as ‘disciplined imagination’: Exploring emergent patterns of organisational behaviour

"The discussion of post-bureaucratic organization is complicated by the fact that it doesn’t exist. To my knowledge there is no concrete example that truly exemplifies the type – certainly not on a large scale or for more than a short period. Thus the analysis is more than a matter of culling ‘best practices’ and investigating causes and effects. The notion of a post-bureaucratic type is drawn from a set of (largely partial and short-lived) examples of organizations that seem deliberately to violate bureaucratic principles...The test of the adequacy of the type description cannot, however, be that it accurately describes existing phenomena. It doesn’t. Most examples...are merely cases of old wine in new bottles. There is no inconsistency in claiming the birth of a new form and arguing that most who aspire to it are missing the mark. Testing the claim therefore involves making heavy use of theory to leverage a small amount of data."

Heckscher (1994: 17-18)

"Theorists often write trivial theories because their process of theory construction is hemmed in by methodological strictures that favour validation rather than usefulness (Lindblom, 1987). These structures weaken theorizing because they de-emphasize the contribution that imagination, representation and selection make to the process, and they diminish the importance of alternative theorizing activities such as mapping, conceptual development and speculative thought...Theorizing consists of disciplined imagination that unfolds in a manner analogous to artificial selection."

Weick (1990: 516)

The notes and summary statements of the guiding questions for this thesis that were presented in Sections 1.3.1 and 1.3.2 have hopefully clarified the content and scope of our on-going research focus. The ‘how’ of our research, or the broad research strategy and its micro-methodology remains more problematic. The quotes above give some idea of the reasons for those difficulties and a hint at the possible route to resolution.
As we noted in Sections 1.1 and 1.2, both the environmental context of the 21st Century manager and the post-bureaucratic vision of the organisational vehicle most suited to meeting the challenges are complex and paradoxical and often produce elements in tension, if not direct contradiction. They are both ephemeral and actively constructed in collaboration and are assumed to be decaying even as they are being created. Consistent with post-modern assumptions, they also deny and confound attempts at building either grand general theory or grand and lasting products or vehicles of that theory.

Thus, as Heckscher’s (1998) quote suggests, despite several decades of active theorising and advocacy about them, it is hard to identify any complete and lasting examples of ‘truly post-bureaucratic organisations’. In this regard, a study by Kolodny, Lui, Stymne & Denis (1996) is instructive. They were interested in the interplay between the introduction of new electronic technologies into work design and the concurrent adoption of new organisational paradigms. To examine this they considered cases of technological innovation in three industries (banking, food processing and electronics) in each of France, Sweden, Ontario and Quebec and assessed both the design principles and the strategy of implementation being utilised. From their case data, they built a 4-Quadrant model of the design process that is reproduced in Figure 1.3.1.

![Figure 1.3.1: The Organization Design Process - From Kolodny et al (1996)](image)

As displayed there, their ‘Design principles’ dimension runs from high specialisation, technological determinism and dominant rationality on the left to integration, complexity/uncertainty absorption, flexible choices and expanded rationality on the right. Similarly, ‘Design Implementation’ is about expert design and closed process at the bottom versus diffused, participative open process at the top. While the study was
initially generated to look at the strategies and processes of technological change, it is interesting to consider the compelling conceptual and spatial similarities between its four broad ‘paradigms’ and Limerick et al.’s (1998) Four Blueprints.

This model is a product of a multicultural team of researchers drawing patterns of inference from interview data from 12 or so individual cases. Nonetheless, it seems clear it has positive things to say about the usefulness of Limerick et al.’s (1998) model if not its validity. As shown in Figure 1.3.2, 7 of the 13 cases were on the right of the model indicating some use of the integrative, uncertainty-absorbing rationality in design principles. However, only 1 was in the banking industry and a few experts dominated its implementation process. Also, 10 of the 13 used a significantly open, participative implementation process and 5 cases registered fully in the ‘Fourth Quadrant’.

This might suggest that the Heckscher pronouncement in the quote above was unnecessarily pessimistic and that we have found our post-bureaucratic organisational cluster. Before assuming this, we should listen to Kolodny et al.’s own words in summarising their findings in the quote below (Kolodny et al., 1996: 1482).

"Most of the companies had confined their movement away from the traditional paradigm to changes that involved increased participation and involvement on the part of their employees. They were less willing to reinforce these new processes with the structural changes that would have placed them in the upper right quadrant of the diagram. For many managers, programs of employee involvement and participation are a challenge to their traditional ways of controlling and supervising; but participative programs are still less risky than structural change that might necessitate sharing
power, providing more autonomy or making changes that flatten organizations and remove managerial levels."

The above quote has echoes of the Limerick et al (1998) concern about the ‘neo-corporate bureaucracies’ reviewed above. It also tends to support the distinction, drawn in our discussion of the diffused strategic empowerment that characterises genuine Fourth Blueprint organisations, between delegation and strategic devolution. Overall, the implications of this study for our research strategy and methodology include:

- a further demonstration of the broad and constructively useful character of the framework sketched by Limerick et al in helping us understand the critical dynamics of the discontinuous, Fourth Blueprint environment;
- a clear illustration of the layers of complexity involved in the culture and character of the post-corporate organisational environment and a reminder of the difficulties of finding organisations that will be valid ‘social labs’ for examining the micro-dynamics of human adjustment;
- an appreciation of some of the sources of resistance to a fully implemented Fourth Blueprint redesign that might be more than just short-term, transitional problems and, in any case;
- the individual and diverse character of each case, as a complex and interdependently constructed and negotiated compromise, providing rich insights into the key dynamics of post-corporate functioning but limiting the generalisability of precisely measured and monitored findings.

We should have expected nothing less. It is not just that we have not given the new paradigm enough time to implement sufficient empirical trials to have eradicated ‘the worst bugs’ and constructed working social environments in which we can then focus on perfecting the micro-details of interaction. The fundamental premise of the underlying post-modern philosophy is that social organisation will remain a negotiated and ‘emergent’ work in progress whose character will be continually evolving.

So, in the Cartesian, positivist world, we might seek to address the ‘Fourth Blueprint’ mindset questions we articulated above by finding instances of organisations operating on such principles and;

- observing the relative effectiveness and adjustment of members of those organisations with varying personality of cognitive styles, and/or;
• assessing the relative success and comfort of members from different
genders, functions or national groupings, and/or;
• describing and evaluating alternative regimes of leadership and
fellowship within them.

The heading quotes for this sub-section suggest such ‘social labs’ will be difficult to find.
Such positivist designs tend to misrepresent the dynamics by which social mechanisms
are created, develop and mature. They also fail the test of fluid, interactive complexity
that makes our questions meaningful and any tentative answers we might reach
potentially ‘useful’. Besides, the mid-20th Century history of such positivist studies in
personality as related to managerial and organisational behaviour was disappointing. So
how do we build up a more complete and ‘useful’ picture of the leadership and
personality dynamics in Fourth Blueprint mode and discontinuous environments?

The first part of an answer is that it requires an ‘exploratory collaboration’ – between this
author and the range of others who have erected some of the theories or sought some of
the ‘partial realities’ by empirical observation or ‘thought trials’ (see Weick, 1990). The
second part of the answer is that the product of those explorations is subject to a second
collaboration, this time between the author and each reader of this document. This
collaboration should reflect the ‘disciplined imagination’ Weick (1990) referred to. He
suggests that for a theoretical framework to be useful, its imaginative construction should
be ‘disciplined’ by several selection criteria:

• “That’s plausible” – a minimum consideration for further retention and
development of a nascent formulation;
• “That’s interesting” – a critical energiser of the research process,
particularly valuable in the element of surprise often felt by the theorist
on first encountering the idea;
• “That’s obvious” – a criteria he says suggests the conjecture may as well
be deleted from further pursuit;
• “That’s connected” – designed to broaden the conceptual base from
which relevant models are drawn to form the theory under construction;
• “That’s believable” – which requires the concept/idea to be evaluated on
the degree to which it ‘completes a believable story’ about the issues
under consideration;
• “That’s beautiful” – a criterion that he implies speaks to the essential harmonics of order that might underpin such sciences as quantum physics.

We should remind ourselves that Weick, in suggesting the criteria above, is concerning himself with the process of effective theory building (or generative thinking). He is explicitly not referring to validation. In pursuing the general spirit of his advice, we will be making systematic use of ‘activities such as mapping, conceptual development and speculative thought’. In more concrete terms then, the first stage of this thesis will involve building a theory about the dynamics of leadership and followership behaviour in hypercompetitive, post-corporate environments and the relationship between those dynamics and the personality style, gender and occupational and national background of aspiring Fourth Blueprint managers. We will also seek to build a similar understanding of the interplay among the environmental and organisational issues, personality and demographic characteristics and experiences of stress among organisational members.

This theory building will be done in the absence of any evidence that such a specific, exploratory charter has been undertaken before. In this light it will attempt to sketch the more intricate pattern of potential dynamics to be considered in the interplay between all of the variables under study. It will also seek to establish better understanding of the implications of an extensive and complex database gathered from aspirants for senior managerial roles moving into the early years of the 21st Century. This second stage of the thesis will be briefly grounded and scoped in Section 1.3.4 immediately below and will form the central focus of the thesis in Section 3.2 and Chapter 4, while the Stage 1 – Theory Building - process will provide the contextual background to the overall study.

1.3.4 Assessing and interpreting the stylistic profiles of aspiring 21st Century managers

“We propose that our MBA programmes ... ought to be educating our next generation ... to be more inner-directed, more independent thinkers, more committed to what they believe to be right. We also propose that we educate them to be more collaborative, better team players, more relational human beings. Can those two co-exist? ... One key challenge for the 1990's, for both academics and working managers, is how better to understand and manage the vital mix of individualism and collaboration in organisations.”

Leavitt (1991)
The above quote from Hal Leavitt, along a ‘wither the MBA?’ theme, neatly captured the dilemma of the designers of management education and organisational learning in the early 1990’s as they looked ahead. To release spontaneity, flexibility and innovation in fast changing environments, they needed to develop and empower the experimental, risk-oriented expressiveness of individuals. And yet, in the extended, interactive, global playing fields of commerce and industry, a sense of direction, coherence and commitment was seen as central to the integrative responsibilities of management. As we have seen in Chapter 1, this agenda has not lost its currency and bite but, perhaps, as we turn into the 21\textsuperscript{st} Century it may have gained in both significance and urgency.

In fact, for the central foci of this thesis, the quote taps intellectual, creative and emotional issues critical to the personality and cognitive styles we need to fully explore. And it does so in relation to a key cluster of the ‘high-potential’ aspirants for senior management – MBA students and graduates. As we shall find later, samples drawn from relatively established and refined programs such as MBAs can provide useful control levers for research studies especially those seeking to make generalisations across complex and diverse sub-cultures such as gender, occupational and national groupings.

However, there is a more compelling reason to ground our research on personality fit and transition to the Fourth Blueprint in an MBA setting. As knowledge becomes the key strategic asset of 21\textsuperscript{st} Century organisations (Arthur, 1996; Drucker, 1989) the probability is that a high proportion of the credible applicants for the leadership and professional roles in the new networks will either come from such programs, or be well represented by them. As Leavitt’s quote indicates, few institutions are closer to the dilemmas of such psycho-social transitions between paradigms and more polarised in their responses than those that offer MBAs.

So, when it is time to gather empirical data to supplement our theoretical constructions from Stage 1 of the thesis we will turn to MBA programs in three countries in which they have a well-established and reasonably consistent presence. This strategy might put us in danger of a little positivistic backsliding. However, if we filter our interpretation of quantitative findings through the lens of our collaboratively constructed theory, we may find it clarifies the experiences of colleagues who are struggling to implement the Fourth Blueprint. It may also speak to the dynamics underlying the process of managerial development and adjustment in the new realities of the 21\textsuperscript{st} Century.
Chapter Two

Exploring leadership dynamics and managerial style in the new organisation: A review of relevant literature
Under Fourth Blueprint management, by the time we reach the stage of renewal, metastrategy has become a process in which the entire organisational community is involved. Of course, there are still leadership roles to be played – but leadership is not considered to be the property of a single individual or elite group at the apex of the hierarchy. Those at the hub become facilitators of appreciative processes that involve the whole network community in redefining identity and vision."


As noted in Chapter 1, the primary focus in this thesis is on the personality and cognitive style requirements of the "Collaborative Individual" within networking organisations in discontinuous hypercompetitive environments. However, the required maturity and shared leadership responsibilities that characterise Fourth Blueprint expectations of all network members means that a secondary but critical focus of the thesis is directed to leadership. Or, more precisely, to a proper understanding of the dynamics of leadership, influence and autonomous creativity needed to enable coherence, flexibility and responsiveness to co-exist simultaneously.

As suggested above, Limerick et al (1998) expressed an equivocal, perhaps even conflicted, position in relation to the processes of transformation and transcendence in Fourth Blueprint organisations. Their paradigm spoke to the notion of active and continuing examination and fluid rearrangement of the key elements of identity and capability – both at organisational and individual level. This is the natural 'homeland' of the transformational leader. And yet, they were distinctly cautious of the reversion to the image of a domineering 'heroic' leader that seems to underpin the transformational and charismatic leadership literature. The issue of shared leadership is an important element of their vision of the Fourth Blueprint. However, perhaps even more critically than that, the *fully distributed* responsibility for endorsing and defending strategic choice and renewal among *all* members of the network is at the core of the community of collaborative individuals that forms the Fourth Blueprint’s central dynamic.

This raises a further question. Regardless of who the leaders are, or how widely distributed, if they are genuinely transformational or charismatic in their style, are they in danger of swamping and nullifying collaborative process by the power of their presence? Or does the very dynamism and discontinuity of the 21st Century environment demand the security, clarity and structure that such ‘strong’ leaders supply? These issues will be canvassed in Section 2.1.
The idea that specific traits, capabilities, values or experiences might differentially privilege certain individuals above others in the conduct of collaborative process could be seen to be anathema to some devotees of organisational democracy. Instead, they would prefer commonly accessible processes that might empower all parties, regardless of characteristics and background. This begs the further question as to what the literature tells us about individual differences and their effect upon capacity, motivation or readiness for various organisational roles. Broadly, the literature on managerial style, and the related areas of personality or cognitive style, has much to say on these issues which we will be considering in some depth in Section 2.2 below.

2.1 The context and dynamics of leadership in Fourth Blueprint environments

"Strategic management is characterised by an instrumental, means-end rationality... This is the same logic that underpins the 'rational model' with which every business school graduate is familiar... Charismatic leadership, on the other hand, is a values-based rationality — action taken for its intrinsic worth in demonstrating deeply held beliefs about human relationships. Strategic Management is the central management activity on the performance loop, which leads eventually to organisations that become tightly connected and constrained. Charismatic leadership ...develops loosely connected, creative networks from which new activities can emerge."

Hurst (1995: 104)

What is the space within which any type of leadership — whether it is authoritarian or democratic, task-focused or people-centered, transformational or transactional — evolves, emerges, expresses itself and becomes an identifiable and critical element of action? What are the characteristics and contours of that space and the dynamics and tensions that enliven it? And how and why does that space evolve over time within the processes of societal, institutional, organisational and individual development? These contextual questions are crucial to any sophisticated understanding of the micro-dynamics of leadership and influence in any setting. There have been many individual theoretical and conceptual contributions to our thinking on these issues. Perhaps the two most elaborate and inclusive frameworks are those of:

- **The Competing Values Framework:** of Quinn and his colleagues (Quinn, 1984; Quinn & McGrath, 1985) and
- **The Ecocycle model of organisational analysis:** suggested by David Hurst (see Hurst, 1995).
The first of these provides an elaborated and integrated social and psychological analysis of the contours and competing tensions within any organisation, group or institution. The second concentrates on the evolution and continuous recycling of development of the organisation in the context of, and contiguous with, its critical environment(s). However, as we shall see, while they contribute many unique insights, they also have much in common and together form an overall picture of the context and macro-dynamics of leadership and influence in organisations.

As the above quote from Hurst reminds us, the alternative conditions and models we canvassed in Chapter 1 do indeed constitute a fundamentally different paradigm with regard to both the critical variables operating in the environment and the dynamics that link those variables together. Thus, to understand the dynamics of leadership and influence at play in the new environment requires both a fuller appreciation of the operating context as well as the processes by which the various critical factors are held to interact. So, in Section 2.1.1, we will map the contextual terrain of leadership and influence as outlined in Quinn’s Competing Values Framework. Then, in Section 2.1.2, we will present the key elements of Eco-cycle theory, which describes a developmental dynamic driving organisations through a infinitely recursive cycle of competing states, moving from the constrained world of the third blueprint, 'strategic management' paradigm to the loosely coupled, Fourth Blueprint world of the 'learning' organisation.

However, the Fourth Blueprint organisation requires a fundamentally different view of the interaction of key players in both their performance and learning modes. The ‘Collaborative Individual’ is an entirely more complex package, as both a leader and a follower than was the Third Blueprint strategic manager, or the team leader or the follower in the performance dance that was at the heart of the old paradigm leadership theories. We will explore and map these contrasting micro-dynamics in Sections 2.1.3. The questions raised above concerning ‘strong’ leadership styles and the distribution of leadership across organisational levels and functions will then be canvassed in Section 2.1.4, as a prelude to constructing a conceptual map of the nature and dynamics of leadership in Fourth Blueprint environments.
2.1.1 The Competing Values Framework (CVF): Charting the ‘understructure of leadership theory’.

“Just as the failure to specify similarities hinders the construction of ‘a broad science of man’, so the problem hinders us from developing a more efficient investigation of leadership. (Thus, we propose to) present a framework that specifies similarities across traits, behaviors and influence patterns, organizing these three approaches within the field, and linking them to other areas of organizational analysis. This is done by making explicit the understructure of leadership theory. (Emphasis added)”

Quinn (1984: 10))

Quinn and his colleagues commenced their exploration of the psychodynamic terrain of organisational behaviour with a focus on the perceived criteria of organisational effectiveness. They initially targeted the alternative definitions of organisational effectiveness they encountered both in the literature and in the judgments of ‘successive panels of theorists in organisational theory” Quinn (1984: 11). They then charted how those differing visions of effectiveness clustered together and contrasted with each other. They found a complex, interactive and paradoxical terrain filled with goals and objectives in tension with each other. The nature and dynamics of this terrain is illustrated in Figure 2.1.1, adapted from Quinn (1984).

![Figure 2.1.1: The Competing Values framework of Effectiveness Criteria](image)

We will not attempt a more detailed exposition of the original research methodology or concept development. The reader needing this background is referred to the original sources (see e.g: Quinn & Cameron, 1983; Quinn & McGrath, 1982, 1985; Quinn &
Rohrbaugh, 1981, 1983). For the purposes of this thesis, it is sufficient to note the following characteristics of Figure 2.1.1:

- it is another quadrant-based model, underpinned by two bipolar variables;
- in this case, the bipolar variables are flexibility versus control and focus on internal versus external conditions;
- the four quadrants this plotting creates are reflective of value/culture orientations with which we are already familiar — such as Human Relations, Open Systems, Rational Goal and Internal Process. Even a cursory inspection of each quadrant’s content suggests alignment with the Limerick et al (1998) Four Blueprint analysis outlined in Section 1.2;
- also, the fusion of contiguous quadrants around the square produces four ‘super-paradigms’ — effectively ways of looking at and interpreting reality that cluster operational and intrinsic values into competing cultures.

Finally, as in most quadrant-based models, two ‘super-paradigms’ are embedded but unacknowledged. These are the oppositional diagonal combinations. Thus, there is no obvious theoretical or empirical reason a combined emphasis on the Internal Process and the Open Systems quadrants relative to the other two (or vice versa) would not be possible. As Quinn (1984) did not directly address these alternative styles, I suggest the descriptors presented in Table 2.1.1 below as helpful in understanding their nature.

**Table 2.1.1:** Suggested content and titles of the ‘oppositional’ super-paradigms derived from the model proposed by Quinn (1984)

<table>
<thead>
<tr>
<th>Combining:</th>
<th>&quot;Towards:&quot;</th>
<th>Making a Paradigm of:</th>
<th>Representing:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Systems and Internal Process</td>
<td>Transcendence and Perfectibility</td>
<td>Constructive Maximising</td>
<td>Complex Information Processing – Uncertainty absorption</td>
</tr>
<tr>
<td>Human Relations and Rational Goal</td>
<td>Grounded Responsiveness&quot;</td>
<td>Goal-directed Satisficing</td>
<td>Simple Information Processing – Uncertainty reduction</td>
</tr>
</tbody>
</table>

Consistent with Quinn’s use of relevant theorists and their conceptual distinctions to locate and define the paradigms, I have used Simon’s theory of managerial behaviour and decision-making (Simon, 1956) to provide a conceptual background on which to label these two paradigms. These two labels are adaptations of concepts relating to
Simon's concept of 'Bounded Rationality'. Bedeian (1980: 116) had this to say regarding Simon's theoretical formulations.

"(Simon) advanced the view that the actual choice or decision to follow a course of action, far from being substantially rational, is limited by finite cognitive capacity, as well as by environmental constraints over which there is virtually no control... Such circumstances are seen as not only reflecting the limited computational capabilities of the human mind to process...information, but also as reflecting the uncertainty of future organizational events and the inability to order preferences for all consequences in a single utility scale."

Simon thus identified two approaches to responding to this dilemma. They were:

- **The maximiser**: a term that he took from the classic economic injunction to 'maximise intended outcomes based upon complete information',
- **The satisficer**: a term he retrieved from the Scottish word "satisficing" meaning to select "the first course of action (encountered in search) deemed 'satisfactory' or 'good enough'." Bedeian (1980: 117).

In commenting on the 'satisficer' style, Bedeian (1980: 117) added these further explanatory comments: "That is, rather than examine all possible alternatives and attempt to order them according to a well-organized and stable hierarchy of preferences, they generally settle for the first satisfactory alternative that presents itself." Thus, the satisficer limited and contained uncertainty by the use of a narrow range of simple heuristic devices to aid and expedite the decision-making process.

In Limerick et al.'s (1998) terms, Simon was firmly embedded in the Second Blueprint looking skeptically at the analytical excesses of the First Blueprint. Both these paradigms were rooted in a period of relatively low complexity in the managerial task environment but the Second Blueprint emerged out of the recognition of the relative uncertainty that comes from stakeholder diversity and consideration of human needs at work. It was, nonetheless, a paradigm that advocated reduction in, and containment of, felt uncertainty as critical to satisfaction, adjustment and performance. Consideration for people and negotiated agreement of superior task performance by collaborative action towards clear goals characterised its themes. These are reflected in Figure 2.1.1 above with the themes of "Towards Human Commitment" for the Human Relations Model and "Towards maximization of output" for the Rational Goal model.
By the time that the level of environmental and managerial complexity exploded in the last decades of the 20th Century, the two alternative paradigms of simple maximising and satisficing had fused into a single approach of operational integration and ‘Complexity Reduction’. They also were integrated, in Third Blueprint regimes, by elaborated, analytical pre-designs of structure and team process. In Figure 2.1.1, the Internal Process model represents this integration element. The resulting trinity was designed to ensure effective organisational and operational defence of current position in relatively stable conditions in the early development of the Third Blueprint. We will return to it in Section 3.1 in presenting an integrated model of change responsiveness.

As discussed in Section 1.1, the alternative response strategy to high levels of complexity and the discontinuity and paradox that accompany it, is to absorb and interact within the managerial task uncertainty that it generates. This ‘Complexity Absorption’ strategy (Ashmos, Duchon, & McDaniel, 2000) implies active information search and processing and interactive dialogue and bargaining in the judgment and decision making process. As Ashmos et al (2000: 578) note:

"From the view of complexity theory, organizations in which there are a large number of ties or connections, widely distributed, are more capable of variety in their behavior which in turn leads to adaptability. Without such variety, organizations will miss important data points, will oversimplify their view of what is happening in the environment, and will generally be unable to respond to high levels of variations among elements in the environment... When organizations choose managerial responses to complexity...(they) likely recognize multiple and emerging goals inside organizations and emphasize the importance of connections among parts of the system as a way of acknowledging and working out conflict that is created in part by the pursuit of multiple goals."

In Figure 2.1.1, this ‘Uncertainty Absorption’ style is represented by diagonal fusion of the Internal Process and Open Systems models. Ashmos et al (2000) found that, for an equally matched sample of Uncertainty Absorption and Uncertainty Reduction organisations in the health care industry, those using the former strategy delivered superior financial and performance outcomes. This paradigm is a new ‘maximiser’ in that it still seeks the perfect design for optimum operation but, as opposed to the imposed simplification and quantification that Simon railed against, it concedes that this perfection is an on-going challenge for human dialogue in interactive process. Thus, the use of the label; ‘Constructive Maximising’ in Table 2.1.1. This paradigm is at the heart of the strategic and intellectual elements of the Fourth Blueprint.
Thus the six super-paradigms presented above could be seen to constitute the universe of competing alternative perspectives in tension that occur to organisational members and experts alike when they reflect upon their views of effectiveness in organisations. If this was the first stage of research for Quinn and his colleagues, the second stage was to consider the environmental contexts and interactive dynamics that might militate in favour of some sectors of the space over others. These reflections led them to articulate a life cycle theory of organisational development. The reader requiring a more detailed exposition of the research program and conceptual development of Life Cycle theory is referred to Quinn & Cameron (1983) and Quinn and McGrath (1982). Figure 2.1.2 illustrates the key concepts of Life Cycle theory related directly to this thesis.

![Figure 2.1.2: Life Cycles of Successful Young Organisations - From Quinn (1988)](image)

The graphs of the four representative stages of the life cycle as presented in the figure were generated from research reported in Quinn & Cameron (1983). The key points to note from the figure include:

- The shifting focus on various sectors of the chart of values and behaviour as the organisation develops through 4 stages of the Life Cycle from Entrepreneurial startup to Maturity and Structural Elaboration;
- The use of the ‘ameobagram’ concept. That is, the dark internal boundary in a more or less circular shape designed to connote the ‘identity’ or character of the organisation by indicating the values and/or activities it emphasizes, as well as those it avoids, as it adjusts to each stage of development; and;
• The evolutionary trajectory, which is from energetic, exploratory 'birth' through building a vibrant community of innovative excellence to tightly coupled, somewhat sclerotic but well sustained and controlled maturity and, presumably, on towards decline and death. There is little sense of continual, almost daily, re-invention and re-emergence, such as suggested by the hypercompetitors. There is also nothing on the experience of creative destruction or what happens after catastrophic decline or failure.

This last point raises the issue of the implied determinism underlying the life cycle. Figure 2.1.2 has clear resonance for our discussion of the Fourth Blueprint and hypercompetitive organisational functioning in discontinuous environments. However, that resonance is distinctly positive for the first two stages and the movement from entrepreneurial inspiration to collective ownership and self-regulation but equally negative with regard to formalisation and external regulation. To the Fourth Blueprinter, it is just such imported and imposed constraint that leads to a failure of flexibility, responsiveness and initiative and, often, decline in a fast changing environment.

If the life cycle's progress inevitably leads to an undeniable and natural stage when formalisation is critically needed then the Fourth Blueprint and related networking designs may need rethinking. At best they would be simply temporary considerations for start-ups and creative renewals requiring a very limited 'specialised' work-force in short-term 'encampment' structures who work to expedite their own replacement with routine controllers as speedily as possible. As we shall see when we consider the Ecocycle analysis of Hurst below, there are good grounds and plentiful advocates for viewing natural life cycle analyses as relevant to the evolution of human systems.

Whatever the merits of the life cycle theory of organisational transition, it does raise the issue of alternative interpretations of the dynamics at play in the movement of values and identity within the CVF universe. Quinn (1988) hints at some alternative processes at work when he considers the case of a privately owned High-Tech firm that, by his analysis, was on the cusp of a transition from the collectivity stage to the formalisation stage. Quinn and his colleagues conducted a retreat with the top team in which they presented self-referent data for the executive team and assisted them to "articulate strategies that would help them through the formalization crisis." (Quinn, 1988: 64). Being "very excited and proud of our work", they were devastated to learn a few
months later of the demise of most of the top team. In seeking to better understand this outcome, Quinn (1988:64) stated:

"The formalization crisis had fully played itself out, and our help had made little difference. Why? Because we had impacted the group intellectually but not emotionally. (emphasis added) They could understand, repeat, and even espouse the ideas we gave them, but they could not practice these ideas. Emotionally the ideas around formalization were repugnant to these people. The values in the lower left of Figure 2.1.2. were "morally" wrong. They were a denial of everything the group believed in and found worthwhile."

Thus, critical, and relatively recalcitrant, stylistic issues were blocking what might otherwise have been seen, on a life-cycle analysis, to be a rationally required transition. This raises the possibility of intransigence within the value and personality frameworks - or 'mental models' - of key human actors as the central dynamic within the interplay of change and resistance, maturation and regression in organisational evolution. The third stage of research for Quinn and his colleagues is relevant here. In this stage they sought to "make explicit the understructure of leadership" by fleshing out competing styles of leadership and describing the dynamics of leader-follower relationships, influence patterns and change strategies consistent with the CVF model.

The first step was to chart the territory related to competing views of leadership styles. The essential elements of the model that resulted are presented in Figure 2.1.3. In constructing Figure 2.1.3, Quinn (1984) began with the more general Figure 2.1.1 and related the implications and content of each of its quadrants to the key leadership debates extant at the time. For example, he notes that in the Handbook of Leadership (Bass, 1981) five chapters were devoted to one each of the following dichotomies:

- democratic versus autocratic;
- participative versus directive;
- relations versus task;
- consideration versus initiation, and;
- laissez-faire versus motivation to manage.

Quinn (1984: 14) claimed that "the phenomenon of leadership tends to be perceived around the core dimensions in Figure (2.1.1)." He then proceeded to demonstrate his claim by an extensive analysis of each of the key elements of the figure in reference to the theoretical and research literature around the five dichotomies listed. The reader needing more of that detailed analysis is referred to Quinn (1984: 15-26).
For our purposes, the content and structure of Figure 2.1.3 will provide a conceptual map of the mental models and behavioural styles most appropriate to the Fourth Blueprint. In that regard, it is sufficient at this stage to note that:

- The ‘universe’ of leadership styles as indicated in Figure 2.1.3 is, again, properly supplemented and clarified by the addition of the two styles presented in Table 2.1.2 below representing the coupling of diagonal quadrants. The general logic for these combinations is outlined above in relation to Table 2.1.1 and the resulting styles retain resonance within the literature on the micro-processes of leadership – on which we shall focus more directly in Section 2.1.3;

- The total character of the mapped ‘universe’ remains, as for Figure 2.1.1, a mass of tensions and contentions, of positive value affirmations and their shadow opposites and, in various of the potential ‘couplings’, will necessarily invoke paradox and the need for transcendence in the reconciliation of opposites; and,

- Quinn intends the spatial equivalence of the mapping in Figures 2.1.1, 2.1.2 and 2.1.3 to imply ‘congruence’ or conceptual fit. That is, these leadership styles in their specific quadrants should be seen as differentially relevant to the various amoebagram patterns for each life cycle stage in Figure 2.1.2, and the general pursuit of alternative views of organisational effectiveness as suggested in Figure 2.1.1.
Table 2.1.2  Suggested content and titles of the ‘diagonal’ Leadership styles derived from Quinn, (1984)

<table>
<thead>
<tr>
<th>Combining:</th>
<th>Towards:</th>
<th>Making a Paradigm of:</th>
<th>Representing:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Systems</td>
<td>A conceptual, visionary style”</td>
<td>Innovative, Intellectual leadership</td>
<td>An open and collegial relationship with followers</td>
</tr>
<tr>
<td>and Internal</td>
<td></td>
<td></td>
<td>– Shaping Ideas</td>
</tr>
<tr>
<td>Process</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human Relations and</td>
<td>A grounded, operational style”</td>
<td>Team Performance Leadership</td>
<td>A focused &amp; paternalistic relationship with followers</td>
</tr>
<tr>
<td>Rational Goal</td>
<td></td>
<td></td>
<td>– Building Outcomes</td>
</tr>
</tbody>
</table>

The logic that underlies Figure 2.1.4, and the construction of Table 2.1.3, is the same as that for Figure 2.1.1/Table 2.1.1 and Figure 2.1.3/Table 2.1.2. The content focus on the patterns of influence in each of the quadrants and the generic change strategy choices outlined in Figure 2.1.4/Table 2.1.3 is central to key distinctions between the Fourth Blueprint and earlier paradigms in Limerick et al’s (1998) classification.

Figure 2.1.4: A Competing Values Framework of influence patterns and change strategies

We will refer to that content in Section 2.1.4 when we address the question of the appropriate style(s) of leadership and influence in the Fourth Blueprint environment. To continue the conceptual mapping processes for the thesis as a whole, we now need to build a map that is consistent with the content and intent of the CVF. However, it should also chart consistently against the dimensions that underpin the conceptual maps of the match between the environment and the various blueprints as, for example, we encountered in Figure 1.2.2. Figure 2.1.5 provides such a mapping but rather than focus on the variables considered above, it maps the four ‘cultures’ that Quinn suggested in fusing the various frameworks together (Quinn & McGrath, 1985).
Table 2.1.3  Suggested content and titles of the diagonal ‘influence’ styles derived from Quinn (1984)

<table>
<thead>
<tr>
<th>Combining:</th>
<th>Towards:</th>
<th>Making a Paradigm of:</th>
<th>Representing:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Systems and Internal</td>
<td>The use of vision and intellect</td>
<td>Stimulation &amp; Engagement Strategies</td>
<td>A higher order needs motivational</td>
</tr>
<tr>
<td>Process</td>
<td></td>
<td></td>
<td>strategy</td>
</tr>
<tr>
<td>Human Relations and Rational</td>
<td>the use of clarity and team coherence</td>
<td>Inclusion &amp; Containment Strategies</td>
<td>A safety and security needs motivational</td>
</tr>
<tr>
<td>Goal</td>
<td></td>
<td></td>
<td>strategy</td>
</tr>
</tbody>
</table>

This is done to better illustrate the mental models that Quinn sees as underlying the logical consistency across the other behavioural domains he charted. In his analysis, he refers to these mental models as Information Processing (IP) styles and suggests a single IP listed for each quadrant in Figure 2.1.5. Each of these IP’s is matched by an embedded “theory of effectiveness” also summarised in the quadrant. Quinn & McGrath (1985: 325) explain the arrow leading from the IP to the theory of effectiveness as follows:

“In rational cultures, individual information processing is assumed to be a means to the end of improved performance. In a developmental culture, intuitive information processing is assumed to be a means to the end of revitalization. In the consensual culture, collective information processing is assumed to be a means to the end of cohesion. In the hierarchical culture, formal information processing is assumed to be a means to the end of continuity.”

Hence, the culture is summarised by the cognitive style underpinning it and the instrumental and terminal values characterising it. This is the “understructure of
leadership" which we highlighted in the earlier quote from Quinn (1984). Quinn and McGrath (1985) used their model to illustrate the concept of "congruence" or fit between environments, cultures and leadership style. This is presented in Table 2.1.4.

**Table 2.1.4 Four Types of Fit or Congruence (from Quinn and McGrath, 1985)**

<table>
<thead>
<tr>
<th>Environmental Condition</th>
<th>Organisational Culture and Form</th>
<th>Leadership Style</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Uncertainty - High Intensity</td>
<td>Developmental culture (adhocracy)</td>
<td>Idealistic prime mover</td>
</tr>
<tr>
<td>High Intensity - Low Uncertainty</td>
<td>Rational culture (market)</td>
<td>Rational achiever</td>
</tr>
<tr>
<td>Low Uncertainty - Low Intensity</td>
<td>Hierarchical culture (hierarchy)</td>
<td>Empirical expert</td>
</tr>
<tr>
<td>Low intensity - High Uncertainty</td>
<td>Consensual culture (clan)</td>
<td>Existential team builder</td>
</tr>
</tbody>
</table>

While the titles of the four organisational cultures in Table 2.1.4 don’t correspond precisely to any label in the original CVF presented in Figure 2.1.1, the reader should have no difficulty matching each title to a quadrant in that figure. This is equally applicable to the leadership style titles in Table 2.1.4 and the Leadership framework presented in Figure 2.1.3. However, apart from this, we still have a spatial mismatch of the quadrants in all those earlier figures and Figure 2.1.5. This brings up the issue of charting the Quinn model (or any other we address) in a fashion consistent with the underlying dimensions we are employing in our other areas of conceptual mapping.

Thus the reader will recall that the horizontal dimension in Figure 1.2.1, where we located the Four Blueprints, charted uncertainty from low on the left to high on the right. I have equated this dimension with Quinn’s “Flexibility versus Control” dimension, on the vertical axis in Figure 2.1.1. This modification in itself has the effect of turning the chart on its side. Secondly, in Figure 2.1.1, the horizontal dimension was from internal focus to external focus whereas our continuity and comparability criteria require a second dimension related to environmental simplicity (at the bottom of Figure 1.2.1 and now Figure 2.1.5) versus complexity (at the top in both figures). On this dimension, the Internal Process and Open Systems models are the relatively cognitively complex models while the Human Relations and Rational Goal models are relatively simple. Hence the rearranged placement of the quadrants in Figure 2.1.5. However, we
should note that all six competing styles, as presented in Figure 2.1.1 and Table 2.1.1, remain embedded in Figure 2.1.5. The two diagonally-fused styles in Figure 2.1.5 are now what were the paradigms of “internal coordination” and “external impact” from Figure 2.1.1 and the Constructive Maximising and Goal-Directed Satisficing paradigms from Table 2.1.1 now reside at the top and bottom of Figure 2.1.5 respectively.

Concepts of congruence and environmental fit and the contingency theories that rested upon them were closely connected with the Third Blueprint of management. As such they encompassed notions of uncertainty and complexity but fell short of recognition of the transcendence and transformation required within the paradoxical world of discontinuity. However, Quinn & McGrath (1985: 331) recognise the critical departure from the standard continuous extrapolation models extant at that time embodied in concepts such as emergence and transcendence. As they state: “At the psychological level, it is the capacity to engage paradox in a Janusian (the God that ‘looked both ways at once’) fashion to transcend one’s own schismogenic tendencies, to see the unities in oppositions, and to move above and reframe the contradictions.”

Thus they cautioned against both simple linear thinking and the complementary thinking fault of totally rejecting linear thinking in favour of the ‘newly discovered’ concepts of transformation and transcendence as though they had now become the universal essence of excellence. We will return to this theme in Section 3.1.3 when we construct an integrative model of the appropriate styles for the Fourth Blueprint and specifically focus on the issue of balance amidst diversity. For now, we should revisit the issues of organisational development over time, touched upon in the Life Cycle model of Quinn and his colleagues and clarify the macro-logic that drives the theories of relatively deterministic bio-dynamic development over time. To do this we will consider the organisational ecocycle theory proposed by Hurst (1995)

2.1.2 The Ecocycle in Human Organisations: Leading Performance and Learning Organisations.

"...in their small scale informal beginnings, many modern organizations have social dynamics rather like those of the hunters (nomads of pre-history). The emphasis in such organizations is on learning of all kinds – learning to master recalcitrant technologies, learning to respond to divergent customer needs, learning to develop sources of capital required by young business, and so on. The organizations that survive, however, will sooner or later start to look more and more like herders (in village encampments). The emphasis
will move from learning to performance, from the development of routines to the repetition of routines. The most extreme statement of this view is to say that young businesses begin their lives as informal learning organizations, but if successful, they become formal performance organizations."

Hurst (1995: 32-33)

In addressing the role of crisis in precipitating change and renewal in organizations, Hurst (1995) used a general eco-cycle model of change to underpin his analysis, emphasizing the fundamentally bio-social (as opposed to mechanical) nature of processes of change and development within human institutions. To illustrate the natural roots of the model, Hurst (1995) adapted a basic eco-cycle model from Holling (1987). This model is presented in Figure 2.1.6 below.

![Figure 2.1.6: The Birth, Growth, Destruction, and Renewal of a Forest: The Ecocycle Metaphor - adapted from Hurst (1995)](image)

The first thing to notice is the sign for ‘Infinity’ on its side. As Hurst notes, this is to connote the continuous and infinite nature of change. Not only does the ecology cycle; it recycles! Thus we could ‘start anywhere’ but the numbers assigned to each of the four quadrants are a convenience to aid the description of the ebb and flow of the ecocycle. They do not imply that the world starts at Zone 1 and ends at Zone 4. So we start our description in Zone 1 – ‘Exploitation’ – which represents a relatively resource-rich, but open, environment with many diverse but relatively small organisms competing to acquire those resources in an exploratory, ‘emergent’ manner. Many of these organisms are what Hurst calls ‘hunters’ – species that are highly productive and mobile, producing large quantities of offspring. At this stage, available space allows diverse organisms substantial growth without exhausting resources or ‘bumping into each other’. 
However, as they grow, some species will flourish and others will expire. Then, progressively, the open space will begin to get crowded and organisms will clash and compete for resources. Also, some will begin to be more tightly interconnected in an emerging pattern of complementary relationships. This progresses into Zone 2, as an open ecology becomes a ‘conserved’ forest. In this environment, large mature structures (trees) dominate the use of scarce resources. They also provide sub-cultural conditions that support smaller and more specialised organisms in what is now a complex and tightly connected web. The ecology is now what Hurst (1995:99) calls ‘a delayed-returns’ economy in which significant and ongoing investment is required to generate a return. This leads to the emergence of large-scale hierarchical relationships and limited ways in which resources can flow through the system. As Hurst (1995:99) notes:

“The system will be dominated by large hierarchical structures that control a set of niches beneath them, allowing a variety of specialists to flourish. Because of the great length of the growth cycle of trees, the trees and the niches they shield will appear to be relatively stable to human observers... (However,) it is precisely the homogeneity of such systems in age, species type, and their specialized adaptation to protected niches that renders them brittle and vulnerable to catastrophe.”

In other words, the focusing process that is conservation leads to a significant decrease in organic diversity and the alternative response repertoires it provides. In the environment for which it was designed, high level long-term continuous performance is possible as a result of the specialised focus and investment. In alternative environments, flexible responsiveness is no longer available. Enter the metaphorical (or actual) ‘forest fire’ or plague from a new insect species or any other catastrophic discontinuity. Hurst (1995:100) makes the point that “ideally, a healthy forest should consist of a mosaic of patches that are located all over the ecycle”. This is not so in the conserved forest and the longer the focused strategy of conservation concentrates systems and resources, the more catastrophic the destructive event that finally arises is likely to be.

This brings us to Zone 3 – “Creative Destruction”. As Hurst notes, rarely is the system totally destroyed. Rather, it is partially destroyed, in order to be renewed. New processes and organisms invade the ecosystem in ways to which its age, specialisation, and loss of resilience have rendered it vulnerable. In this process large scale structures are particularly vulnerable. As they disintegrate, they are broken down into much smaller elements dramatically reducing organisational scale. In its nature and inherent
processes, Zone 3 closely equates the world as articulated by the complexity theorists and Hypercompetitors we considered in Section 1.1. It releases the conditions of “far-from-equilibrium” functioning more typical of non-linear systems than of the linear regimes that pertained to the moves towards conservation.

In such circumstances, the system imperative returns to loose-coupling and energetic expenditure of effort in search across the wide and open ecology that is created by the demise of the old regime. This is the territory that Hurst (1995) classified Zone 4: Renewal. He describes this stage of the ecocycle as follows (Hurst, 1995: 101-102):

*The fourth phase in the evolution of an ecosystem is the reconception of the system... (A)fter the structural disintegration of phase 3, it is often very difficult to distinguish the organization from ‘its’ environment: the boundary that separates and defines them has disappeared. (Emphasis in original)... (T)he creative potential of the ecosystem has been vastly increased. Resources are no longer concentrated in specific structures, they are widely scattered... The forest is once again a hunters environment with a high carrying capacity, and it favors fast growth.*

Hurst (1995: 102-103) notes these key features of the ecocycle model:

- **Change is continuous**: as an aspect of the system but the pace and nature of it vary greatly in different phases of the cycle from smooth and linear to rapid and non-linear;
- **Renewal requires destruction**: in order to open up space and release resources for creative reconception;
- **The ecocycle is consistent with, but also different from other perspectives on change**: this difference particularly applies to the dimensions and shape of the curve (as a fully recursive system) suggesting a different but complementary pair of macro-processes in tension with each other; and
- **The interplay between Emergence and Constraint**: as the dynamic that drives and maintains the system is central to ecocycle thinking.

In order to clarify and elaborate the implications of this model for strategic and organisational analysis, Hurst (1995) then constructed a variant of the basic Eco-cycle model designed to take account of the conscious and self-referent nature of human behaviour. This model is presented in Figure 2.1.7.
The first and third vertical rectangles in Figure 2.1.7 enclose the processes described by Hurst in the basic Eco-cycle model. The first rectangle encloses quadrants 1 and 4 from Figure 2.1.6 and thus refers to the loosely coupled segment of the cycle. Hence the use of the heading “Emergent Action”. The third rectangle encases quadrants 2 and 3 from the basic model and thus refers to the tightly coupled processes described above. Thus, the title: “Constrained Action”. However, Hurst (1995:103) suggests; “the modified eco-cycle applied to human organizations needs to have the capacity for conscious, rational action (emphasis added) added to the emergent and constrained behaviors.”

The model maintains the general dynamic presented in Figure 2.1.6 but adds two direct categories of human intervention (labeled 1: Strategic Management and 5: Charismatic Leadership) and two ‘transition points’ (labeled 3: Crisis and 7: Choice). Before proceeding, we need to register a generically important characteristic of Figure 2.1.7. That is the ‘split’ sign of infinity with a firm, solid line heading from lower left to upper right and a dotted line taking over at the “Crisis” point and heading from the lower right to the upper left of the picture. Hurst labels the first line as the “Performance Loop” and the second line as the “Learning Loop”. The general intent of this distinction is made explicit in the quote that initiated this discussion on Eco-cycle models.

At a more specific level, Hurst then concentrates on the two contrasting modes of ‘rational action’ shown in the modified model. Hurst (1995: 104) notes that these two forms occur as the two alternative curves ‘traverse the area where rational action is possible’. He then makes the distinction between them that appears in the quote that initiated Section 2.1. In that, we can clearly discern our two broadly opposing and
complementary “mental models” governing the two generic phases of the infinitely recursive eco-cycle. Hurst (1986) had earlier characterised the Strategic Management mentality as limited to the ‘planning’, ‘acting’ and ‘evaluative’ phases of strategic development and lacking any essence of generative, affective or visionary behavior. Thus, the mentality driving the “Performance Loop” is a managerial mindset - from the classic distinction by Zaleznik (1990) between leaders and managers. It is also closely aligned with the values summarised in the bottom two quadrants of Quinn’s CVF model (see Figure 2.1.1): The Internal Process and Rational Goal models.

Conversely, Hurst (1995) uses the label “Charismatic Leadership” for the mental set at the heart of the “Learning Loop”. His intended character for this style is made fairly clear in the quote that initiated Section 2.1 above - especially the last sentence. This is the epitome of Zaleznik’s (1990) ‘Leader’ and Burns’ (1978) and Bass’ (1990) ‘Transformational Leader’. It also clearly evokes an emphasis on the values contained in the upper two quadrants of Quinn’s CVF model (see Figure 2.1.1): The Human Relations and Open Systems models.

However, Hurst seems to feel the same uneasiness in his calling upon charismatic leadership, as did Limerick et al (1998) in invoking transformational leadership. The equivocation rests, of course, in the checkered history of charismatic leadership down the centuries. Hurst’s response to these concerns is to note the context into which it is advocated that charismatic leadership be injected – that is; a society/organisation in confusion after a crisis, pre-existing processes of conflict resolution and integrative maintenance have broken down and long-held values are being challenged and transformed. In this context, he seeks to specify what types of charismatic leader he does and doesn’t want. Thus, Hurst (1995:147-148 - emphasis added) states:

“For creativity during the renewal cycle of an organization, the type of charismatic leadership required is egalitarian, collective and nonexploitive. This is the form of charismatic leadership exemplified by (leaders) like Mahatma Gandhi, Nelson Mandela and Mother Teresa...(rather than Hitler, Stalin and Mao)... We need to understand the ‘light’ side of charisma if we are to avoid (its) dark (side). A clue to this understanding is one possible derivation of the word lead from the latin, lira, meaning a ‘furrow’. This evokes the image of a leader creating pathways that direct natural processes to flow along them. Leadership in this metaphor is the creation of conditions under which self-organization or learning can occur.”
This sounds much like Limerick et al's (1998) sketch of the collaborative individual, as outlined in Section 1.2.3, which seems only proper in Hurst's model, in that the Charismatic Leader is charged with the reinvigoration of broadly distributed, generative learning processes rather than the reinstatement of focused performance outcomes. The driven charismatic with his/her own dedicated and sanctified answers and an unwillingness or inability to explore complexity is exactly the wrong helmsman for that open search for the provocative question in a world with new rules.

Hurst's Organizational Eco-cycle model helps us to distill the essentials of the two mental models at work in these oppositional processes. We will start with the Performance Loop, which Hurst (1995: 104) acknowledges is “identical to the conventional life cycle.” As can be seen in Figure 2.1.7, the Performance Loop commences with the focused entrepreneurial action that follows a choice to pursue one developmental option from the many under previous exploration. Conditional upon the initial success of the chosen option (represented by a rising, growth arrow), the performance requirement is to clarify and focus the targets and goals that will drive activity and evaluation. The purpose is to maximise efficient repetition of key routines and ensure the effective positioning of the product/market mix within the tight coupling of the developing micro-ecology of the soon to be conserved industrial forest within which the enterprise is seeking a dominant position.

The essential focus of the Performance Loop mindset, then, is to ensure precise congruence or fit within a highly constrained but successfully balanced set of forces such as one would encounter in a large, internally balanced and successfully conserved rain forest. That is designed coherence against external constraints. This then shapes the analytical, goal-directed and control-oriented character of the Strategic Management element of the Performance Loop. Thus we have constraint defining and delimiting excellence. A tightly specified and fully balanced hierarchy of roles and processes is essential to the effective delivery of these profiles. As Hurst (1995: 43) states:

“Hierarchy (not to be confused with bureaucracy) is the essential accompaniment to the survival of any complex system. It reflects the progressive mastery and reduction to subconscious routines of the multitude of activities that have to happen automatically every day if the organization is to stay in business. If these activities were not buried subconsciously, then the management would be able to do nothing except fight fires. In short, in complex systems, hierarchy is history, and no successful modern organization can avoid accumulating it.”
Of course, a constrained environment has only so much room for growth. Hence the familiar flattening of the life cycle at maturity followed, in due course, by decline as the hegemony of the tightly coupled dominant network loses traction in a changing environment and alternative organisms invade a conserved ecology that has no developed defences against the unfamiliar predators. This precipitates the generic "Crisis Point" as illustrated as Point 3 in Figure 2.1.7. At this stage, the very reasons for the earlier development and refinement of the hierarchical system become the source of its weakness and prime threat to survival of its host system. The more precise its fit and the more focused and potent the internal cultural alignment, the more likely it will lead to the rigidity and tardiness of its forward sensing, exploratory search and responsive adjustment in the newly hostile and unfamiliar environmental conditions.

This leads us to the Learning Loop. As we can see from Figure 2.1.7, it commences with a downward plunge into confusion from which it only recovers as an emerging sense of exploratory leadership arrives with the advent of rational human intervention of a fundamentally different style. Whereas, the mental model for the Performance Loop was directed towards defined and constrained outcomes, the Learning Loop requires a mental model that encourages wide exploration in search of emergent patterns. This gives us further clues as to our type of Charismatic leader. It is a leadership of wisdom not knowledge, of journeys not destinations, of stories not plans and of questions not answers. It is about stimulating not accounting, discovering not conquering and creativity as a way of being not a skill for doing. The essential focus of the learning mindset is discovering and clarifying internal values through emergence of pattern.

Performance Warriors of the Strategic Management era often take charge of the defence against the fires of creative destruction and the rebuilding of the old tightly knit edifice. However, despite their best hopes, this challenge is often essentially a journey through the wilderness in search of a fundamentally different harmonic. Their most fearsome and insurmountable enemy is the old mindset carried at their core. In its place needs to bc patience, tolerance, playfulness, empowerment of others – especially others who seem ‘strange in their ways’ – and noticing emergent patterns rather than computing pre-designed trajectories. We also should understand that this requires giving up key elements of the old mentality before the new one can emerge not simply adding situationally convenient elements to the old repertoire. Hurst (1995: 49) puts it this way:
"Although learning evolves into performance, at the extremes, the two processes tend to preclude each other. The dynamics of the learning process hamper performance by discouraging the establishment of routine, whereas the demands of performance inhibit learning by institutionalizing routine. The locus of control is different in each case. The learning organization is internally controlled during its process of emergence. It is pulled by the visions and shared sense of mission of its founders. The performance organization, on the other hand, becomes increasingly externally controlled – constrained – as it becomes successful."

We should also remember that Stage 6: Creative Networking is an unavoidable element of the learning journey. Opportunities for deep insight through exploratory learning occur through open and active dialogue and interaction with autonomous and often quite diverse elements of the new environment. Thus, the old tendency to regard knowledge as proprietary and inviolate; a commodity to be hoarded and protected, must be discarded. It should be replaced by a generative search for insight that can be shared in creating an emergent understanding through the varying lenses of a disparate network of autonomous colleagues in learning. So it seems clear that issues of personality and cognitive style might move from being potential distractions and perturbations in the Performance Loop to becoming central creative or regressive mechanisms in the Learning Loop. We will examine these dynamics more fully in Section 2.2 below.

Before moving to more micro views of leadership dynamics, we will continue our progressive conceptual mapping. This is done in Figure 2.1.8 below. In that figure, the four CVF cultures and their related leadership skills have been placed on the Environmental Vector map that was presented in Figure 1.1.2. Also in Figure 2.1.8 are the two opposing mental models, of the Performance Loop and the Learning Loop.

Further, there is a thick dotted line running from the upper left to the lower right of the figure. As Hurst’s quote above concedies, learning and performance can never be totally separated. However, the line is there to remind us that, at the extreme, they are antagonistic mental models and operating styles. It highlights the insight that, as the Eco-cycle turns rapidly at the point of crisis and creative destruction, the dominant stylistic bias needs to move rapidly from well into the lower left to deep into the upper right of the mental terrain being charted. Equally, as the Choice point at 7 in Figure 2.1.7 is passed, the mental model of the Learning Loop will be challenged by the need to develop focus and precision around externally set goals. This pressure will escalate quickly as the organisation seeks to exploit its new product breakthrough and then
maximise the returns to scale that can be derived from the new conserved ecology in which it seeks to become a dominant structure. This analysis certainly lends further clarity to Quinn's point, discussed above, relating to the difficulty faced by executives steeped in the collective mental model when the time came to accept formalisation.

![Diagram of Learning Loop and CVF Models](image)

However, we are still left with a question mark over the macro-vision of the Fourth Blueprinter. The Eco-cycle model suggests an infinite recursion through the stages outlined in Figure 2.1.7. And Hurst (1995: 115) states that, relative to the time spent in the Learning Loop of the eco-cycle, the Performance Loop normally is a much more extended experience. In contrast, the Fourth Blueprinter sees an alternative world of infinite exploration and generativity much as we might find in Stages 4 to 6 of Figure 2.1.7. How might we resolve these two competing views?

One resolution would be to recognise the move to the "Knowledge Economy" from the "Mass Economy" – or the Modern to the Post-Modern - as a much more profound and pervasive environmental disruption than any other in recent history. This perspective would suggest the period of confusion and consequent learning focus that follows such "Creative Destruction" of the old regime might be far more challenging and extensive in time than any of the more micro eulogies of the specialised patches in the old socio-industrial ecology. This interpretation would still expect, in the medium term, a new "dominant design" (see e.g.: Tushman et al., 1997) for the emerging ecology to take hold and drive a new Performance Loop with its attendant Strategic Management mentality. It would, nonetheless, grant an extended period of hegemony to the learning culture as we explore a fundamental and system-wide re-education and re-orientation.
The alternative interpretation is more radical. Consistent with the analysis in Section 1.1 it could be argued that new technologies have so altered the relationship between man, materials and work that the nature of human activity needs to transcend the anchors previously put upon it by the constraints of limited resources and finite space. Thus the impact of the positive feedback effects ‘on the edge of chaos’ has become so powerful in relation to the negative feedback impacts, that our managerial classes are unlikely to return to the quiet, focus and predictability of the Performance Loop, which will be:

- **Relatively Shorter:** in its total transit and also in comparison to the generative Learning Loop; and
- **Mainly automated:** and thus only an element in human work in its generative design and creative evaluation and redesign.

This would be held to apply generally but most particularly to strategic and managerial roles. In essence, this latter interpretation sees routinization as fully automated and, in that event, humans released from the constraints of compliance into the, quite possibly more terrifying and challenging, realities of uncertainty, complexity, collaborative generativity and emergent coherence. Hence we see the shape of the two alternative movements we canvassed in Chapter 1. In the first, the Hypercompetitive Warriors would recognise the need for novelty and creativity by committing us to a frenetic, time driven and goal-oriented serial destruction of each performance regime almost before it had time to build its encampment. This is really the old mental model driving performance into learning, but more particularly turning learning into a performance!

Alternatively, the Fourth Blueprinters would seek to entice us on a long, collectively supported and organically developmental journey through uncertainty in search of transcendent to a higher level of functioning. For them, the future of human endeavour in a discontinuous world depends on learning becoming the essence of all performance. Collaborative construction of an alternative reality is the core challenge of the future. Its production and delivery functions are approaching automation and there will thus be less space within the new ecology for reproductive routine to be delivered by humans.

In one sense, these two alternative perspectives provide an important distinction, which will inform our interpretative analysis in the balance of this thesis. In another sense, which interpretation is more viable is an emergent reality, currently unknowable and, in any case, is not critical to our research. In either interpretation, there is a critical current
need, which is likely to remain indefinitely, for the emergent ‘learning’ mental set to be in the ascendancy within our managerial classes and for us to understand its positive contribution to our management of discontinuity and uncertainty. We also need to appreciate the prevalence and potency of the regressive ‘performance’ mentality as a continuing presence within the Learning Loop, and develop processes and institutions of learning to offset its more pernicious effects on open and collaborative learning.

These questions imply the relevance of personality and cognitive style as a critical determinant of managerial competence and adjustment in the 21st Century. In the Performance Loop, the clear and tightly linked roles, structures and focus delimit the possible impact of individual differences on organisational and group performance and adjustment. However, in the ambiguous, discontinuous environment where learning is a generative product of collaborative dialogue and creative reflection, personal style and its creative merging within group process through dialogue, is a vital driver of strategic development and managerial effectiveness. We will return to this topic in Section 2.2.

2.1.3 Static and dynamic models of micro-leadership: Congruent and Transforming Leadership Style

“To prepare for post-industrial leadership in the twenty-first century, we must transcend the circular journey of leadership studies of the twentieth century which is rooted in the industrial paradigm of organizations. The post-industrial era of knowledge workers requires a group-based, interactive framework of leadership.”

Magliocca & Christakis (2001: 259)

The concept of the ‘leader as hero’ seems deeply embedded in the western psyche, especially in countries such as Australia and the U.S. that spent their formative years on the frontiers of western colonial expansion. Central to the concept is an action-oriented focus on the individual leader as initiator of pro-active or remedial intervention in an often-harsh world in crisis. This image was softened and blurred a little in the 1950’s and 60’s as the Western world experienced an unprecedented level of stability and industrial and trading concentration. During this period an extensive literature and practice developed around the micro-processes of team leadership. The resultant situational and contingency theories of leadership prescribed more emphasis on task and structure and less on people, or vice versa, contingent upon a limited set of variables including the willingness, ability and past experience of the leader’s followers. Such
theories were supported by policies designed to ensure high levels of extrinsic rewards and career security for compliant and committed followers. In Limerick et al.'s (1998) terms, these theories were among the finest flowers of the Third Blueprint ethos.

The leader's role was now to fine-tune his behaviour to simulate a variety of styles ranging from a 'mildly civilised Genghis Khan' to a 'rampant spiritual guru', depending on a sophisticated understanding of the level of enthusiasm, competence and task clarity of his subordinates. One concern this elicited was the behavioural, cognitive and temperamental flexibility (or lack of it) among the 'organisation men' of the 1960's. The assumption was that the goals were known in advance and non-controversial and the job of the leader was simply to galvanise and audit team implementation. The disturbed and reactive 1980's and speculative and turbulent 1990's put paid to such pre-programmed views of control. Enter James MacGregor Burns (1978) with his distinction between the transactional and transformational leader. According to Bass (1990), the following elements comprise transformational leadership:

- Charisma and inspiration (highly correlated with each other in most studies so far)
- Intellectual stimulation, and
- Individualised consideration (which, according to Bass & Avolio (1993); is more focused on enabling and supporting personal development and growth than on the more instrumental issues suggested by the old "consideration for people" situational variable).

The transformational leader was 'likely to be more proactive than reactive, more innovative in ideas and less inhibited in ideational search for solutions' (Bass, 1985b: 38). S/he was thus an active reframer for a world in flux who would seek to provide both direction and inspiration for followers. A sense of personal presence and visionary zeal provided the motive force behind this leader's impact. As this shift in emphasis was gaining momentum, various theorists and practitioners attempted to contribute to the building of theoretical bridges and conceptual maps linking and contrasting the old and new paradigms. One such was Nicholls (1986), whose analysis of 'Congruent and Transformational' leadership, was developed in an article attacking the consistency and completeness of the situational leadership theory of Hershey and Blanchard (1969). The substance of that attack is not critical here. However, the model he built to illustrate his
modified ‘Congruent’ leadership theory demonstrates the contrasting dynamics of the old and new paradigms. The model is presented in Figure 2.1.9.

The figure maps leadership behaviour across two continua related to the leader’s level of ‘activity in task’ and focus on the ‘reshaping of relationships’. On the lower left of the figure both of those leadership behaviours are high. At the upper right, both are low. According to Nicholls, the journey to group maturity and effectiveness from the initial formation is from lower left to upper right. To underline this, the thick, central arrow that follows that path encases Tannenbaum and Schmidt’s (1958) classic continuum from direction to trust. The ‘Visionary Enabler’ role at the top right, and the trust which must underpin it, is both a destination for the journey and a necessary precondition within operating teams for any networking, loosely coupled relationship to develop.

The two thinner arrows with detours (to the upper left or the lower right) in our figure are Nicholls’ way of addressing ‘imbalances in ability and willingness’. These two qualities of followers had become almost mystical qualities of the situation, to which the leader was required to sensitively respond. For Nicholls, the formation and maturation of a new team under coherent leadership should normally be accompanied by steady increases in both ability and willingness. However, he was prepared to concede that situations might occasionally waylay this orderly progress.

Thus, the detour up and to the left towards the ‘Instructor’ role indicates a need to delay evacuation of the active task leadership role to attend to the development of new skills. This need may be due to a change in technology, varied work assignments or the
introduction of alternative stakeholder expectations of the team. Equally, the detour
down and to the right would be occasioned by the perceived need to actively
reconstruct/renegotiate team roles and relationships pursuant to, say, a change in team
membership or an outbreak of an interpersonal conflict. Nicholls (1986: 46) uses the
term ‘Enforcer’ to “emphasise the fact that congruent leadership is not a soft option. If
circumstances warrant, a firm stance can be taken – even though the expectation is for
progress towards trust and reduced activity (by the leader) as the group develops.”

So the model outlined in Figure 2.1.9 operates at 2 levels. The logic of the ‘Congruent’
(or transactional) model is as stated above. In common with situational leadership, this
model charts the developmental journey of the team from the point of formation where
a Controller style is proposed to the ultimate destination where a Visionary Enabler
style of leadership sits as the beacon for mature, empowered teams. As Nicholls (1986:
50) comments: “The search for a congruent style at the transactional level is inward
looking, accepting the status quo and current objectives. It is often called managerial,
as opposed to inspirational or true leadership.” The second level of analysis focuses
attention on the demands of transformational leadership and, in particular, the content
and role complements for the Visionary Enabler. Nicholls (1986: 50) sees this role as
“the target at the transactional level and the foundation at the transformational level”.

Figure 2.1.10 more fully illustrates the detailed role content options that, for Nicholls,
characterise, or contrast with, transformational leadership. Most critically, it adds the
primary role complements and antagonists for the Visionary Enabler role. The
Visionary Enabler is ‘concerned to create a sense of mission which will give the team a
vision of what their job is about…beyond the narrow confines of daily routine (putting)
work into a context of meaning and value” (Nicholls, 1986: 49). This has themes
reminiscent of Bass’s ‘inspirational’ role mentioned above. It is also consistent with
Hurst’s concept of Charismatic Leadership in the Learning Loop although its
relationship to classic charisma is less clear. The two complementary styles are
Contributor and Catalyst. The Contributor is very low in “Reshaping of Relationships”
but moderate in “Activity in Task. This is the classic ‘light on the hill’ role and, in
Bass’s formulation mentioned above, would seem close to the Intellectual Stimulation.
Likewise, the Catalyst with their moderate involvement in relationship is consistent
with the Bass & Avolio (1990) specification for Individualised Consideration.
The two anchor, or antagonistic, roles of ‘Knowall’ and ‘Ringmaster’ add further clarity to the nature of Transformational Leadership. While the Contributor can be seen as the ‘wise and stimulating’ Instructor, the Knowall is the ‘insecure and inhibiting’ Trainer. Or while the Catalyst can be seen as the ‘avuncular and aspirational’ broker, the Ringmaster is the ‘interfering and limiting’ Sergeant Major. Nicholls refers to them as the two faces of ‘overleading’. The Knowall is the newly promoted insecure technician who finds ‘the need to rely on others to get things done uncomfortable’ (Nicholls, 1986:49). So he seeks to control all technical and functional decisions and in doing so kills the creativity, flexibility and initiative within the team. The Knowall eventually runs out of currency for his expertise. He is then in danger of seeking comfort in the role of Ringmaster who ‘makes every aspect of interpersonal relations his direct concern, actively engaged in detecting tensions and resolving conflicts, so that he feels the team’s success is due to his efforts and skill’ (Nicholls, 1986: 49).

In the Congruent Leadership analysis (in Figure 2.1.9), the leadership theory charted a journey to group maturity requiring a flexibility in the leader’s cognitive, emotional and behavioural repertoire that could take him from an effective Controller to a relaxed and inspirational Enabler. As noted, the breadth of that repertoire challenges our confidence in leaders, past or future, to be able to deliver the script. This concern was certainly central to Fred Feidler’s (1967) view that his Contingency model of leadership behaviour was more related to selection than development issues. This will remain an issue when we consider the relevance of psychological type and related schema to the effectiveness and adjustment of inhabitants of the new organisation later in the paper.
Equally, we need to be conscious of the issues of personality and cognitive repertoire when the Nicholls analysis is viewed as a set of prescriptions (and proscriptions) for the proper rendition of transformational leadership roles and processes (as in Figure 2.1.10). The more limited flexibility required to inhabit the territory between Contributor and Catalyst (or Knowall and Ringmaster) in Figure 2.1.10 seems a more realistic – even individualistically typical – expectation of our new age warriors. Also, the central valuce in the Nicholls’ model is the insight that those roles at the top right of Figure 2.1.10, in their very psychodynamic essence, underpin the possibility of transformation. Equally important is the insight that those roles at the lower left represent the psychodynamic anchors that will stall and, in the end, swamp our attempts at genuine empowerment, creative individuality, collaborative sharing and flexible responsiveness in the Fourth Blueprint networks of the 21st Century. It is to these concerns that we now turn.

2.1.4 Transformational styles and distributed leadership processes in the 21st Century network organisations.

"Authentic Fourth Blueprint organisations construe processes of transformation more broadly than is implied in much of the leadership literature. Contemporary leadership approaches have not for the most part thrown off the shackles of ‘legitimate power’ that were part and parcel of the origins of ‘authority’ as Weber and others construed it. The result is a fascination with control of ‘leaders’ over ‘followers’ that is not only irrelevant, but damaging in post-corporate organisations."


"When organizations become less bounded and more flexible, they function more like “weak situations”. It is precisely under such weak circumstances that leadership, as opposed to management becomes important. In the absence of specific rules and fixed structures, people need mental models to help them handle the situations they face and coordinate their actions. In the absence of stable structures and strong cultures, there are no substitutes for leadership, and leaders have to provide the mental models and frameworks to coordinate the behaviour of organizational members."

**Shamir (1999: 56-57)**

Various quotes from Limerick et al (1998) in Section 1.2.3 have indicated the central role they see for widely distributed processes of reciprocal influence amongst all members of the collaborative network in both focused action and exploratory dialogue and renewal. From that perspective, we should remember that all members of ‘the team’
could, and desirably would, be part of the leadership culture. They should all be flexibly responsive to the need for continual transformation of both their colleagues and themselves. To the extent that a ‘residual hierarchy’ remains, they should respect the need for space for direct action, interaction, experimentation and continuous learning that is necessary for effective functioning of empowered ‘Collaborative Individuals’.

Alternatively, Shamir (1999) sees the discontinuous, uncertain and lightly coupled psychic reality of such organisational environments as requiring an injection of grounded and consistent focus around clear and powerful messages from identifiable and lasting symbolic leaders relating to both the past and the future of the enterprise and its members. How might we find such strong, symbolic leaders in Fourth Blueprint settings? And, if those exist with a mind to provide such strong leadership, what would such leadership be based on in terms of patterns of influence on, and the consequences for behavioural repertoire among, ‘followers’? In pursuing this dilemma, we should further explore and clarify the underlying logic, and inherent paradox, that characterise the network designs of the loose couplers and ‘boundaryless boundary riders’.

As indicated earlier, the need to emancipate creativity, initiative and responsiveness is seen to be an imperative driven by a fast changing environment of elaborating complexity that has been freed from artificial policy constraints by technological development and human striving. Those from the humanist school, in particular, recognise the threats that a rampant, competitive response characterised by uncontrolled and disconnected individualism might pose to both social coherence and human adjustment and satisfaction. Driven by this concern, they searched for loose coupling in design but emergent connectivity in action. Hence, concepts such as “Collaborative Individualism”. Shamir’s (1999) argument for strong leadership in the relative vacuum of post-modern organisations makes sense under the bright light of a strong need for security and clarity. However, it is in danger of reestablishing the most limiting and restrictive conditions of the control culture on the one hand or ripping the cooperative, interactive fabric that makes for social coherence within our institutions on the other.

The Fourth Blueprint theorists seek to transcend this dilemma by strengthening the interactive access and competence of all constituents of the expanding complexity within our emergent workplace. The glue is not to be global identification with the charismatic visionary or efficient compliance with legitimate bureaucratic authority. It
is to be constant, open, energetic and widely distributed dialogue that is subject to
persistent questioning at the organic core and continual iterative ‘helm corrections’ in
the operating nodes. The insertion of individuals or groups, with old style ‘heroic
leadership’ pretensions, into the buzzing confusion of an emergent reality is seen as
likely to cause regression of the social maturation of the system towards inertia, entropy
and death. The preferred alternative is to develop and distribute process strength within
the team that would aid its continuing growth and evolution on the ‘edge of chaos’.

Thus, the position of network theorists is that, as the diverse challenges of our
environment turn in kaleidoscopic fashion in front of us, the locus of leadership should
move naturally among the group on the basis of specialist alignment with the key
elements of the environmental challenges. Or, as various clashes of values occur within
the group, we should see the locus shift to those with the process expertise and
detachment from a committed position on the specifics in contention to allow them to
facilitate and enable resolution by dialogue. In either case, the prescription implies
fierce standards of maturity, self-knowledge and acceptance of joint responsibilities
amongst all the collaborative individuals making up the network.

Shamir’s contrary perspective asserts that, in boundaryless organizations, the “main
function of organizational leaders becomes that of being ‘centres of gravity’ in the
midst of weakening frameworks” (Shamir, 1999: 59). However, he also concedes the
role of leaders as change agents has led to neglect of their role as “centres of gravity”
and agents of continuity. In seeking to reassert the value of continuity he returns to
charisma and the access to symbolic and emotional commitment that it implies. He
concludes: “As change becomes a permanent feature of organizational life rather than
an infrequent occurrence, charisma, in the sense of meaning-giving leadership and
strong trusting relationships between leaders and members, becomes increasingly
necessary for effective organizational adaptation and action.” (Shamir, 1999: 64)

Shamir’s (1999) preferred resolution is to more fully develop an ‘identity-based’ theory
of leadership. In his discussion of this approach he notes an important qualification to
the unconditional endorsement of the charismatic leader. Thus, on page 65, he says:

“The theory de-emphasizes personal identification with the leader in
the psychoanalytic sense of identifying with an infantile father figure.
It emphasizes social identification with the leader as primarily
identification with the leader as a representative character and
symbol of the group.” (emphasis added)
However, the danger remains of effectively imprinting a specific model of social and interactive behaviour (this time by group endorsement of a symbolic model) and limiting flexible search in conditions of discontinuity. So we may be back to the perils of “group think”. As Limerick and Cunnington (1993: 116-117) noted:

"...an over-emphasis on teamwork and collectivism had led to an homogenising effect on human endeavour. An ideological commitment to group cohesiveness ... tended to push relationships in many organisations past the point of functional teamwork towards a dependent reactive groupiness. (As) Zaleznik says: ‘The tail has come to wag the dog. In our obsession with teamwork, collectively we have failed to recognise that individuals are the only source of ideas and energy.’ (Zaleznik, 1990: 9) (Also), the focus on teamwork did not fit comfortably with the challenges of discontinuity...(which)...meant that people (should) be given space to think laterally, take risks and deal with change themselves without the constraints of group think.”

So we remain with the position of the Fourth Blueprint advocates being for ‘weak’ content positions and goal commitments within individual leaders but strong and dynamic leadership processes distributed broadly among diverse and empowered collegial contributors who continually dialogue to achieve temporary and evolving ‘centres of gravity’. However, we also need to acknowledge that Shamir’s contrary position may better appreciate the limitations and concerns that typify the bulk of our human workforce, including our high potential leaders and specialists as we move into the 21st Century. We will return to this issue in Section 2.2 below.

Armed with these comparisons, we can now usefully return to our progressive conceptual mapping. First we should give some consideration to the macro-leadership issues canvassed in Sections 2.1.1 and 2.1.2 above. The fusion is illustrated in Figure 2.1.11. The Fourth Blueprint design is intended to meet the demands of the Learning Loop as articulated by Hurst (1995) in his eco-cycle analysis. Our thick dotted line reminds us that elements of the Second Blueprint, related to scope for human diversity and interactive support, and the Third Blueprint, relating to management of complexity and systems of governance, are also critical to the journey of learning in the wilderness.

The positioning of the four quadrants from CVF also makes it relatively straightforward to infer the CVF styles of leadership, influence and change responsiveness held to be most relevant to a Fourth Blueprint environment. For ease of reference we could state
these relationships as follows. Fourth Blueprint environments, as opposed to the previous blueprints, will be:

- more responsive to *democratic* and *innovative, intellectual* leadership as opposed to *authoritarian* and *team performance* leadership;
- more conducive to the use of *trust and faith* and *vision and intellect* than the use of *structure and authority* and the *use of clarity and team coherence* in the processes of influence;
- more sensitive to *normative re-education* and *stimulation and engagement* strategies than to *rational, empirical* and *inclusion and containment* strategies in pursuit of effective organisational change.

![Figure 2.1.11: Integrating CVF and Eco-cycle Models with Tannenbaum & Schmidt and Four Blueprints Analysis](image)

More generally, and consistent with the amoebograms for stages 1 and 2 in Figure 2.1.2, the Effectiveness domains preferred by the Fourth Blueprint theorists are:

- The Natural Systems paradigm over the Rational paradigm, and
- The Constructive Maximising paradigm over the Goal-Directed Satisficing paradigm.

This raises the issue of the third trade-off – in terms of effectiveness, between the *Internal Coordination* and the *External Impact* Paradigm. This is because there are real grounds for equivocation within both these domains. This is indicated in Figure 2.1.11, where we find our dotted line equally dividing the *Hierarchy* and the *Clan* quadrants between the *Learning Loop* and the *Performance Loop*. These quadrants are the fused pair underlying the *Internal Coordination* paradigm. Also, of the two quadrants making up the *External Impact* paradigm, one (The Adhocracy) is firmly in the *Learning Loop*.
with the other (The Market) fully in the *Performance Loop*. This relationship says something about the clash between the committed and urgent “*Hypercompetitors*” and the gentler, more integrative views of the communitarian networkers as discussed in Section 1.1.4. The time urgency and output orientation of the hypercompetitor is likely to be viewed as destructive of the fundamental and deep learning challenges that the networker sees as the essence of the transformational journey towards higher level responsiveness to complexity and discontinuity.

Secondly, we can now shift our focus to the micro-level of leadership role analysis as discussed in Section 2.1.3. To do this, we will chart what each of the Four Blueprints analysis and Nicholls’ Transforming Leadership model contributes to our deeper understanding of the other model. This fusion is presented in Figure 2.1.12.

![Figure 2.1.12: Management Blueprints and Transformational Leadership Roles](image)

We should note the return of our thick dotted line, this time running across the figure between ‘Instructor’ in the upper left and ‘Enforcer’ in the lower right. This reminds us that we have left behind the Third Blueprint concepts of Congruent Leadership. Figures 2.1.9 and 2.1.10 showed the upper and right hand quadrants as low in both ‘Activity in Task’ and ‘Reshaping of Relationships’. So, read in conjunction with those figures, Figure 2.1.12 is telling us that, as both uncertainty and complexity increase towards their maximum, the appropriate strategy for the leader is to evacuate the operational and primary strategic response zone of the team. The Fourth Blueprinter would rather say that the various roles indicated would usefully become distributed throughout the team so that no individual becomes the focus of identification for the dependent residuals.
The second purpose of the dotted line is to emphasize that the psychic territory of the Fourth Blueprint organisation must be within the upper right half of the map. An important task for such organisations is to ensure that all collaborative individuals enter their project groups and task assignments with the maturity and personality and cognitive profiles to quickly carry their responsibilities as part of the fully empowered team. The third purpose of the dotted line is to register the 'shadow side' of leadership in the lower left of the figure - the regression to insecurity, over-control and interference in the otherwise freely expressive group processes of a responsive and creative team of empowered colleagues. This shadow side is a critical element in any analysis of the contribution of managerial style and psychological type to effective, adjusted functioning in networks.

Finally, how might we placate Shamir's (1999) case for strong leadership to provide a centre of gravity and a sense of continuity without releasing the twin furies of the charismatic's rigid focus and the follower's blinded identification? After all, as De Vries, Roe & Taillieu (1998) note, actively practiced, charismatic leadership tends to evoke a "need for (strong) leadership" amongst followers resulting in a level of inertia and dependence in the absence of the referent charismatic. Figure 2.1.10 reminds us that the Visionary Enabler is a 'Lo-Lo' - low activity in task and low reshaping of relationship. This role comes with a caftan! It is the continuity of ageless verities and wisdom not the driven clarity of treasured goals or the emotional regression to past havens. This is the 'still point' of inspiration not the turmoil of the driven charismatic.

The Fourth Blueprinter would probably still prefer the incumbent of this role to be a distributed group than an individual and for them to discharge these duties in their meandering between Contributor and Catalyst roles to maintain daily integration in the team reality. However, the need for a committed identification with the team as an evolving organism is acknowledged. Perhaps McMaster (1996: 76) captured the balance best when he said:

"Leadership, in a complex intelligent system, is the ability to exercise fully the possibilities available to that system. The nature of effective leadership is one of self-expression without attachment to identity. The kind of self-expression needed to come from those who see themselves as part of a complex system - a system in which they are both influencing and influenced."

Thus, identity continually evolving, focusing and blurring, in sensitive response to the changing environment, and in a collaborative interaction with fellow explorers summarises the Fourth BluePrinters understanding of the emotional and cognitive challenge to be met by leaders and followers alike. This is a view of issues of trust, emotional sensitivity and interactive commitment that seems much more challenging and demanding of advanced levels of maturity and cognitive complexity than we see in the tribal harmonics of driven charismatics and their dependent devotees.

How might we locate and develop the potential occupants of these challenging roles? Shamir (1999: 58) suggests that: “In strong situations, much of the behaviour of members is determined by hierarchical structures, reward structures, and normative frameworks. In weak situations behaviour is determined more by factors such as personality dispositions and self-concepts.” The need for strong leadership to provide clearly articulated and more committed perspectives on organisational identity may itself be moderated by critical individual differences in personal style. Further, the negative connotations of strong, charismatic leadership for the growth of open, mature dialogue may only impact particular psychological types or styles while others might fulfill transformational roles more effectively without triggering dependent or defensive responses amongst their colleagues. We can now explore these possibilities in search of the micro-dynamics of effective leadership process in networks.

2.2 Personality type, brain styles and the psycho-dynamics of leadership and influence

“One of the paradoxes of modern management is that, in the midst of technical and social change so pervasive and rapid that it seems out of pace with the rhythms of nature, human personality has not altered throughout recorded history. People have always had distinct preferences in their approaches to problem solving. Why is it only now becoming so necessary for managers to understand those differences? Because today’s complex products demand integrating the expertise of individuals who do not innately understand one another. Rightly harnessed, the energy released by the intersection of different thought processes will propel innovation.”

Leonard & Straus (1997: 121)

The above quote comes from an article advocating the extensive use of testing for individual stylistic preferences (using such instruments as the Myers-Briggs Type Indicator and the Herrmann Brain Dominance Instrument) to enhance the innovative
and developmental processes in organisations. In identifying the exponential rise in complexity that drives the need for active and constructive management of diversity in developmental teams, Leonard and Strauss (1997) have clearly struck a cord that has much resonance with the arguments generated to this point in the thesis.

The managerial environment has changed in quantum fashion in the complexity and diversity that now confront the managerial cadres of the 21st Century. But there is another critical variable that highlights the need for active consideration of issues of personal style and individual differences. Shamir (1999) alludes to it in the quote at the head of Section 2.1.4. The post-modern organisation has stripped the formal role scripts that used to provide the buffer between individuals and their colleagues and between the individual and their own sense of self in work. Now these relationships are also part of the emergent world of constructive dialogue and interpersonal intercourse between diverse and often abrasive others and this poses a central challenge for all in the new organisation – especially those who seek to contribute to its reconceptualisation.

This change has driven a distinct resurgence in the level of interest in personality assessment in organisational settings over the last decade or so. This is particularly so in relation to tests of theoretically elaborate typologies addressing the psychology of behaviour at work as opposed to omnibus, factorial, quantitative indices or clinical personality tests. This literature can be usefully clustered around the concept of "managerial style". Here we will find the fine distinction that Limerick et al (1998) made between Jungian frameworks and brain dominance models may be dissipating in the face of recent research findings that suggest a common underlying cluster of psycho-dynamics. We will examine these issues in Sections 2.2.1 and 2.2.2 below.

Also, as suggested above, the history of research into the relationship between personality and the various broad criteria of managerial and leadership performance has been quite erratic and contradictory at various times over the 20th Century. We will briefly review that history and the currently forming consensus that there is a credible and significant role for personality factors to play in explaining and improving executive performance and adjustment in Section 2.2.3. Finally, as implied in Section 2.1 above, the distinction between the "Performance" culture, typifying Third Blueprint organisations, and the "Learning" culture of the Fourth Blueprint, is an important consideration. It is seen as a critical factor in increasing both the relevance of
personal and cognitive style to, and the size of its impact upon, leadership processes. So the implications of the journey into the "Learning Loop" for the appropriate managerial style mix within our managerial cadres will be discussed in Section 2.2.4 below.

2.2.1 Managerial Style, Psychological Type and Brain Dominance Profiles: Exploring common psychic and conceptual domains.

In the above context, we can now focus on the issues of management style and related psychological typologies. Perhaps the most precisely focused integration of the literature on managerial style was undertaken by Stamp (1989). She had this to say about the level of clarity and agreement forming around the concept (Stamp, 1989: 23):

"Driver (1979) suggests that there is already a fair amount of knowledge (about style). For example, we know that people's styles are stable, that changing is not easy and that any style may, in the right environment, achieve a satisfactory decision."

After reviewing about a dozen diverse studies, she created the two-variable, four-quadrant plot presented in Figure 2.2.1 placing the bulk of the styles uncovered in the survey within that space.

![FIGURE 2.2.1: A Summary Mapping of Managerial Styles - from Stamp (1989)](image)

<table>
<thead>
<tr>
<th>CONVERGENCE</th>
<th>COMPLEX</th>
<th>INTEGRATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Problem solver</td>
<td>* Integrator</td>
<td>* Extreme diverger and converger</td>
</tr>
<tr>
<td>* Moderate Converger</td>
<td>* Assimilators</td>
<td>* Intuitive-receptive</td>
</tr>
<tr>
<td>* Systematic perceptive</td>
<td>* Integrative</td>
<td>* Conceptual Theorist</td>
</tr>
<tr>
<td>* Hierarchic</td>
<td>* Holistic</td>
<td>* Problem finder</td>
</tr>
<tr>
<td>* Analytical Scientist</td>
<td>* Moderate or extreme diverger</td>
<td>* Diverger</td>
</tr>
<tr>
<td>(3)</td>
<td>(2)</td>
<td>(4)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PRAGMATISM</th>
<th>SIMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Technician</td>
<td>* Problem finder</td>
</tr>
<tr>
<td>* Extreme converger</td>
<td>* Moderate or extreme diverger</td>
</tr>
<tr>
<td>* Accommodator</td>
<td>* Diverger</td>
</tr>
<tr>
<td>* Systematic receptive</td>
<td>* Intuitive-Receptive</td>
</tr>
<tr>
<td>* Decisive</td>
<td>* Integrative</td>
</tr>
<tr>
<td>* Flexible</td>
<td>* Flexible</td>
</tr>
</tbody>
</table>
The two dimensions of simple/complex and analytical/holistic were ‘implicitly or explicitly common to all studies’ (Stamp, 1989: 23). Stamp generated the four quadrant titles of Divergence, Integration, Convergence and Pragmatism to capture the essential qualities that emerged from her survey. The only label that might seem obscure is the lower right quadrant – that is; Divergence. At first glance, that seems at odds with being in the holistic domain. However, upon reflection, divergence (or differentiation) is the first level of response to growing diversity in the perceived environment (see e.g.: Torbert, 1987). Acceptance of diversity is the first stage of moving towards positive handling of complexity by integration and, in the fullness of time, transcendence.

Having established the general dimensions of managerial styles, we can focus on the structure of the two typologies suggested in the Limerick and Cunnington (1993) quote on page 44 of this thesis. Consider the pattern of styles suggested by Figure 2.2.2.

![Figure 2.2.2: MBTI - A Sketch of the Four Primary Functions](image)

Figure 2.2.2 shows the summary descriptions of the four ‘primary functions’ of the Myers-Briggs Type Indicator, constructed on a Jungian theoretical base. The internal content of each quadrant has been adapted from Table 3 on page 39 of Fitzgerald (1997). The two dimensions underlying the 4-Quadrant plot have been retained from Figure 2.2.1 for comparison purposes but, in my submission, the conceptual ‘fit’ of the
content data from Fitzgerald’s table to the generic plot is palpable. Space precludes a review of the voluminous research literature on the MBTI and related Jungian tests, the quantum of which would overwhelmingly support the location of the four primary functional styles as they have been in Figure 2.2.2. The reader interested in gaining a more detailed picture of these relationships is referred to Fitzgerald & Kirby (1997) which contains several chapters of relevant research.

The alternative framework suggested by Limerick et al (1998) was brain laterality. Recently, we have seen an explosion of interest in the area of cognitive psychology variously described as ‘hemispheric specialisation’, ‘brain-dominance’ or ‘left – right brain thinking’. From the perspective of strategic thinking, one of the primary sources of impetus was Mintzberg’s (1976) Harvard Business Review article in which he drew the distinction between “planning on the left (side of the brain)” and “managing on the right”. In one of the seminal neuro-psychological works on the area, Ornstein (1972: 108) summarised the major thrust of relevant theory as follows:

"The left hemisphere... is predominantly involved with analytical, logical thinking especially in verbal and mathematical functions. Its mode of operation is primarily linear...(and it processes)...information sequentially...(whereas)...the right hemisphere seems specialised for holistic mentation. Its language ability is quite limited...(it is)...primarily responsible for our orientation in space, artistic endeavour, crafts, body image and recognition of faces. It processes information more diffusely than does the left hemisphere and its responsibilities demand a ready integration of many inputs at once".

Some of the models and test instruments used retain this simple dichotomy. However, many of the recent developments have utilised a more elaborate four-quadrant classification. Ned Herrmann’s ‘Whole Brain Model’ (Herrmann, 1989, 1996) distinguishes between right and left hemisphere as well as the cerebral and limbic levels of the brain. This model is illustrated in Figure 2.2.3

This later dichotomy comes from the work of Maclean (1981) who describes the cerebral system, or outer layer, of the brain as the intellectual information processor with clearly specialised hemispheres, and the limbic system as specialising in processing emotion and regulating visceral and instinctual behaviour. Herrmann goes a little further, specialising the functions of the two limbic hemispheres as well. A quote from McLean, cited in Restak (1979: 36), clarifies the distinctive features of each level of the brain (he includes the primitive reptilian system as well) as follows:
"The three brains amount to three interconnected biological computers, each having its own intelligence, its own subjectivity, its own sense of time and space, its own memory and other functions."

**Figure 2.2.3: Herrmann's Whole Brain Model**

<table>
<thead>
<tr>
<th>Cerebral left</th>
<th>Cerebral right</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Facts</strong></td>
<td><strong>Futures</strong></td>
</tr>
<tr>
<td>'ANALYST'</td>
<td>'IMAGINIST'</td>
</tr>
<tr>
<td>Logical, Analytical, Technical, Financial</td>
<td>Integrative, Imaginative, Insightful, Visionary</td>
</tr>
<tr>
<td><strong>Form</strong></td>
<td><strong>Feelings</strong></td>
</tr>
<tr>
<td>'PRODUCER'</td>
<td>'TEAMIST'</td>
</tr>
<tr>
<td>Organised, Planned, Detailed, Business</td>
<td>Interpersonal, Emotional, People Oriented, Helping</td>
</tr>
<tr>
<td>Limbic left</td>
<td>Limbic right</td>
</tr>
</tbody>
</table>

The substantive distinctions of behavioural style implied by the model in Figure 2.2.3 could be characterised by the following summary titles and descriptions:

- **Cerebral Left**: 'Analyst' or 'Thinking' style. "No decision is made without the facts and reality is now" (Herrmann, 1996: 24). This style is a faithful rendition of the values and behaviours that underpin the *Internal Process* quadrant in Quinn's CVF. Key operating skills include logical, quantitative, analytical thinking and manipulating complex formulae.

- **Limbic Left**: 'Producer' or 'Sensing' style. "Down-to-earth with no equivocation or ambiguity. Things are done according to procedure and on time." (Herrmann, 1996: 24) Here we have a close equivalent to the *Rational Goal* quadrant in Quinn's CVF. The Limbic Left values order, is conservative, structured, detailed and sequential in thinking and is control-oriented with a focus on tangible outcomes.

- **Cerebral Right**: 'Imaginist' or 'Intuition' style. "If there's a better way, let's try it out. Experimentation is highly valued." (Herrmann, 1996: 25) This style underpins the *Open Systems* quadrant in Quinn's CVF. The Cerebral Right personality is a conceptualist, synthesiser, integrator and provocateur. They think visually and metaphorically and lack grounded structure. They tend to live in a future of their own construction.
- **Limbic Right**: 'Teamist' or 'Feeling' style. "Human values and feelings are paramount and people come first. The workplace should be friendly and condone open communication." (Herrmann, 1996: 24). The Limbic right is an equivalent to Quinn's *Human Relations* quadrant. They are emotional, expressive, and empathetic. Frequently involved in teaching and human development roles, they deliver such roles with a grounded, one-on-one, tangible style not in an intellectual, challenging fashion.

It should also be noted that the underlying dimensions and content of Figure 2.2.3 correspond closely to those of Figure 2.2.1. If the dimensional "tag-words" in Stamp's general classification of managerial style in Figure 2.2.1 were changed as follows:

- holistic/analytical to right brain/left brain; and
- simple/complex to limbic/cerebral;

then the correspondence of her dimensions, and the content and broad intent of each of the quadrants, to the brain styles schema is evident.

Over the last 25 years, much conceptual and empirical research effort has been devoted to the question of whether the Jungian typologies and brain laterality models were tapping into the same psychic and conceptual terrain (see e.g: Bunderson, 1989; Hartman, Hylton, & Sanders, 1997; James, 1986; Power, Kummerow, & Lundsten, 1999; Power & Lundsten, 1997; Shiflett, 1989; Taggart & Kroock, 1991). The clarity and consistency of results support a conclusion that the four primary Jungian functions (i.e. Thinking, Sensing, Intuition and Feeling) are conceptual and practical equivalents to (in order) Cerebral Left, Limbic Left, Cerebral Right and Limbic Right brain styles. A recent study (McAdam & McWilliams, 2001) confirmed these relationships using factor analysis on 320 profiles including scores from the Life-Time Analysis Survey (Brain styles: See: Davies, 1982), the Champagne and Hogan Personal Styles Inventory (Jungian index, see: Champagne & Hogan, 1980) and the Team Management Index (a Jungian team roles index, see: Davies, 1986). (See: Table 2.2.1).

Consistent with the underlying frameworks of both models, the four factors in that table are bipolar. The data also suggest that the four primary functions from the Jungian framework are direct equivalents to the two left brain quadrants (Thinking and Sensing) and the two right brain quadrants (Intuition and Feeling). There is also correspondence at Cerebral (with Thinking and Intuition) and Limbic (with Sensing and Feeling) levels.
Table 2.2.1: Factor Analysis: Datum/Brain Dominance, Hogan/Champagne Index (H/CI), and Team Management Index¹

<table>
<thead>
<tr>
<th>Suggested Descriptor</th>
<th>FACTORS</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Left Brain versus Right Brain</td>
<td>Perceiving versus Judging</td>
<td>Introversion versus Extroversion</td>
<td>Cerebral versus Limbic</td>
<td></td>
</tr>
<tr>
<td>Variables²</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AB</td>
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<tr>
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<td>.7571</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.6641</td>
<td>.3764</td>
</tr>
<tr>
<td>P.INT</td>
<td></td>
<td></td>
<td></td>
<td>-.6445</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PI</td>
<td></td>
<td></td>
<td>.8476</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SF</td>
<td></td>
<td></td>
<td></td>
<td>-.8207</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R.INT</td>
<td>-.4005</td>
<td></td>
<td>.4986</td>
<td></td>
<td>-.3583</td>
<td></td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td>.8818</td>
<td>.3305</td>
<td></td>
</tr>
<tr>
<td>EI</td>
<td></td>
<td></td>
<td></td>
<td>-.8742</td>
<td>.3305</td>
<td></td>
</tr>
<tr>
<td>R.SPEC</td>
<td></td>
<td></td>
<td></td>
<td>.3305</td>
<td>.3305</td>
<td></td>
</tr>
<tr>
<td>R.ACC</td>
<td></td>
<td></td>
<td></td>
<td>.7059</td>
<td>.6128</td>
<td></td>
</tr>
<tr>
<td>P.ACC</td>
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<td>.6128</td>
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</tr>
<tr>
<td>PC</td>
<td></td>
<td></td>
<td></td>
<td>.4967</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P.SPEC</td>
<td></td>
<td></td>
<td></td>
<td>.4935</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Consistent with the structure presented above, studies by Power & Lundsten (1997) and Power, Kummerow & Lundsten (1999) provide further support for a common structure underlying Jungian-based instruments and brain laterality measures. In those studies, the tests used were the MBTI and Herrmann Brain Dominance Index and the authors charted all brain styles and Jungian variables in 2-space using their inter-correlation data. The outcome is presented in Figure 2.2.4, taken from Powers et al (1999).


² Codes: R.ACC = Relaxed Accumulator (Limbic) | IE = H/CI Introversion
P.ACC = Pressure Accumulator (Limbic) | NS = H/CI Intuition
R.INT = Relaxed Integrator (Right-Brain) | TF = H/CI Thinking
P.INT = Pressure Integrator (Right-Brain) | PJ = H/CI Perceiving
P.SPEC = Pressure Speculator (Limbic Left + Cereb. Right) | EI = TMI Extroversion
R.SPEC = Relaxed Speculator (Limbic Left | PC = TMI Planned vs Creative
AB = TMI Analysis vs Belief
As always with the MBTI the four bipolar variables show up. The HBDI allows four uni-polar variables to find their own space, and so the four brain styles are shown as single dot points. However, they settle consistently with the predictions presented above in their separate quadrants of the 2-space. And, while the two left-brain styles are at greater distance from each other than the two right-brain equivalents (an artifact of the particular test instrument), the general pattern of relationships between brain-styles and Jungian structures indicated by Figure 2.2.4 is consistent with the data in Table 2.2.1.

![Figure 2.2.4: HBDI/MBTI Points in 2-Space: from Power et al (1999)](image)

Other studies suggest common psychic terrain is being uncovered in relation to a range of theories of individual differences. For example, research on "The Big Five" personality factors has related them to questionnaire scales developed by Eysenck (McCrae & Costa, 1985), Jackson (Costa & McCrae, 1988), Spielberger (Costa & McCrae, 1987) and Wiggins (McCrae & Costa, 1989b) as well as for the MMPI (Costa, Busch, Zonderman & McCrae, 1986), the MBTI (Furnham, 1996; McCrae & Costa, 1989a) and the Kirton Adaption Innovation Inventory (Gryskiewicz & Tullar, 1995).

While each different sub-set of micro-variables introduced to the factor pool slightly alters the detailed specification of the contours, the overall macro-structure of the personality and interpersonal terrain uncovered bears a significant and sustained proximity to that sketched for managerial styles in Figure 2.2.1.

This indicates a solid case for broad conceptual and theoretical equivalence of, at least, the Jungian and Brain Laterality models – as they address themselves to measuring managerial style. In fact, it seems possible that, along with the other tests and variables

+ Cereb.Right) SF = TMI Structured vs Flexible
cited above, managerial style classifications, such as those suggested by Stamp, may well be tapping a broad and integrated under-structure of personality (but not temperament) in ways that will become clearer as the research progresses. However, this thesis does not provide the appropriate venue to fully explore such a proposition. Rather, in the interest of brevity, our further consideration of the connections among typology, leadership and the Fourth Blueprint environment will focus on a Brain Styles model. Also, research findings from the MBTI literature and related Jungian studies will be cited below where relevant to clarify relationships between managerial style, leadership and influence and performance and adjustment in varying environmental conditions. Those who are more familiar with a Jungian typology should find the model quite interpretable provided they use the equivalence coding suggested above.

2.2.2 The correlates and dynamics of Brain Dominance as managerial style

"The whole-brain model, although originally thought of as a physiological map, is today entirely a metaphor. The circular display represents a whole thinking brain, which then divides into four conscious modes of knowing (emphasis added). The move away from the physiological interpretation towards a more general, metaphoric one made sense for 3 reasons: 1. Determining precisely which part of the brain was doing what was looking more difficult, and less and less important; 2. The idea was useful because it provided a means of organizing and clarifying our thinking about modes of knowing; and 3. Daily occurrences confirmed that the four-quadrant model was producing data on human behaviour that was consistent enough to have validity in its own right."

Herrmann, (1990: 63-64)

The first point to emphasize comes from Herrmann’s quote. His model for the interpretation of Brain Styles originated, and was elaborated, through an understanding of the neuro-physiological research related to brain structure and functioning starting with Sperry and his colleagues in the late 1960’s (see e.g.: Sperry, 1977). A deeper understanding of Herrmann’s take on this research, and its impact upon the metaphoric model he built, is beyond the scope of this thesis. The reader wishing to explore this in more detail is referred to Herrmann (1989; 1996).

As indicated above, the consistent, conceptually and predictively valid results that Herrmann and related researchers had been achieving, allowed the explanatory useful findings on the 4-quadrant model to stand on their own merits. However, although Herrmann, in common with many researchers on brain styles in organisational settings,
has moved to a metaphorical model, that does not cancel the continuing interplay between their research and the neuro-physiological research on the brain. Thus, where relevant, new findings from that field can and should be used, with appropriate caution, to enlighten our understanding of individual and organisational behaviour.

We should note that the dimensions and titles underlying the common map of managerial styles to which we related the brain dominance model in Section 2.2.1 are not new in the psychological literature. However, a particularly interesting feature of the neurological foundations of the brain laterality model is the concept of 'dominance'. Hemispheric dominance means that individuals habitually perceive the world, and process information about it, according to patterns that are typical of the functions and strategies of one brain hemisphere rather than the other. In quadrant-based models, the concept needs to be broadened to include consideration of 'dominant' (primary) styles, 'back-up' (secondary/alternative) styles - used commonly where the primary style has not been effective - and 'avoided' styles which are used only when all else fails and, even then, reluctantly. Thus, dominance provides a useful diagnostic and developmental device, allowing identification of the most likely response repertoire for an individual (or group) and areas of avoided/undeveloped response patterns. This involves the use of 'combined styles' analysis (a combination of both the dominant and back-up styles). In Herrmann’s model, these are called 'thinking styles' (see Figure 2.2.5).

![Figure 2.2.5: The Universe of Thinking Styles](image)

In common with the value positions in Quinn’s CVF, these 'thinking styles' are naturally and conceptually opposed; more of one implies less of the other. The consequence of this is that, also in common with CVF, the individual’s profile of Brain Dominance is in
ameobagram style with the space occupied in each quadrant indicating the dominance or recession of that style within the individual's expressive repertoire. Less than five per cent of the population shows a 'whole-brained' profile (common emphasis on all four primary styles). Well over 60 per cent of the population display a 'specialised' profile with one of the six conceivable thinking styles clearly more characteristic of the individual than at least four of the other five. These percentages apply to a range of brain dominance instruments and a broad variety of samples (See Herrmann, 1989).

As noted above, most people tend to consistently use more than one of the primary brain styles but also to avoid at least one, and often two, of the styles. The 'double-dominant' or 'thinking' styles (as Herrmann has called them) are therefore the most useful quick summaries of an individual's probable behavioural, emotional and problem-solving repertoire. The major descriptors, typical type behaviours, specialised interests/values and professional affiliations characterising each of the cerebral, limbic, left-brain and right-brain styles are presented in Figure 2.2.6.

![Figure 2.2.6: Key Descriptors & Correlates of Primary Brain Styles]

These descriptors suggest distinctive behavioural preferences, relational styles and fundamental world-views attached to each thinking style. The key to the cerebral versus limbic contrast, for example, is the tolerance for complexity and the emphasis on design and elaboration of the former compared to the need to simplify and the high stress on tangible, immediate action evident in the latter. The right brain/left brain trade-off is the classic tension between the holistic integration and perceptual fluidity of the former against the elemental precision and judgmental rigidity of the latter.
The right brain is into 'being', 'existence' and 'organic unity'. It knows where we have been (right limbic) and where we might usefully consider going (right cerebral) but cares little for how we might get there. 'How' and 'what to do' are the domain of the left brain which concerns itself with specific action in the immediate here and now and, in this role, is a simple and rigid rule-follower and pigeon-holer (left limbic). It is also, on a more complex level, a routine information processor and analytical decision-making tool (left cerebral). In this mode, it is about 'doing things right' rather than 'doing the right thing'. These structural relationships are illustrated in Figure 2.2.7, which also demonstrates the integration and conceptual communality between the brain dominance model and the Jungian typology that underpins instruments such as the MBTI.

Encapsulated in the figure is a theoretical framework based upon an open systems analysis of the demands on any living organism transacting with its environment. The diagonal and horizontal axes suggest the three primary transactions characterising effectively operating organisms in a dynamic environment:

- They reach out to define and delineate their world – they gather data;
- They evaluate those data and determine how they will respond to it – they evaluate and decide;
- They take action on a continuing and cyclical basis – they act.
Thus, it is proposed that any 'brain' (actual or metaphorical) needs an integrated and coherent way of managing those three broad functions. Each diagonal represents a continuum with conceptually dichotomous poles. For example, the left limbic provides largely unrefined, 'primitive', experienced reality as its contribution to the organisation data-base, whereas the essential role of the right cerebral is to generate new patterns by spatial re-arrangement of, generally, visual images - not necessarily based on previous experience. Equally, the left cerebral's logical, sequential, formalised method of processing data to reach judgement can be opposed to the instinctive, emotional sense of internal coherence (we typically call 'gut feel') emanating from the right limbic.

The purpose of the limbic system is to address the first major responsibility of an open system - that is, to survive. Hence the broad labeling across the limbic area of Figure 2.2.7 is Maintenance. Likewise, it now seems clear that the cerebral cortex is not only relatively flexible in its localisation (e.g. transferring cognitive functions after brain trauma) compared with the more structured and constrained limbic system. It also seems to have much more capacity than is currently under demand (see: Herrmann, 1986). It is designed to serve the other primary responsibility - that is to function or perform which, given an uncertain and complex environment, requires effective Adaptation.

Hence we find that heading across the cerebral area in Figure 2.2.7. The two primary requirements for survival are satisfaction of immediate needs and support and protection of the internal structure's organic integrity. Likewise effective adaptation requires a sense of the alternatives and preferred direction on the one hand as well as a capability for precise design and complex redesign on the other. In all cases, there is no a-priori assumption of supremacy of one pole. Consistent preference for one pole is the central character of learnt hemispheric dominance stemming from the organism's history of learning resulting from systematic and random interaction with its past environment.

Also, to ensure a fuller understanding of the proposed relationship between Jungian and Brain Laterality models, we should examine the position of MBTI variables in Figure 2.2.7. The position of the primary functions of Thinking, Feeling, Intuition and Sensing should be straightforward following our discussion in Section 2.2.1. However, Jungian variables also include the Attitudes: i.e., Introversion versus extroversion; and often also have a dichotomous variable related to the preference for Judging or Perceiving as an Organising Principle. These later two variables are often critical in managerial and
organisational research. So to expedite our integration of research from related areas of personality into our overall conceptual mapping process in Section 2.2.3 below, it seems useful to explore how we might chart these extra two dichotomies in Figure 2.2.7.

While, in theory, all four dichotomies in the MBTI are independent, the research data have consistently shown moderate to high relationships between them. The placements of Introversion/Extroversion and Judging/Perception reflect a summary view of those research findings and, in particular, are consistent with the findings of McAdam & McWilliams (2001) and Power et al (1999) as presented in Section 2.2.1. The question marks attached to each title do not reflect doubt as to the validity of the overall pattern but, rather, remind us that the exact placement of each is still a matter emerging through research. However, the implications of these placements are profound, with the real probability that Extroversion is a right-brain variable with a somewhat limbic centre whereas Introversion is a definitely left and, possibly, cerebral process. Likewise, though not perfectly aligned, Perception has much in common with Cerebral Right processes whereas Judging, as an organising principle, is a Left Limbic characteristic.

One final element of the organic model is essential to understanding its contribution to concepts of strategic thinking in complex, discontinuous environments. According to specialisation theory, the left brain is the time-sensitive hemisphere with the right brain having 'no sense of time'. In fact, a timeless quality is often attributed to 'right brain' experiences and this distinction is central to the age-old clash (in terms of economic theory) between the 'short-term' and the 'long-term'. Having mapped the Brain Styles model and its related psychic terrain, we can now explore the related literature on personality and cognitive style. Given the relative recency of organisational research specifically directed to the brain laterality model, we need to tap the more general literature to evaluate the impact of these issues of style on managerial learning, adjustment and effectiveness in organisational settings.

2.2.3. Personality and leadership processes and outcomes: The past and future history of a checkered relationship

"Back in the days when we had no personalities (Mischel, 1968), it made no sense to use personality measures in personnel selection. Now that we have regained our personalities, evidence has been accruing about the utility of personality measures as predictors of diverse criteria. Recently both qualitative and quantitative reviews of the literature have concluded that personality measures, when classified
within the Big-Five domains are systematically related to a variety of criteria of job performance.”

Goldberg (1993: 31)

In the middle decades of the 20th Century, a positivist, descriptive and quantitative ethic gradually established hegemony in the area of personality assessment, generally but particularly in the academic and research arenas of psychology. The two ‘fathers’ of this approach which became progressively more dominated by factor analytic techniques were Raymond Cattell (see e.g.: Cattell, 1965b) and Hans Eysenck (see e.g.: Eysenck, 1960). The factor analytical studies they championed (especially those of Cattell) led to a proliferation of single-focused traits targeted at micro-level behaviours, characteristics and attitudes that may all have had some valid interactive contribution to make to the behavioural complexity of humans in transaction with environment. However, they were individually and independently unlikely to make major impacts upon key criteria of performance, adjustment or satisfaction. Notwithstanding this obvious limitation, they provided the source material for the myriad ‘inventories’ of personality that largely dominated the occupational research scene through the 1960’s to the 1980’s.

The history of validation research was littered with an extensive array of such inventories being related to a range of criteria of executive, managerial and leadership behaviour. These criteria varied from simple to highly complex, broad and integrative to narrow and single-focus, from ratings by colleagues, subordinates and superiors to objective measures of task outcomes, from career progression rates to strategic decision-making speed or quality. All these criteria were commonly mixed with all the narrow trait measures and the value of personality as a predictor of managerial and leadership outcomes was found wanting because:

- the average size of correlations was typically below 0.2 (although showing many interesting common and theoretically consistent trends);
- in any case, the size of relationships were generally below those for intelligence and ability measures; and
- inconsistent and conflicting detailed findings characterised the field and made confident prediction difficult.

Commenting on two seminal studies from the early history of this research (Mann, 1959; Stogdill, 1948), Lord, De Vader & Alliger (1986: 402-403) noted the pessimism, in their views on the relationship between personality and leadership behaviour:
"What has occurred in the scientific literature is an overgeneralization of findings on personality and leadership perceptions to the issue of how personality relates to leader effectiveness. Moreover, the actual empirical results seem to have been interpreted too pessimistically by Mann, and even Siogdill (1974: 72) has noted that his 1948 review was interpreted too negatively."

Lord et al (1986) then conducted a meta-analysis on the data from those studies and concluded that the number of independent studies in the databases were much fewer than previously thought – and therefore less compelling than they might have at first seemed. They also found “several instances where the highest correlation was substantially greater than that reported by Mann” (Lord et al., 1986: 407) and that, at the very least, “the ‘true’ correlations between leadership perceptions and intelligence, masculinity-femininity, and dominance were significant.” (Lord et al., 1986: 407)

From that time, meta-analyses have come thick and fast, many of them related to the development the “Big Five” – or Five-Factor model of personality. According to Goldberg (1993), this thrust originated from attempts by factor analysts and personality theorists to find the superstructure underlying the myriad of traits their analyses had thrown up. Cartell, for example had flirted with “second-order” factors in an attempt to economise in relation to theory building. The story of how the consensus landed on five is complex, full of agonies and beyond the scope of this thesis. The interested reader is referred to Goldberg’s (1993) historical review. The important issues are as follows:

- The Big Five appear to be the subject of a broad and growing consensus and to now include Extraversion, Agreeableness, Conscientiousness, Emotional Stability and Openness to experience;
- According to McCrae & Costa (1989a), with the exception of Emotional Stability, the other four factors correlate with the four dichotomous variables of the MBTI consistent with predictions. That is Extraversion with EI (r = -.74), Agreeableness with TF (r = .44) Conscientiousness with JP (r = .49) and Openness to experience with SN (r = .72);
- A meta-analysis by Barrick & Mount (1991: 22) concluded that “those measures associated with Conscientiousness are most likely to be valid for all jobs. It is difficult to conceive of a job in which traits associated with Conscientiousness would not contribute to job success”;
However, a later meta-analysis by Tett, Jackson & Rothstein (1991) identified higher average correlations for all the factors than Barrick & Mount (1991) and concluded that agreeableness, openness to experience and emotional stability were most strongly related to job performance;

Tett et al (1994) suggested that the discrepancy between their findings and those of Barrick and Mount (1991) were due to their use of absolute r-values (to assess the effect not its direction) in their database. They also noted the inclusion of confirmatory (not just exploratory) studies where clear theoretical models were likely to be guiding predictions and hence higher average relationships should be uncovered; and,

In this regard, Robertson & Kinder (1993: 226) criticised the scatter-gun approach used by previous meta-analyses in that all correlations between all sub-indices or narrow traits within inventories and all criteria were reported and averaged. They suggested including only those relationships that might be expected, on a priori grounds, related to theory and found higher average r findings in their study as a result of such a policy.

More generally, the area of personality/performance research, especially that related to personality type, has blossomed since the mid-1980’s, even in the academic circles. A large part of that growth is due to the apparent convergence of the quantitatively based factorial research represented by the Five-Factor Model with the theoretical thrust and conceptual structures underlying typological approaches. This is timely because, since the mid-1980’s, data have shown that over 65 percent of recruitment consultants across Europe and the U.S. use personality assessments on managerial applicants.

It is also fortuitous for us since the relative recency of the construction of valid brain dominance tests, specifically designed for organisational settings, means that there is little direct predictive data relating brain styles to job performance and outcomes. There is, however, a rich vein of related research available through the cautious comparative interpretation of MBTI, the Five Factor Model — or, in some cases, derivative variables such as Cognitive Styles (see e.g.: Allinson, Armstrong, & Hayes, 2001). It is from these studies that we will seek to build a picture of the relationships between brain laterality, personality type and behaviour and effectiveness in Performance and Learning organisations. For the purposes of clarity and focus, it is useful to organise the research findings from this literature under three headings. These are;
- Historical norms for type/style in executive and managerial groups;
- Correlates of managerial behaviour in Performance/Third Blueprint versus Learning/Fourth Blueprint environments; and,
- Personality Type and Leadership Style.

**Historical norms for type and style**

"Studies of managers consistently reveal that, while managers in general exhibit a remarkably constant predominance of S, T, and J at all levels of management and across all kinds of organizations, movement up through the managerial ranks reveals some predictable changes in frequency of preferences, most notably an increase in the frequency of N."

*Walck (1997: 90)*

The most ubiquitous finding relating to managerial norms on type is the predominance of TJ styles. Thus, most managerial populations show a ratio of T: F in excess of 60:40, and with all male and technical groups this often exceeds 70:30. The equivalent ratios for J: P are regularly in excess of 65:35 (see e.g.: Table 4 in Kirby, 1997: 21). In regard to the SN continuum, the norms show a slight preference for S, typically with a ratio of around 55:45 in the general managerial population. As noted in the above quote, this general picture changes markedly as we go towards executive levels of management, where N begins to predominate.(see e.g.: Johnson, 1992; Nordwick, 1994; Reynierse, 1993, 1995; Roach, 1986). This last finding is consistent with evidence from the brain dominance (Agor, 1986) and cognitive style (Allinson & Hayes, 1996) literature that demonstrate an increase in the proportion of intuitives with organisational seniority.

Overall a study by Markham & Murry (1994) suggests that the modal type in management in the US is ISTJ. Data gathered by Margerison & Lewis (1983: 16) on 849 British managers show a similar pattern with the frequencies for the four primary function pairs as follows: ST (53%), SF (15%), NF (10%), and NT (22%). While these are historically reflective norms, and may be changing slowly as the new reality impacts on selection and development processes in management, the summary picture is still one which is dominantly attuned to analytical, goal directed and control-oriented styles of management. Another significant sample is the 26,477 aspiring executives who attended the Center for Creative Leadership’s Leadership Development Program from 1985 to 1993. Fleenor, (1997: 119) found the following ratios for that sample:

- E:I was 52.5:47.5;
- S:N was 49.6:50.3;
- T:F was 79.6:20.4; and,
- J:P was 68.9:31.1

As can be seen, this sample of aspiring middle to senior managers was strongly Thinking and Judging oriented rather than Feeling and Perceiving in type. While the other two ratios were quite even, these types of normative imbalance can have a crucial effect upon organisational climate, especially those elements related to developmental issues and change. Kirby (1997: 27) notes that there is a tendency for some of the following effects to occur as a result of significant group imbalance:

- Dominant types have significant influence on how “reality” is defined;
- Dominant type individuals tend not to see a need to modify their expressions of their type preferences;
- The group may verbalise and demonstrate a definite bias for the imbalance and see no need for other preferences;
- People of minority types may be annoyed and angry at dominant type characteristics, and may resent not being able to be themselves; and
- Those who do not share the dominant type may mask their true preferences and unconsciously adapt their style to match the majority.

This can lead to the collusive, but quite unconscious, construction of in-group cultures that remain internally robust even when they run out of performance currency. Thus Murray & Markham’s (1994) modal group of ISTJs was, regardless of its dominance, displaying type which was negatively related to performance outcomes. So while the norms do not tell us directly about performance, they are still an important focus for our attention because of the mechanisms of social influence alluded to by Kirby (1997).

**Correlates of managerial behaviour in Performance versus Learning organisations**

“Evidence indicates that managers use decision models consistent with their decision styles: Executives of the four personality types make different choices even when given identical information. Thus, SFs and STs may subject open-system tasks to rigorous analyses, even when the analyses cannot capture critical criteria. Similarly, NFs and NTs may tinker with clear-cut tasks instead of subjecting them to straightforward analyses.”

_Haley (1997: 210-211)_
As noted in Section 1.2.2, Limerick et al. (1998) saw Fourth Blueprint organisations as primarily driven by "Entrepreneurial" rather than "Competitive" cultures. The characteristics of those two cultures, as illustrated in Table 1.3, also have much in common with the "Learning Loop" and "Performance Loop" cultures discussed in Section 2.1.2 and mapped in Figure 2.1.8. Also, as illustrated in Figures 2.1.8 and 2.1.11, the Fourth Blueprint environment is high in both uncertainty and complexity whereas the Third Blueprint environment seeks to contain complexity and uncertainty by divisionalisation and elaborate control systems. The question we might usefully ask is what research into the effect of personality type and managerial style on organisational outcomes tells us about their differential impacts in these two fundamentally opposite cultural settings. Do those with differing managerial styles differentially adjust to the task requirements, interpersonal climates and strategic demands of the Performance Loop and the Learning Loop?

As the quote above suggests, the answer appears to be yes. It comes from an article that builds a strong case for fundamentally different "cognitive trails", or decision-making templates or biases from each other, for each of the four primary MBTI combination styles – ST, SF, NT, and NF. Haley and Stumpf (1989) note three types of decision making biases that can be related to the different MBTI styles. They include:

- **Input biases**: errors in collecting data;
- **Output biases**: errors in generating alternatives; and
- **Operational biases**: errors in evaluating alternatives

They then note the different types of biases displayed by the four personality types. They are as presented in Table 2.2.2 below, derived from Figure 1 in Haley & Stumpf (1997: 193). The brain-style labels in brackets in the first column of Table 2.2.2 should assist with translating the content of the table to our later conceptual mapping process.

<table>
<thead>
<tr>
<th>Personality Type</th>
<th>Input Bias</th>
<th>Output Bias/Recommendations</th>
<th>Operational Bias</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST (Left-Brain)</td>
<td>Analytical data</td>
<td>Conservative</td>
<td>Little reanalysis</td>
</tr>
<tr>
<td>SF (Limbic)</td>
<td>Affective data</td>
<td>People-oriented</td>
<td>Social approval</td>
</tr>
<tr>
<td>NT (Cerebral)</td>
<td>Patterned data</td>
<td>Long-term</td>
<td>Reinforcement of Rec.'s.</td>
</tr>
<tr>
<td>NF (Right-Brain)</td>
<td>Judgmental data</td>
<td>Innovative</td>
<td>Tests of hunches</td>
</tr>
</tbody>
</table>
Table 2.2.2 suggests that the perceptual, judgmental and action biases of Left Brain and Limbic managers favour performance and control-oriented environments where problems are relatively "close to certainty and close to agreement" (see Figure 1.1.3). This is because the typical routines used by managers with those types will positively support the key performance requirements in such environments as well as doing least damage even when occasionally applied in error. Conversely, the type of data that is critical to Fourth Blueprint decision-making and interactive, collaborative learning strategies are most likely to be delivered by the Cerebral and Right Brain managers with their holistic and patterned view of data and their long-term, innovative orientation.

Further, the tendencies for the cerebrals to reinforce their original recommendations and the right-brainers to indulge in hunches, though they may be dangerous operational and strategic biases, are less likely to lead to negative group outcomes in genuinely collaborative decision-making environments. They are the essence of "open learning" styles in ambiguous environments whereas the classic biases of the Left Brain and Limbic managers tend to delimit, control and close down exploratory learning.

The above results suggest similar stylistic outcomes to those uncovered by Reynierse (1997) in a recent study of stylistic differences between entrepreneurs, small business owners and executives. Reynierse (1997: 3) quoted, with approval, Drucker's (1985) view of "the entrepreneur as a broad-based change agent" and also noted J.B Say's view (quoted in Drucker (1985: 26) that "it was intended as a manifesto and as a declaration of dissent; the entrepreneur upsets and disorganises." Further, Reynierse (1997: 3) includes Schumpeter's (1934) position that the essential entrepreneurial task is "creative destruction" and Stevenson and Harmeling's (1990: 8) view that "entrepreneurism requires chaotic forces for change that are fundamentally destabilizing" among the same tradition and seeks to distinguish that form of entrepreneur from any other form of business owner or manager, large or small. His guiding hypothesis, strongly supported by his research findings, is stated as follows (Reynierse, 1997: 4):

"The J-P preference represents a broad continuum of bureaucracy and entrepreneurship in which the entrepreneurial P preference tends to initiate and promote change, whereas the bureaucratic J preference tends to encourage the established order and resist change."

He makes it clear that "entrepreneurs had consistently more entrepreneurial EPs, NPs and TPs but fewer bureaucratic IJs, SJs and FJs" (Reynierse, 1997: 3). He suggested
two types of entrepreneurial P's – the NP (“highly innovative and visionary opportunists who are on the cutting edge”) and the SP (“highly expedient opportunists in conventional, traditional ventures”). Also, he postulated two bureaucratic J types – the NJs (“innovative and visionary who provide strategic leadership”) and SJs (“highly practical and who are particularly attentive to operating detail”). He also found that, to the extent entrepreneurs showed an F preference, their profile was more likely to be ENFP. However, he noted that this was only for “small firm entrepreneurs”. For a sample of “fast growth entrepreneurs”, T preferences clearly predominated. Reuveni (1997: 15) commented:

“It is interesting that F entrepreneurs are restricted to small firms. This may reflect a more permissive, entrepreneurial spirit in small firms that is replaced by a more demanding TJ orientation in large successful companies.”

In summary, he notes the “mindsets” of entrepreneurs and managers are different, representing “opposing perspectives of their worlds”, and concludes:

“Kao and Stevenson (1985: 25) reminded us that ‘those who attempt to change existing paradigms test society’s tolerance for the ambiguity that a paradigm shift entails...So it may be with entrepreneurship.’ Although entrepreneurial managers may be a source of discomfort within bureaucratic J organizations, in a business environment where change is perpetual and stability and control an illusion, they are probably essential for any organization to remain competitive.”

Thus, with the innovative, creative and confronting NP combination, we find the genuine cognitive, mental and temperamental set of the transformational entrepreneur operating in complex, discontinuous environments but we have to be prepared for disturbance and loss of confidence and control amongst our dominantly SJ operational managers. A similar finding arises from research on “Integrative Complexity”. Tetlock, Peterson and Berry (1993) defined this concept as a capacity for both evaluative differentiation and conceptual integration. It is held to be a critical cognitive weapon in tolerating ambiguity and creating innovative responses to complexity. They reported a high correlation between this concept and N and P from the MBTI.

However, integrative complexity was also negatively correlated with conformity, socialisation, work motivation, responsibility and orderliness. It also seems to be more associated with the need for power (rather than the need for achievement or affiliation). So integratively complex individuals can also be unpredictable, hostile, rebellious, distrustful, undependable and critical. However, it may be that those NPs who are also
Es and/or Fs may bring with them the expressive and interpersonal skills to overcome the problems of social distance and lack of trust that otherwise come with their integrative complexity. Tetlock et al. (1993: 510) concluded as follows:

"... it remains to be seen... whether the integratively complex... will prosper as creative executives in corporations that value innovation or fail because they antagonize key persons critical to career success."

This conclusion should carry more weight in the Third Blueprint environment we are allegedly departing than in the emergent Fourth Blueprint. In theory the new paradigm clearly needs the complexity, flexibility and creativity that the integratively complex bring and also is no longer driven by career structures and strictures (see Table 1.2.3). Further support for the NP relationship with creativity and innovation comes from a study by Gryskiewicz and Tullar (1995). They tested the relationship between MBTI factors and the Kirton Adaptation Innovation Inventory and found significant correlations between Innovation and N (r = 0.41) and P (r = 0.41) but not for E-I or T-F. So the NP combination definitely carries some of the critical cognitive ‘DNA’ for the new millennium organisation.

However, the Fourth Blueprint also seeks a positive, supportive “collegial” climate directed towards development of all its collaborative individuals. So we should note a finding by Hough (1992) relating to the big five personality factors and various aspects of work performance. She found that, while affiliation and “Agreableness” were positively related to many compliance, proficiency and adjustment factors at work, they were negatively related to creativity as a performance criterion. Thus, those features of F, or right limbic, functioning that are about empathetic celebration of personal growth and development, rather than group control and conformity, will need to be freely operative within the new loosely coupled networks. They will be critical to achieving more positive creative and socially integrative outcomes when we seek a significant increase in NP characteristics within the collegiate.

If this is so we need to confront the finding from Reyniersc (1997), cited above, that E and F attached to the NP fusion was only found in small firm entrepreneurs and that TJ may be needed for large companies. We can perhaps take comfort from Limerick et al.’s (1998) view that the new form is about large confederations of small and flexible network nodes in loosely coupled and continually evolving patterns. This would also be consonant with Hurst’s (1995) Eco-cycle model in that his “Learning Loop” resides in a
world recently stripped of many of its monolithic structures and dominantly driven by
the exploratory oddseys of a myriad of small bands of "hunter/gatherers".

Two other findings are relevant within the context of Third versus Fourth Blueprint
environments. First, while Barrick and Mount's (1991) article emphasised the strong
relationship of the Conscientiousness factor to performance criteria, it also reported
some strong correlations with "Training Proficiency" as a criteria. These were
"intellectance/openness (N or Right Cerebral in our terms) with r = 0.25, Extroversion
with r = 0.26 and Conscientiousness (J or Left Limbic) with r = 0.23. So the personality
factors likely to support the "Learning Loop" may well differ from those supporting the
"Performance Loop" in ways consistent with the predictions immediately above.

Finally, Barrick and Mount (1993) found that the level of job autonomy was a critical
moderator of the strength of connections between personality factors and performance
outcomes. Thus we might expect the autonomous status of collaborative individuals
would be at least as great as for most senior managers in Third Blueprint, role scripted
jobs. In such cases, we can expect individuals will be "free to behave in idiosyncratic
ways" (Barrick & Mount, 1993: 112). As they do, the key managerial style variables
will be even more likely to show strong relationships to performance and learning
outcomes – as well as the quality of interpersonal process within the network. This is
likely to have a critical impact on processes of leadership and influence within the
loosely coupled world of the Fourth Blueprint.

**Personality Type and Leadership Style**

"There is little evidence that certain types prefer one leadership style
over another. There is some evidence that Ss and Fs are more
participative decision makers than Ns and Ts. Research also suggests
that N, E, and F are associated with facilitating and interactive leader
behavior while S, J, and T are associated with administrative skills. S-
N appears to have no impact on conflict management while Fs appear
more likely to avoid, accommodate, or compromise than Ts. N and P
appear to be positively associated with creativity, managing change
and transformational leadership."

**Walck (1997: 87)**

As noted above, Walck (1997) found scant evidence of any relationships between MBTI
types and Situational or Contingency Leadership styles. She quoted a total of 9 studies
from 1981 to 1993, which found no relationships between psychological type and
leadership style as measured by LEAD-Self – the Hershey and Blanchard instrument - or the Fiedler Contingency Model Questionnaire. However, a study by Routamaa & Ponto (1994), using Reddin’s 3-D model in a situational leadership context, found Es were more Executive, Ss more Bureaucratic and Fs more Missionary. A glance at Figure 2.2.4 reminds us that all three of those types were in the limbic zone of the 2-space map although E was close to equally aligned with Cerebral and Limbic Right.

More positive relationships between type and leadership were found with specific elements of behavior held in theory to be relevant to leadership. For example, Ss and Fs (Limbics) seem to favour participative management styles more than Ns and Ts (Cerebrals) who tend to be more autocratic (see e.g.: Schweiger & Jago, 1982). Walck (1991), in a study on undergraduate students learning participative management skills, found that although all types learned the skills adequately, Fs learned them best. This effect was moderated by gender: F females learned best whereas T males learned worst.

Also, E, N, and F (or right brain) managers tend to be associated with facilitating and interactive styles while S, T, and J (or left brain) managers are associated with administrative skills. Hein (1989) reported that subordinates saw Es and Ns as more effective at coaching. Es, Ns, and Fs also received higher ratings from subordinates on motivation and morale in a study of over 200 managers across several industries. (see: Johnson & Golden, 1994). On the other hand, Fitzgerald (1994) found that Ss, Ts, and Js were rated by subordinates and peers as showing higher administrative skills such as planning, organising, and time management; cognitive skills such as problem analysis and quantitative skills; delegating and controlling style and results orientation. However, the results on performance and satisfaction can differ depending on who is doing the rating. Van Velsor and Fleenor (1997) found that subordinate and peer ratings appeared to more consistently demonstrate relationships with MBTI than did supervisory ratings. Also Fs seemed to gain more favourable ratings from peers and subordinates than supervisors whereas Ns scored higher with supervisors.

In regard to dyadic interaction, it appears that opposites may attract. In a study of four women college administrators and their women subordinates, Duley (1989) found that opposite types tended to have a more positive management interaction than similar types. This is all but consistent with Nutt’s (1986) view that action-oriented types SF, NT, and NF prefer to deal with their opposites but that the action-averse STs have
difficulty coping with other styles. On the other hand, DiMarco and Tate (1994) in a comparative study on managerial dyads in Ireland and the US found that the smaller the difference in type, the higher the superior rated the subordinate on satisfactoriness. So it appears that the “opposites attract” effect may not be entirely reciprocal. Roush (1992) suggested type may effect the tendency towards variable ratings from subordinates. In that study, Naval Academy midshipmen with ESFP and ENFJ types rated like-type superiors highly but TJs as a cluster rated like-type superiors quite low. However, this last result could be affected by the Academy culture being dominantly SF and F in tone.

Another study using a “Cognitive Style” variable distinguishing between intuives and analyticals (Allinson et al., 2001) relates to the above issue. The authors make clear that they see this variable as either a broad Right Brain versus Left Brain measure or, more narrowly, possibly a Cerebral Right (Intuition) versus Limbic Left (Sensing) surrogate. In either case, they examined the profile similarity of 142 manager-subordinate dyads to test the similarity-attraction hypothesis. Their ‘outcome’ variables related to the rated dominance and nurturance of supervisors within the relationships and the subordinates’ satisfaction with the quality of the leadership. Findings include the following:

- Intuitive leaders were seen as less dominant and more nurturing than analytical leaders and were more liked and respected
- Intuitive members with intuitive leaders were more dominant in their dyads than were analytical members with analytical leaders
- The more intuitive were the leaders compared to their members, the less they talked in meetings.

Allinson et al (2001: 213) concluded as follows:

“It may be that the tendency of intuitive leaders to be perceived as more nurturing than their analytical counterparts results from their openness to new ideas and flexibility in problem solving which contrasts sharply with the more structured, undeviating approach of the analytical leader. The relatively accommodating style would be perceived in positive terms by subordinates, especially analyticals who may want to impose their own structure on the problem. The more focused approach of the analytical leader, on the other hand, possibly limiting subordinates’ involvement in framing the problem and contributing ideas for its solution, would create a relatively ‘cold’ climate and a dislike of the leader.”

To the extent that their view is cogent, it poses severe dilemmas for distributed leadership in the Fourth Blueprint regime. On the one hand, the intuitive type is likely to
be more commonly liked and respected in leadership roles. They are also likely to encourage growth and development in all members of the group to the extent that they are empowered to do so. On the other hand, it appears that, even in formally structured situations, the analytical type, whether designated leader or follower, will tend to be more dominant in their style and rigid in their views. In the fluid, rotating, emergent leadership dynamic the Fourth Blueprinter is seeking, the intuitive might rarely 'emerge'. And even when they do, it may be more to serve the group control objectives of some committed analytical who wishes, at that moment, to avoid too high a profile.

Conflict management style raises related issues. However, on this continuum, there are no relationships with the SN variable. Rather the TF variable seems to be the most relevant here. Fs show an increased tendency to use accommodation and cooperation whereas Ts are more competitive (see e.g.: Kilmann & Thomas, 1975; Mills, Robey, & Smith, 1985). A study by McIntyre (1991) found three personality dimensions (E-I, T-F, J-P) were better predictors of integrating and compromising strategies than gender whereas gender better predicted obliging and dominating strategies.

With regard to the issue of Transformational Leadership, the research findings are somewhat equivocal. Walck (1997: 84) has this to say about the theoretical understanding of the relationship between transformational leadership and type:

"When this shift from 'managers' to 'leaders' is framed in type terms, it emerges as a call for a shift from the ST and SJ managers who dominate most organizations to NF and NP leaders who can develop a vision of the future and arouse excitement of organizational members to pursue it."

Four studies in two different contexts cast some inconsistent light on this issue. In a study of 128 senior executives in a major pharmaceutical company, Van Enron (1991) reported that Ns and Ps were more likely than Ss and Js to self-report a disposition for transformational leadership. They also found that the more strongly the leader held the transformational self-perception, the more likely subordinates were to rate them highly. Conversely, Roush and Atwater (1992) reported that S and F preferences correlated with ratings of transformational leadership amongst Naval Academy midshipmen.

More generally, Roush (1992) reported that Fs were more likely to receive higher scores on transformational leadership in the same setting. Roush attributed this to the emphasis on interpersonal interaction in the questionnaire. The instruments used by both Roush
and Roush and Atwater were derivatives of the Multifactor Leadership Questionnaire (MLQ) developed by Bass and Avolio to measure Transformational Leadership (Bass, 1999). A strong element of emotional and motivational tone is often attributed to the measurement of transformational leadership by the MLQ. Thus the predominance of Fs among the highly rated on this factor is not so surprising.

A recent study in a military setting by Ross and Offermann (1997) casts further light on this issue. The focal leaders in this study were 40 commissioned officers at the USAF Academy. Ross and Offermann related scores on MLQ items, designed to measure transformational leadership, (TL) to nine personality variables measured by adjective check list instruments. “Subordinates” in the 40 training squadrons supervised by each of the focal leaders provided all the ratings. A Factor Analysis of the personality variables produced three factors: “Enabling” – a bipolar factor with positive loadings for pragmatism, nurturance and feminine attributes and negative loadings for aggressiveness and criticalness; “Forcefulness” – a unipolar factor loading high on self-confidence, dominance and masculine attributes and “Need for Change” - a single variable factor. Enabling accounted for 38% of the variability in TL and Forcefulness, though not significantly related to TL itself, added a further 10% to total variance on TL on top of Enabling. Need for change made no contribution to the variance on TL.

So, it appears that S (pragmatism) and F (nurturance, feminine attributes) do, indeed, represent a strong clustered element of TL, at least as measured by MLQ in military settings. However, we should also consider some other elements of the military setting uncovered by Ross and Offermann relating to the interaction of personality, leadership and performance. Ross and Offerman measured subordinates satisfaction with the work unit and the academy with a rating scale and related those measures to the TL scores and personality measures. Satisfaction generally, and most strongly with work unit, was related to TL and, also, to those personality variables making up the Enabling factor. However, unusually for such studies, they also had an array of six “objective” measures of unit performance for each of the 40 squadron commanders. Each squadron included about 120 subordinates and their performances were averaged to reach the score for each focal leader. None of those scores significantly related to TL.

In discussing this, the authors noted that the closeness of interaction and duration of the structured relationship between leader and followers afforded perhaps the best chance
possible for intensive and inspirational leadership to produce "performance beyond expectation" to borrow words from the title of Bass’s (1985a) seminal work on TL. However, none was apparent. Ross and Oppermann also noted that all units were formed on entry by an elaborate quantitative and analytical system designed to ensure equal distribution of characteristics likely to be relevant to performance across all squadrons. Hence, they suggested that the lack of impact of TL on performance in this setting might imply that TL is essentially about a dynamic of attracting peak performers, and presumably then holding them in the star team, by all the dynamics related to satisfaction as outlined above. This might imply that TL does not have a direct interactive impact on subordinate development but rather is an indirect selection and retention impact of social and interpersonal dynamics.

While there may be some merit to this explanation, this author would also note that the ethos of the military setting might well enthuse about “performance beyond, or even well beyond, average”. However, performance “beyond expectations” introduces an entirely more vexatious prospect into the climate of a preparatory nursery for delivering swift, guaranteed and focused response to immediate crisis. It introduces elements of uncertainty, novelty and initiative. It is true that all these elements may be needed in full measure in the future operating environment of a military operating in a technologically intense, geo-politically unstable and conceptually complex setting. However, there is little evidence that any world military group produces a transcendent culture in this respect, let alone risks letting it loose in their premier officer development incubators.

A further finding from Ross and Oppermann is relevant. It seems that the personality characteristic – “Need for Change” (NC) – does not relate to TL, at least in this military setting. Ross and Offerman (1997: 1084) note: “an element of nonconformity is included in the (NC) scale and it is possible that the military sample precluded leaders who demonstrated nonconformity.” While this explanation does seem entirely cogent, we should remember that the above description of NC has very strong echoes of the NP issues we were canvassing above. It also suggests that our two contrasting findings as above should alert us to the possibility that:

- the perception of transformational leadership is strongly influenced by the task situation and group dominant culture in which it is assessed; and
• the SF or Limbic charismatic is perhaps more likely to elicit and drive emotion in the service of regression and ritual defensiveness than in pursuit of exploration, generative learning and transcendence.

The SF, or Limbic, pattern as the driver in a transformational leadership measure needs further thought. It is a simple, action-oriented team or group coherence style. It would not be expected to initiate and drive fundamental transformation. To use Hurst’s (1995) classification illustrated in Figure 2.1.8, SF or Limbic or Market/Clan is the delivery end of the Performance Loop – not the generative side of the Learning Loop. The transformational leader that one uncovers at the end of Nicholls’ developmental odyssey as we described it in Section 2.1.3 most certainly is not a grounded limbic. House and Shamir (1993: 82), in an article on ‘transformational, charismatic and visionary leadership theories’, offer these thoughts on the generic leader being invoked:

“According to this new genre of leadership theory, such leaders transform the needs, values, preferences, and aspirations of followers from self-interests to collective interests. Further, they cause followers to become highly committed to the leader’s mission, to make significant personal sacrifices in the interests of the mission, and to perform above and beyond the call of duty. Charismatic leaders theoretically transform organizations by infusing into them ideological values and moral purpose, thus inducing strong commitment, rather than by effecting the cognitions or the task environment of followers.” (emphasis added)

In regard to the limited adaptability of charismatics, House & Shamir (1993: 102), add:

“Since charismatic leaders must have a passion for the ideological goal that they set forth, it is most likely that they are rather nonadaptable with respect to changes in the vision or the values underlying it... This ... does not imply that charismatic leaders are strategically or tactically rigid. Rather we believe that such leaders are able to change strategy and tactics in the interest of the vision but are likely to be unable to compromise the major thrust of the mission, or its underlying values and ideology.”

Thus, in Argyris & Schon’s (1964) terms, the SF charismatics are passionate and committed single loop learners, cautious and somewhat tardy double-loop novitiates and quite unfit for the priestly rites of triple loop transcendence. They are Performance Loop warriors! Conversely, the NP, “integratively complex” cerebral-right style we discussed in the previous sub-section is the warrior of the “Learning Loop”. They will generate many profound, transformational and provocative questions and will be at home in the domains of double and triple loop learning. In terms of the leadership roles
we located in Figure 2.1.10, they are likely, when combined with T or Cerebral Left, to be the visionary “Contributor” or, when combined with the F or Limbic Right style, to be the developmental “Catalyst”. However, in either case, too tight and clannish a team culture developing within their network, especially with a dominant SF element, is more likely to destroy the NPs contribution to the complex exploratory search that is at the heart of the “Learning Loop”. It will also cause their social regression, withdrawal of trust and the display of the antisocial behaviour attributed to them above. It is to these leadership and influence dynamics that we will direct our attention in Section 2.2.4.

2.2.4 Brain Styles and Leadership: The psycho-dynamics of influence in turbulent, transformational environments.

“Participatory management is generally accepted in organizations where (right-brain) modalities and values prevail; but where (left-brain modalities) dominate, the participatory approach seldom if ever takes hold without a very conscious effort to expand or shift the organization’s thinking preferences. In a management group whose culture is profiled as strongly preferring highly structured, tightly planned, organized, disciplined, and administratively focused modes of operation, you can expect outright rejection of a management approach that also tolerates ambiguity, considers intuitive thinking valid, respects emotional expression, considers its employees unique and intrinsically valuable, is flexible in its administration, and trusts employees to do what they think is best.”

Herrmann (1989: 149)

The research literature we have considered in Section 2.2.3 allows us to refine the details and nuances of stylistic interaction in the new organisation and their impact on transformation. Thus, the real devotees of the participative process are SFs (in Jungian terms) or Limbics. While it is probable that NFs (or Right Brainers) will be comfortable with participative processes, they will also energetically seek space for individual expressiveness and initiative. Also, if N drives their right brain fusion, they will be uneasy with elaborate process controls, such as ‘equal time’ and ‘equal voting rights’, when they interfere with creative reframing and relocation of action for those they see as inspirationally and experientially competent. They will, however strongly support developmental opportunities for all their colleagues and, reciprocally, will expect full, individual commitment to the challenges those growth opportunities bring.

In terms of the “Edge of Chaos” map (see Figure 2.1.3), Right Brainers will be comfortable ‘far from certainty’ but will be sensitive to the discomfort and dysfunctions
that a ‘far from agreement’ position brings. They will invest significant time and energy
in open and inclusive dialogue in the hope of constructing a congenial ‘agreed reality’
and broad intentional focus but they will be skeptical and dismissive of democratic
rituals that seek to force and then record a group position. They will see participation in
terms of opportunity and responsibility rather than rights and equality.

As research also showed, the cerebral, and especially the NTP, is a visionary driven by
alternative views of a better world and an internal referent that thrives on ideas from any
source but has little grounded empathy for the difficulties of others. NTs, just as for NFs
and SFs are more comfortable working with other types rather than like types, but it is
more from a sense that their thinking is less transparent to other types and thus they
have more room to manoeuvre. Open dialogue is seen as a refreshment and part of the
playground of ideas for all but the most analytically dominant left cerebrals. However,
any attempts by the SFs in a group to trap them in a grounded clan control climate will
lead to unilateral withdrawal – either actual or psychic – by the Cerebrals.

For the Left Brainers, Herrmann seems to have caught their preferences and stylistic
biases precisely. STs are not inclined to openly transact with anyone except other STs.
They have dominant interactive proclivities that prompt them to drive relationships
whether or not they are designated as leader. Also, they seek precision and control,
using elaborate systems design to pre-program behaviour and organisational responses.
Along with NTs, they tend towards autocratic, rather than democratic styles and reject
all but the most elaborately pre-designed and proscribed participative schemes. They
strongly support procedural justice – did the system treat you properly according to
established procedure rather than did it treat you sympathetically and reach a positive
outcome for the future of all. They can agree to change – provided that its value can be
unequivocally established in advance - and the new regime is extensively pre-designed.
In short, they are deeply maladjusted to the demands of uncertain discontinuous
environments and strongly inclined to behave in ways that are directly antithetical to the
emergent, organic search for new perspectives through collaborative dialogue in action.

Finally we can return to the Limbics or SFs, the real advocates of participation in work
groups. Their belief in the value and propriety of full engagement and empowerment of
all is undoubtedly genuine. However, it is often used to ground and focus the dialogue
on easily determined and action-oriented routines and is tied to a marked tendency to
need compromise and interpersonal calm and to avoid interpersonal conflict within the group. Limbies are often charismatic in their ‘here and now’ operational competence and passionate defence of the past regimes. They find it relatively easy to ‘score points’ for individualised consideration from peers and subordinates but their limited tolerance of complexity leads them to dislike the deep questioning and expressive search of NPs and NFs and to use participative rituals to close down genuine dialogue.

As with the four alternative perspectives in the CVF model, the four brain styles come to the experience of emergent, unstructured group process and complex problem solving at a tangent to each other. They show differing interpersonal and cognitive styles and they are differentially adjusted to, and effective within, emergent, discontinuous and collaborative environments. While the Left Brain and Limbic modes are attuned to structured, performance environments, it is the cerebral and right-brain styles that are most attuned to complex, creative, exploratory, “Learning Loop” organisations. Our analysis of psychological type or brain laterality demonstrates how critical a sensitive understanding of individual differences can be to the challenge of achieving organic transformation while maintaining a sense of coherence and committed group identity.

We can now consider some of the micro level issues raised by the leadership model in a Fourth Blueprint context. Figure 2.2.8 continues our conceptual mapping process with the Brain Styles model superimposed on the Transforming Leadership model.

The conceptual justification for the fusion in Figure 2.2.8 should be clear from the material presented previously. However, it prompts several questions, including:

- If the Right Brainers and Cerebrals are the Contributors and Catalysts of transformational processes in Fourth Blueprint environments, how available are individuals with such profiles within the ranks of the “Hi-Po’s” (high potential aspirants) for the new paradigm organisations;
- Equally, if the Left Brainers and Limbies are the prime candidates for regression to the antagonists roles of ‘Knowall’ and ‘Ringmaster’, how prevalent a presence are they among the ‘hi-po’s’? Also, could their dominant presence as hold-overs from the Third Blueprint be the most critical barrier to our effective adjustment to the new millennium;
- Thirdly, recalling the Stamp (1989) conclusion about the stability (or persistence) of style over time, is it time to dispense with the left and
limbic baggage of a past era in the hope of ‘freeing the field’ for the creative and integrative Cerebrals and Right Brainers? Or alternatively,

- Is this the time to actively use distributed leadership designs and crafted learning assignments in ambiguous and vexatious environments to modify the interactive styles and collaborative confidence of the highly-trained specialist professionals that will be so critical to handling the systems complexity of the new environment?

The first two questions are subjects for research, some of which has already been done (see e.g.: McAdam, 1994). It suggests a distinct deficit in right brain profiles amongst the ranks of managerial ‘high potentials’ in the western world. The research also suggests a moderate positive balance for Cerebrals at top executive echelons falling away quickly from senior middle management to be replaced by a surfeit of Limbic at operational and supervisory levels of management. This might be manageable in the traditional steep hierarchy, with the conceptual/strategic roles clustered at the Apex. However, a flat network emphasizing collegial empowerment needs a predominance of fluid and complex strategic thinkers throughout its ranks. Also, the hallmark finding is the dominance of the left brain profile within the managerial cadres of most Western countries, especially so in situations which represent ambiguity, confusion and stress.

This raises the issues tapped by the last two questions above. We should acknowledge that the genuine Fourth Blueprinter would be horrified by the ‘termination’ strategy suggested in the third question. Partly this is based upon a strong emphasis on the need for diversity in the collaborative community facing discontinuity. However, it is also
testament to a strong humanist celebration of the value and unconditional worth of all human talent and energy. They would advocate the use of distributed leadership processes to neutralise the worst impacts of driven, focused leadership and provide a seedbed for learning more open, creative, experimental and inclusive operating styles.

However, the research outlined above indicates that the psychodynamics of stylistic interaction in open, unstructured groups are extremely complex and volatile and subject to systematic dysfunctions and blockages as often as they might lead to emergent learning, creativity and transcendence. I will return to these issues in Section 3.1.2 when I construct a brain styles model of the distributed leadership processes that will need to function effectively if Fourth Blueprint regimes are to achieve their objectives.
Chapter Three

Theoretical synthesis and integration of the exploratory research focus
"Around the globe, two antithetical forces — interdependence and diversity — are generating tensions that will fundamentally change the conditions under which leaders must lead. To succeed in this dramatically altered environment, where inclusion is critical and connection is inevitable — that is, in the Connective Era — we need a new kind of leadership."

Lipman-Blumen (1996: xi)

Sections 1.3.3 and 1.3.4 sketched a program of research that had two grand stages to it. In the first stage, we would use disciplined imagination to probe related theory and research in search of a more elaborate and detailed picture of the psychic, leadership and interpersonal dynamics at the core of the Fourth Blueprint experience. We would seek to build a mental model of the interactive dynamics, psychological types and leadership styles that are critical to the transition from the performance and control oriented organizational culture of the Third Blueprint to the flexible and innovative, learning culture of the Fourth Blueprint. Based upon the extensive literature search, connective theory building and integrative conceptual mapping in Chapters 1 and 2, we are now in a position to present such a model. This will be done in Section 3.1 below.

Stage 2 of the research program was to focus essentially on the question: "What are the possible sources of the new mental models within our potential and aspirant managerial cadres as we head into the 21st Century?" As indicated in Section 1.3.2, there is a range of suggestions within the literature in relation to that broad guiding question. Many of them relate in some way to the growing diversity of constituents in our managerial ranks over the last 2 decades or so (as alluded to in the quote above). They include the advocates of "feminine" leadership and the related issues around gender differences in managerial style and psychological type. They also include those who suggest that occupational background and functional experience has a profound and lasting impact on the cognitive style and emotional responsiveness of managers that make the Third Blueprint warrior especially maladapted to the new organisation and environment. Finally, the level of stress that is now extant in the discontinuous environment, and within the organisational role structures being used, is sufficiently high to inhibit the relaxed, experimental and flexible collaboration so valued within the Fourth Blueprint

The contribution of the literature on these issues is the focus of Section 3.2 below as a prelude and foundation for reporting an empirical investigation of the impact of these
variables on managerial style to be presented in Chapter 4. Finally, in Chapter 5, we will revisit the conceptual models we have built in Stage 1 and presented in Section 3.1. Then, in light of our empirical findings, issues related to the relative tardiness of, and resistance to, the ascendancy of the new organisational forms will be considered. We will also seek to refine the approach to implementing transformation to take account of diversity in psychological type among 21st Century managers. As indicated in the quote above, we are effectively in search of transcendence, of the paradoxical fusion of opposites. It is not simply a matter of deciding when to stress interdependence and when to give diversity (or individuality) its head. We need ‘both/and’ and we need to address not only the terms upon which they might coexist but also the harmonics that will allow them to grow and thrive in each other’s presence.

3.1 Towards a brain dominance theory of change dynamics and distributed leadership in complex and turbulent environments

“There is a need for a theory that can explain both stability and change, that can handle contradiction, that includes complex people, tightly strung systems, and transforming leadership. The problem with (that) is that as soon as we follow the advice to consider contradiction, complexity, tension and transformation, we tend to stop considering consistency, rational people, tensionless systems and instrumental leadership. We fall into a trap born of our need for internal consistency and shearing away that part of reality that contradicts the things that we seek to explain.”

Quinn & McGrath (1985: 316)

An essential characteristic of the Fourth Blueprint ethos is the independent, loosely coupled free reign of the collaborative individuals that make up the key performance and learning nodes of the emerging networks. Any large scale venture, whether run as a tight bureaucracy or a loosely linked confederation, will have a hierarchy of critical foci from complex strategic and developmental questions right down to day to day operational and systems maintenance issues. In the bureaucracy, these tend to be co-located, in terms of level, with the structural hierarchy that exercises control over the organisation’s activities and direction. However, in the Fourth Blueprint, attention to these issues, and the right to determine them, is to be extensively distributed across strategic, developmental and operational teams. This means that issues, such as macro-paradoxes like that described in the quote above, will need to be competently addressed, and collaboratively resolved by all key members of the network.
So it is clear that research questions directed towards the contribution of cognitive, personality and managerial styles to the more effective resolution of such issues are not simply questions about the leadership style of an elite coterie of senior managers, as they would have been in the Third Blueprint. They are, in fact, questions about the key qualities that are required of the full constituency of “Collaborative Individuals” who are now to be super-responsible elements of the action and developmental community which is the network. Given the nature of the 21st Century managerial environment, they are essentially questions about the impact of individual differences in style on tolerance of, and response to discontinuity, ambiguity, environmental change and fundamental internal transformation. Those issues are the subject of Section 3.1.1 in which a model, mapping the common territory for style and change responsiveness and specifying their connecting and contending relationships, will be presented.

However, the character of any group that seeks to plan and deliver coherent and jointly endorsed outcomes whether initially leaderless, emergent, temporary or bureaucratic needs to create and display various critical patterns of influence and leadership. As we saw above, the preferred character of these processes for the Fourth Blueprint can best be described by the labels shared or distributed leadership. So we need to consider the relationship between cognitive and managerial style and various alternative approaches to leadership and influence. This is the focus of Section 3.1.2 where we build a model of distributed leadership roles and relate it to the extant theories of leadership. Finally, while those models will hopefully provide us with a clearer understanding of the individual contributions of various styles to the processes of change responsiveness and leadership, they have limited value in clarifying the dynamics of interaction between contending styles in emergent group process. They also miss the critical issues of how to constitute and develop groups in such a way as to maximise the possibility for open dialogue, flexible responsiveness and transcendence towards a more inclusive and integrative level of functioning. This will be considered in Section 3.1.3 below.

The reader will note the relative brevity of accompanying argument in support of the models presented in Sections 3.2.1 and 3.2.2 below. This is consistent with the view that the research cited in Chapters 1 and 2, together with the cumulative conceptual mapping process that accompanied it, has provided the detailed justification for the final models.
appearing immediately below. The limited amount of verbal argument in Sections 3.1.1 and 3.1.2 is designed only to add clarity to the nature and application of the models.

3.1.1 A Brain Styles model of organisational change strategies and roles

On the basis of the foregoing literature review and the conceptual mapping that accompanied it we are now in a position to sketch a model of the relationship between individual differences in Brain Styles profiles and differential patterns of responsiveness to change. The model is presented in Figure 3.1.1 below.

The general application of the analytical framework sketched in Figure 3.1.1 relates to the dominant responses of the various styles to environmental change and their preferred strategies for managing change. Thus:

- **Limbics**: are the operational integrators - the routine, team-based operational 'ring-masters'. In their mind, change disrupts smooth process and productive and interpersonal continuity and is to be avoided whenever possible. However, as noted in Section 2.2.3, they may well be charismatic defenders of simple, entrenched positions and internally-
focused improvers or transformers of members’ capacity and willingness
to excel in the sacred missions and rituals of the dominant paradigm;

- **Left brainers:** are the operational implementers - who produce elaborate
  plans for implementation, construct mechanical and/or organisational
  vehicles for delivery of plans and ‘fine-tune’ systems and products. To
  them, change produces complexity, which is a challenge, and uncertainty
  and imprecision which is a horror to be avoided at all costs. Also, they
  are intensively short-term and time-driven - 'slaves to the urgent';

- **Cerebrals:** are into strategic realignment - they are the visionary
  designers and readjusters of complex systems whose ever-elaborating
  imaginations generate much scope in terms of possible alternatives and
  whose need for precision and detail leads to extensive generation of
  elaborate and complex analysis. Change stimulates and energises them
  but turbulent environments can lead to 'cerebral overdose' where they
  seem to spend all their life 'flying too close to the sun'. They may well be
  in danger of focusing on the ‘beat of their own drum’ rather than
  pursuing dialogue in search of a changing perspective amongst their
  colleagues. Practical implementation is not their strong suit; and

- **Right brainers:** are the organisational renewers - the visionaries with
  their feet planted in the organic soil of their social and interpersonal
  world. They see the challenge of change but value it most as an
  opportunity for personal growth for themselves and those around them.
  They see process as often more important than immediate results and
  they seek integrated (holistic) health in the systems they deal with. Right
  brainers have no sense of time urgency. They are seekers after 'meaning'.

The other two possible styles are what Herrmann (1989) refers to as “Double Dominant
Diagonal Opposites”. They combine the Cerebral Left Brain with the Limbic Right and
vice versa. These styles have similar status, in the Brain Dominance model, to the
“paradigms of internal coordination versus external impact” in Quinn’s CVF model (sec
Figure 2.1.1 above). Herrmann (1989: 88-89) has this to say about these styles:

“To the extent that physiology affects the model, its worth noting that no
direct connection exists in the brain to link the cerebral left with the
limbic right or the cerebral right with the limbic left. In both the model
and the actual brain, all interaction between these two modes must go
through another quadrant or brain structure first. Of all the types of
profiles these are the ones that are potentially the most problematic... the major modes are in quadrants that oppose one another in almost every way. They pit: (1) ideas against action; (2) feelings against thinking; (3) people against things; (4) the future against the past; (5) risk-taking against staying safe. As a result (they) frequently find themselves caught between decisions based on two entirely different sets of values.”

While this author agrees with that assessment, a certain minority grouping shows each of the two ‘cross-over’ styles within most quadrant-based measures of Brain Styles and they have a distinct profile with regard to responses to change. Thus:

- **Speculators** (Limbic Left + Cerebral Right) are the action-oriented risk-takers. Like Cerebals, they, too, are visionaries but their visions are quickly (sometimes prematurely) driven into action by an insistent left limbic emphasis on tangible product and measurable outcomes. They can generate change where little would otherwise be forthcoming but pay scant attention to the maintenance of the current social and institutional fabric of their organisations. In the Quinn CVF model, they would be seen as “Combative Leaders” (see Figure 2.2.3).

- **Organizers** (Cerebral Left and Limbic Right) are risk-minimisers and maintainers of the system’s current organic balance and arrangements. Their analytical, left-cerebral, emphasis on precision and ‘objective’ formula for action tends to encourage careful and time-consuming reflection before generating programmatic responses to changed circumstances. Also their teamist, Limbic Right preference for fully engaging and satisfying all, or at least an overwhelming majority, of stakeholders before taking action leads to organisational inertia in fast changing environments. However, in the Quinn CVF model, they would be labeled “Synergistic Leaders”, reminding us of the competing claims of internal harmonics in the search for healthy organisational functioning.

As implied by Figure 3.1.1, individuals whose brain-dominance concentrates around the Left Brain and Limbic poles will not be change-friendly. They will seek out, and operate best under, conditions of environmental stability or continuity. On the other hand, those whose dominance is Cerebral or Right Brain, are the initiators and integrators of major systems changes in organisations. The Cerebral style combines the reframing and visualising capacities of the Cerebral Right with the precise and formula-based interpretative talents of the Cerebral Left. It is a style typical of strategic
planners, management consultants and R and D scientists. As our world becomes more complex and turbulent, a higher percentage of CEOs show this as their dominant style. It is a key element in the environmentally responsive, 'initiator', and 'designer' styles advocated by the new organisational systems thinkers, such as Senge (1992; 2001)

However, it is the right brain that combines a facility for envisioning and exploring a range of possibilities while maintaining real sensitivity and empathy for the emotional and personal commitments of individuals and groups within the organisation's constituencies, both internal and external. It is from this style that we learn to grieve for our lost history and celebrate our past achievements at the same time as we become energised by new challenges and excited by the opportunity for personal growth and change. It is the right brain factor that preserves and nurtures the best of our organic core - our sense of positive identity - while opening up the scope for personal growth through shedding our psychic and social 'skins' and trying out new ways of relating.

As noted above, Limerick and Cunningham and their various colleagues articulated a perspective on the 'Collaborative Individual' that saw such a conceptual character at the centre of any credible transformation towards an authentic post-corporate, Fourth Blueprint culture. They recognised the challenge that a proliferation of such characters would pose to the classic or even Third Blueprint manager. They also placed some core elements of personal style such as empathy, intuition, creativity and transformational capability at the heart of their specification of the contrasting psycho-dynamics of this 'new age' actor. Having reviewed those issues, we should return to Figure 3.1.1 and reconsider its implications from the perspectives of transformation and change.

The first point is that the skills, attitudes and values summarily represented on the left and bottom of the chart serve the maximising ethos of operational management. They are the anchors of continuity in a stable, linear world. They represent the transactional imperatives of pre-determined goals and agreed productivity contracts. Alternatively, the upper and right quadrants of Figure 3.1.1 summarise the strategic reframing and organic renewal goals of transformation. We should note the focus of the fused right brain styles on 'Identity'; the topic of such importance to Shamir (1999) in the search for a centre of gravity in boundaryless organisations. The placement of the term 'self' organising with the Cerebral Right style and 'self renewing' beside the Limbic Right style is representative of a critical distinction for our purposes. Hames makes this
distinction, which he draws from Ilya Prigogine’s theory of dissipative structures (Prigogine & Stengers, 1984). He defines the principle of ‘self renewal’ as “preserving what is already known” and ‘self organisation’ as “seeking to transform that which is known in order to improve” and notes (Hames, 1994: 116):

“We can only conclude that the traditional need for self renewal (through management) is increasingly inappropriate and unnecessary, while the need for self organisation (through leadership) is increasingly vital. Because of the turbulent nature of current environmental change, appreciative systems require an ecology of self organisation, an ability to continuously transform themselves in order to survive. Where once there might have been just one leader, appreciative systems need an abundance of leaders at different strata throughout the organisation.”

The old managerial mindset, to the extent that its self-renewing focus was on people, is represented in Figure 3.1.1 by the Limbic. The Left Brainer is the self-renewer of systems. While Hames would have us attach our hopes for a newly organised future with the cerebral right, theory and research on brain styles suggest that people rarely come with so finely focused a style. To the extent that, in any individual, the imaginist preference comes attached to a strong analytical backup, we have a cerebral or ‘Contributor’. In them, self-organising zeal will be in danger of lacking a firm organic grounding in the sense of identity that Shamir so correctly invokes as central to long-term human adjustment, especially in ambiguous environments. Alternatively, when providing the backup for the Imaginist, the right limbic provides a worthy element of the ‘Catalyst’ role. However, their self-renewing preferences may inhibit the learning process by seeking to reinstate the comfort of familiar regimes and avoiding the perturbation attendant upon the conflict of ideas. It is in the continual balancing tensions and collaborative dialogue in process between conceptual strategic alignment and emotional integration and identity that the process of transformation can be effectively trimmed to point directly into the winds of discontinuous change.

Before examining the brain styles implications of such distributed leadership processes, we should sound a caution about the transformational potential of many of our Left Brain and Limbic warriors. It is consistent with Stamp’s view mentioned earlier on the persistence of managerial style. Many of them, especially the Left Brainers are conceptually strong. They can easily understand, at a cognitive level, the strong case in complexity and uncertainty for the new styles and they will publicly espouse the transformational processes as advocated by the networkers. However, under any level of
environmental stress and uncertainty, the metaphorical collaborative Caftan is ripped
asunder, revealing the fine bespoke weave of the hierarchical suit underneath. So, in a
very real sense, they erect complex systems, as anchors against what they feel are
precipitous and erosive changes that will destroy control – or, in the case of the
Limbics, they ‘become’ those anchors themselves.

In fact, the issue of reversion to basic style under stress may be critical to attempts to
build a more open, experimental and collegial climate in Fourth Blueprint organisations.
If so, this would be consistent with Quinn’s comment as discussed in Section 2.1.1 on
the intellectual but not emotional response of his clients to the demonstrated need for
transformation. The process by which distributed leadership regimes are progressively
enacted and defended while ensuring dispersed strategic empowerment and flexibility
should be an important research focus for the Fourth Blueprinters.

3.1.2 A Brain Styles model of distributed leadership roles: Sharing influence and
responsibility in Fourth Blueprint organisations

A Brain Styles model of Distributed Leadership roles in effective networking
organisations in complex and discontinuous environments is presented in Figure 3.1.2.
Two general explanatory observations are called for. First, and consistent with the
decaying status of role scripts as coordinating devices in post-modern organisations,
they are not really “roles” at all. They are more like “centres of thematic attention” or
broad areas of organisational custodianship signifying the primary inventory of Critical
Success Factors for the learning organisation. They are the group maintenance and
development tasks that will need to be given close attention by all the collaborative
individuals within the emergent network, even while each “role” may be regularly or
irregularly distributed and rotated. Thus:

- **From the Left Cerebral’s primary mental domain**: we might hope to see
  focus on the systems development role of “Perfecting what we do” and
  on the systems application role of “Building our knowledge base”;

- **From the Left Limbic**: primary attention to delivering tangible results
  through “Completing our projects” and pursuing continuing responsive
development through “Monitoring and ensuring our performance”;

- **From the Right Limbic**: a broad emphasis on preserving and expanding
  the capacity and commitment of our human resource base by Building
our team” (with an internal, operational focus) and “Extending and enriching our networks” (with an external and development focus), and;

- **From the Right Cerebral:** a concentration of attention on future aspirations, directions and resources through “Appreciating who we are and might become” (with a group inclusion and dialogic focus) and “Elaborating our options” (with a challenging and provocative style).

The second general point to be made is that the eight roles arrayed around Figure 3.1.2 are, of course, ‘fitted’ to the particular brain style preferences in their proximal territories. Thus, they can be taken to be implying a limiting, selection-oriented approach to the problem of staffing responsibilities in the network organisations.

However, we should remind ourselves that the individuals who, from time to time, fulfill these various roles all come with at least some level of “double-dominance” in their brain styles profiles. In fact, at least some will be triple dominant or even “whole brained”. So, far from being intended to delimit and encase, these roles are designed as a map of exploratory, collaborative development possibilities. We might, alternatively, see them as mapping proximal learning and growth opportunities and suggesting learning and mentoring partners for the iterative construction of the new organisation.
This author prefers the latter developmental and collegial approach to harvesting benefits from the insights of brain styles, personality type or any other typology.

Such an approach would see the schema in Figure 3.1.2 as a design for an interactive learning laboratory directed to the emergent building of a collaborative, flexible response system for the Fourth Blueprint environment. So the detailed specifications of the distributed roles are less critical than the individual, dyadic and group opportunities for growth and transcendence that come from both effectively 'fitted' role occupancy and challenging 'discordant' role assignments in collaborative proximity and developmental support of each other. In the SLT terms we introduced earlier, there is scope for the team climate ("E") to be progressively shaped by the open interaction of diverse types in collaborative decision making and action (ie: B;P). Equally, individual personalities ("P") have the impetus for growth and change as they confront new perspectives in the supportive environment of a learning team (ie: B;E). There should be no better breeding ground for the emergence of Collaborative Individuals.

However, as we saw in Section 2.2.3, the research literature is equivocal as to the prospects for such a learning climate to spontaneously emerge in such a situation. We should remember the tendency of the Left Brains or (or analytical) to dominate dyadic interchange whether they are the designated leader or not and also to feel comfortable working with others only when they too were Left Brains. Again, while the Limbic is open to dialogue at one level, they prefer simple, certain environments and will seek to use elaborate participative process and emotional manipulation to shield themselves and the group from confronting the vexations of complexity, discontinuity and ambiguity. Alternatively, Right Cerebrals, or perhaps Cerebrals generally, inject the cognitive complexity and flexibility of conceptual repertoire demanded by our ambiguous and discontinuous environment. However, while they make delightful "intellectual playmates" in a ground of their own choosing, they will tend to unilaterally withdraw when the team "gangs up on them" using participative rituals.

The more general theoretical perspective from which to view this issue relates to new versus old paradigm dynamics in the processes of leadership and influence. Thus, the lower triangle anchored by Task, People and Transaction in Figure 3.1.2 is the domain of the old paradigm – of the Third Blueprint and Situational and Contingency Theories of Leadership. It was a world of answers, continuity and performance, which still could
use some learning, exploration and innovation periodically. The upper triangle anchored at Transformation represents the coming paradigm. It is a world of questions, discontinuity and learning, which can still use some systems, control and performance to the extent that they do not strangle the innovation and flexibility.

As in the past, we need to distribute opportunities for, and expectations of, contributions to the leadership process around the full circle of those functions. However, *it is the essence of the message in this thesis that the balance must change*, if we are to have genuine “Learning Organisations”. The processes to develop the new strategically empowered networks should acknowledge the potentially malign impact of the need for control and certainty, and the capacity for social and interactive regression that drives the mental models of the Left Brain and Limbic warriors of the Third Blueprint. As Limerick et al (1996: 104-106) concede, team empowerment did not necessarily lead to the emancipation of individual expressiveness and creativity in the Third Blueprint.

Their solution for this in the Fourth Blueprint is to emphasize the collaborative dialogue and appreciative inquiry of an Action Learning regime as the continuing modus vivendi for the network organization. I cannot but agree that such a radical change to interactive patterns and rituals of legitimisation within the organisation will be necessary if we are to reach the post-modern nirvana we have been contemplating. However, I would stress that the most fundamental focus for our learning will be our own personal and interactive maturity. At the centre of that focus should be our capacity to acknowledge and accept the importance and impact of personal styles as well as continually seek, and provide others with, space and support to transcend the limitations of those styles. Until we achieve that, we will probably need unusually transcendent, third party facilitators to ensure that we don’t allow our collaborative process to disempower our learning.

It is to the challenges and dynamics of changing that balance between maximising and optimising, independence and interdependence, creativity and cohesion, clarity and search, congruence and transcendence and emergence, that Section 3.1.3 is devoted.

### 3.1.3 On balance and transcendence in forming and shifting emergent cultures

"Transcendence results in dynamic growth. However, within the expansion itself are the seeds of contraction, formalization, and routinization... In other words, as the values of the developmental culture or advocacy are increasingly maximized, the values of
the hierarchical culture spontaneously emerge.” (emphasis in original)

Quinn & McGrath (1985: 331)

"Have you ever thought what it would be like to be a caterpillar in a cocoon being transformed into a butterfly when you had no idea of the existence of butterflies, or of the process of transformation? All you knew was that your body, that had served you so well up to now, was disintegrating. That's what I feel like. It's a very painful process."

CEO of a US $2billion company, 11 months into a transformation
Quoted in: McMaster (1996: 69)

How does one achieve “transcendence”? What is meant by the concept, and what are the mechanisms for achieving it? And to the extent that it is humanly possible, how desirable is it anyway? We should recognise that, not only are these issues deeply effected by individual style, they are also questions of differential perception based upon style. One person’s sense of excellence through disciplined and persistent striving is another’s prison of obsessive and limiting ritual and routine. In the era of continuity and linear growth that was the post-war period from the 1950’s to at least the early 70’s, a lifetime in one broadly focused vocational or professional career trajectory was not only possible but the ultimate “cherished good” for the modernist masses.

Hurst’s Performance Loop and Strategic Management mentality (see Figure 2.1.7) capture the imperatives of this psychological and strategic contract well. The ‘conserved’ organisational ecology served by this mentality required the effective and ‘fitted’ use of a lush variety of interconnected life within a tightly coupled web but the organic range was more fairly described as “proliferation” rather than diversity. The essence of harmonic operation was to achieve a stable and continuing balance within the web and a clarified, and ever more precisely targeted, identity of self – whether that be the individual, the group or the organisation. For the organisation man (Whyte, 1960), the objective was static triumph in this life state not dynamic transcendence to another.

In any case, for the Third Blueprint mentality, transcendence (or even a little transformation) at the individual level, while not unheard of, was certainly an extremely rare phenomenon. It was viewed as both difficult to achieve and somewhat unsettling in the day to day operation and development of performance excellence in work settings. If individuals felt trapped in incongruent roles, they could resolve the tension by leaving
and finding other, better fitting roles – usually in artistic, social or community settings. Alternatively, they could find a team or organisational setting in which their fellow members provided critical elements of congruence with the task environment and they provided needed, but secondary, maintenance services to the team. So, hopefully, they would “transcend” their own “limitations” by affiliation with an excellent team.

This latter strategy was often satisfactory for the limbic – especially right limbic – servant to the strategic top team in a complex environment. However, it often saw the cerebral – especially NP type – visionary creator prematurely expelled from the organisation as a disturbing influence well before reaching the inner sanctum of complex strategic responsiveness, where they might well have done some good. To avoid this fate in the Third Blueprint corporate world, the cerebrals needed to temper their expressive generativity with a capacity for form and order – that is, they needed to be NJs, as Reynierse’s (1997) research suggested (see Section 2.2.3). In quieter times and more continuous environments, such outcomes may have been best for both the individual and the organisation.

However the new environment demands the fluid, creative and disassembling insights of the NP at both the helm of the organisation’s developmental journey and at the core of its operational response systems. For our organisational systems also, transformation came as Darwin described it – by gradual modular replacement over a few generations. Or, occasionally, when urgent crisis demanded, by wholesale replacement of the executive “brain” of the organisation – transplant style. However, we should note that the frequent experiments in such slash and burn style turnarounds in the 1980’s and 90’s left widespread evidence of long term “organic” damage to operational health and loss of organisational memory within the subject systems by the late 1990’s (Casio, 1993). So, while the “surgical” option may be fast, it could kill the patient in the long, or even medium, term. Alternatively, the modular, evolutionary method is too slow for the hyperactive 21st Century environment described above, even in terms of the limited transformational period required within the firm itself.

So, confronting these realities, organisational change theorists in the 1990’s began moving their focus beyond modular and punctual change theories towards a consideration of the nature and dynamics of profound transformation in organisations.
(see e.g.: Bartunek & Louis, 1988; Dunphy & Stace, 1994; Porras & Silvers, 1991). In discussing this type of radical transformation, McMaster (1996: 73) had this to say:

"What is a transformation anyway?... The term generally indicates significant change to the whole, accomplished in a remarkably rapid manner. When comparing the resulting state to the beginning state, the nature of the change is so significant that it calls forth questions of identity." (emphasis added)

However, in exploring the mechanisms of transformation, he also notes that, in biological terms, transformation will only occur within the space of possibilities already inherent in the organism and suggests that, in organisational transformation, a similar process of "greater realization" of existing possibilities is the essence of effective outcomes. In effect, the organisation becomes more of what it might be. How does it do this? McMaster (1996: 74) suggests:

"Organizational transformation... is a process of learning and development rather than a process of intervention. It is a process of dialogue and experimentation, not one of decision and decree. It is an inclusive process rather than one of directed expert design... Transformation is an emergent process and cannot be accomplished by a corporation unless it is a coevolving process between the corporation and its participants."

Thus, transformation requires the willing engagement of collaborative partners in active search for learning and emergent pattern. McMaster (1996: 170) defines engagement as "communication which engages the intention of another (or others) in ways that do not depend on force, coercion or covert operations of any kind but instead fully recognizes the self-organizing and self-creating nature of individuals." He argues that engagement is not possible within a system based upon coercion. He notes that many executives and managers seeking to communicate a positive vision that will energise their employees, still withhold vital information and retain the right of veto and oversight to ensure the level of control their insecurity demands. This "inauthentic" behaviour closes down any chance of their own emergent transformation, let alone that of their employees.

To increase engagement as a pre-condition for transformational change, in both individual systems and people, requires increased dialogue at all points in the system and the open consideration and intelligent contemplation of paradox. To repeat Quinn and McGrath’s (1985: 331) quote from Section 2.1.1:

"Transcendence...at the psychological level, is the capacity to engage paradox in a Janusian fashion, to transcend one’s own..."
schismogenetic tendencies (for either/or), to see unities in oppositions, and to move above and reframe the contradictions.”

While these requirements seem logical enough, they are stylistically vexed. They require a personal style that is loose, relaxed, experimental, complex and “spatial” as opposed to tight, linear, and focused in its cognitive processes – in short, a Right Cerebral style. However, at the same time, they place a premium on human nurturance and support and a natural confidence in, and respect for, the generative competence of one’s fellow humans – in other words, a Right Limbic style. This specification carries it’s own paradoxical tensions. The Limbies (SF) carry the right limbic sensitivity to the needs of others but can not handle complexity and conceptual risk and experimentation. Also, their interpersonal anxieties lead them to seek compromise and accommodation in conflicting and paradoxical situations. The Left Brainer lacks both the interpersonal empathy and tolerance to openly engage in provocative and creative dialogue for long enough to achieve transcendence through the fusion of opposites, and the spatial and visionary capacities to handle complexity through intuitive fusion.

So it would appear that the “natural” propensity for transcendence through learning new “ways of being” (see: Vaill, 1996) exists in the balance of right brain skills. However, as discussed in Section 2.2.3, Allinson et al’s (2001) research suggested strongly that intuitives (or Right Brainers) as leaders tend to defer to analytical followers in dyadic interaction. One can envisage a situation in which open, participative group process will produce the exact opposite of transformational process. Thus, Left Brainers would dominate group processes with analytical prescriptions, Limbies band together to avoid open dialogue on issues of paradox and complexity and Cerebrals withdraw from dialogue in despair that their complex, creative visions and dilemmas will ever be fully addressed to their satisfaction. In such circumstances, we might forgive the Right Brainer for feeling that the key transformation required to enable organizational change would be in the personality and cognitive styles of their colleagues.

As we noted in Section 2.2.3, Kirby (1997) uncovered the tendency of clearly dominant stylistic coalitions to define the group climate (or view of “reality”) and to marginalise alternative styles within the interactive and developmental processes of the group. The message above is that, if that dominance is held within specific coteries of networking organisations by Left Brain and Limbic styles, genuinely deep search and open learning and the potential for transformation through the transcendence of paradoxical tensions
will be unlikely. And, notwithstanding the rationalist pretensions of the Left Brainer, this is not a purely objective, logical response. Much emotion, based upon a genuine incapacity to visualise a non-tangible and unarticulated future with any facility, drives their concern about profound but exploratory transformation – as suggested in the quote from McMaster (1996) that initiated this subsection.

This raises the issue of stylistic balance within managerial cadres as we proceed into the 21st Century. The models presented in the above subsections suggest systematic stylistic differences in the ways various individuals confront discontinuity and radical change in the perceived environment. They also provide an inventory of variously fitted leadership roles that suggests the differential contributions of each brain style to the interpersonal, group and organisational processes of leadership and influence. In reviewing maps, such as Figure 3.1.2 providing a full ‘clock face’ of complementary and contending roles, it is tempting to recommend an integrative ‘smorgasbord’ of roles. And as with any good dietitian, favour a “well-balanced” serving.

Thus Ned Herrmann (1996: 47-51) discusses, in some depth the concept of the “world as a composite whole brain” by which he implies that “if the sample size is large enough, the composite of individual profiles represents a highly diverse, but well balanced, distribution across the four quadrants.” (Herrmann, 1996: 47. Emphasis added). To clarify his point, he is reporting the broadly distributed characteristic of brain styles as a measure of individual differences across almost any significant gender, social, national, ethnic, occupational or professional grouping. He was certainly not implying that smaller samples – such as work teams in specific environments - or focused samples – such as senior executives in service industries – would be similarly well rounded. In fact, as we know from our review of stylistic norms in Section 2.2.3, many executive and professional sub-groups show quite distinct stylistic imbalances and, overall, executive samples show clear TJ bias in MBTI terms and Herrmann (1996: 74) himself reports Left Brain or Cerebral dominance for executives depending on level.

Herrmann (1996) makes the unique characteristics of most peoples’ profiles and the wide range of “spikey” profiles (with significant emphasis in just a couple of quadrants and at least one quadrant avoided) a key theme throughout the text. Nonetheless, at other points in the reference, he also stresses that the desirable position to achieve is “whole-brained” (or in more lay terms “well-rounded” use of all four styles). This
relates to individuals, small social or work groups or organisations. There is a sense that each individual, no matter what their stylistic dominance, should be encouraged to feel entitled to make a contribution to the team in the spirit of common opportunity – regardless of how “ill-fitted” a specific style might be to a particular environment.

Quinn and McGrath (1985: 329-334) seem to have a similar uneasiness with fully implementing the “different strokes for different folks” implications of the “fit” or “congruence” macro-logic. We illustrated their approach to the concept of congruence under the CVF in Table 2.1.4. They attached differing cultures and leadership styles to each of four stereotypical environments. In the text accompanying that table (Quinn & McGrath, 1985: 329 ff.), they then sketched out the logic underlying each ‘fitted’ assignment in the table. Having articulated the congruence logic they also noted that it was in the paradoxical clash of opposites that the genuine seeds of transcendence were to be found, implying that too close an adherence to the logic of congruence might damage the continuing journey of self-discovery and development. Quinn and McGrath (1995: 334) then state; “Actually, in the cycles of organisational life, the thought processes of all four types are congruent with situational demands.”

One of the strengths of such a perspective in a Fourth Blueprint environment is that it is inclusive of diversity in the developmental and strategic processes of the network. However, if balance is interpreted as strict equality in numbers for each style, then:

- we typically do not achieve it in small operating teams and groups;
- in any case, as our mapping has strongly suggested, different stylistic balances (or mixes) are needed to confront different environmental realities and varying interpersonal and leadership dynamics; and
- precise balancing of numbers will not produce a balance of outcomes given the varying propensity of each style to drive group process, seek dominance, generate or withhold creative insight and promote open, emergent search and active dialogue, confrontation and conflict.

Also, in the context of a Fourth Blueprint environment as articulated in Chapter 1, the imminent return to the Performance Loop/Strategic Management mentality is not contemplated. Whether we may in the fullness of time return around Hurst’s (1995) infinite regress to confront it again, for the moment the organisational existential dilemma confronting us, according to the Fourth Blueprinter, is the continuing
domination of the Third Blueprint regime and mental model. In this analysis, we need to understand the change of balance required to initially facilitate the freeing up of our natural transformational styles. Then, we might, hopefully engage our more constrained and constricting Third Blueprint refugees in an assisted, collaborative encounter with the transcendent possibilities that paradox, ambiguity and uncertainty can bring.

A summary statement of the implications of our conceptual mapping to date might be along the following lines. “The Collaborative Individual is naturally found in the interactive fusion of the Right Brainer (for Collaboration) and Cerebral (for Individual). It is in the more open, frequent and empowered interaction of these styles that a culture of transformative learning and stylistic transcendence might be able to develop and sustain genuine learning organisations.” The message of this conceptual mapping process and the two core models derived from it is that, if we hope to achieve these new dynamics, we must follow the steps of the following logic:

- Among the managerial cadres operating in Fourth Blueprint, networking mode, a significant numerical shift in stylistic balance will be required;
  - Towards Cerebral and Right Brain styles; and
  - Away from Left Brain and Limbic styles;

- However, a numerical shift in the balance, while a necessary first step, is not sufficient to recover transformational force. Even if such a shift is accomplished, we can still expect dysfunctions of individual and group decision-making and learning processes to occur within an empowered distributed leadership structure while;
  - Left Brainers confront and resist the changed value sets and operating modes and reach a realisation that the climate will no longer sustain their direct domination at a transactional level; and
  - Limbics confront the need to release group process from the stranglehold of participative democracy and start exploring complexity and ambiguity with the support of their colleagues; and

- Even if the balance can be changed as in the first step above, the stylistic relearning processes outlined in the second step are unlikely to succeed without third party facilitation directed towards energetic confrontation of the warriors of the old paradigm. As noted previously, Limerick et al (1998) place great store on Action Learning processes in this regard and
we will return to a consideration of these technologies in Chapter 5 in the light of the balances uncovered in our research sample; but

- Notwithstanding the difficulties and 'rough remedies' outlined in the second and third points above, we cannot escape our stylistic intransigent Left Brainers and Limbs by the simple mechanism of selecting them out. Not only do we continue to need their critical skills but also, the nature of networks are that they need to operate with the best loosely coupled resources available so, at the micro-operational level, the selection decision will often not be ours. In any case, as noted above, where is our source of creative, paradoxical tension if we totally remove half the stylistic universe from the dialogue?

This completes the theory building and conceptual mapping process that was labeled as Stage 1 of this thesis in Section 1.3.3 above. In my submission, the theoretical fusion, culminating in Figures 3.1.1 and 3.1.2, between the Fourth Blueprint, Competing Values Framework, Eco-cycle Model, Transforming Leadership and the Brain Styles framework is:

- **plausible**: *in its prima facie implications*;
- **cogent and logically consistent**: *in the internal relationships it suggests*;
- **believable**: *in light of the issues which it addresses*;
- **interesting**: *in the range of relevant questions it raises for further theoretical and empirical investigation, and*;
- **connective**: *in the sense of linking varied theoretical structures together in a way that expands the set of provocative questions to be considered*.

The above criteria were drawn from the Weick (1990) article on theory building as 'disciplined imagination' which was cited in Section 1.3.3. We should remind ourselves that these conclusions say nothing about the validity of any propositions that might be generated from the conceptual fusion of our mapping process. Rather it has hopefully generated an extensive exploratory arena for thinking about, questioning, researching, fine-tuning, appreciating and evaluating the experiences of people attempting to lead, or contribute to, creative responsiveness on the 'edge of chaos'.

The other criterion suggested by Weick was "That's beautiful" – an experience he implies speaks to a surprise encounter with the essential harmonics of the universe that
might occasionally occur in sciences such as quantum physics. He aspires to such experiences in the organisational sciences. I can only hope that, in the case of the material in this thesis, that might be seen as a worthy but reasonable beacon for a very long journey of dialogue and discovery with other colleagues and collaborators engaged by its provocations and possibilities. For now, it is time to turn our attentions to the more tangible questions of where we might find the majority of the new paradigm mental sets we hope to engage productively in the transformation of individual styles and organisational cultures to meet the needs of the Fourth Blueprint.

3.2 Finding the Collaborative Individual: Demographic and situational correlates of Fourth Blueprint psychodynamics

In Section 1.3.3, we explored the difficulties, both conceptual and practical, with attempting to empirically test the direct validity of theories and models such as those that have now been presented in Figures 3.2.1 and 3.2.2. However, as we encountered in Chapter 2, there are also many empirical studies that can help us to both construct such “useful”, “provocative” and “believable” models and also explore their implications, and issues related to their collaborative implementation. In relation to stylistic mix within our organisations, we could usefully empirically evaluate the overall character of the current managerial workforce, our trainee “high-potentials” of the future in graduate management and in-house senior executive programs and/or various theoretically selected and carefully stratified sub-samples of those general populations. The models represent a template or guide to assist with evaluating the relative availability of the key features of the “Collaborative Individual”. Equally they provide us with a sense of the critical interpersonal and developmental dynamics, both positive and negative, likely to accompany any given mixture of styles within a population, sample or workgroup.

The move towards a Fourth Blueprint, learning style of organisational dynamic is a profound challenge to the mental model that drove previous blueprints focusing on performance and control. The literature on managerial and personality style also suggests that, as recently as the late 1990’s, the managerial workforce showed stylistic biases that were clearly well adjusted to the Third Blueprint. As implied in Lipman-Blumen’s (1996) quote that initiated Chapter 3, the immense increase in diversity, scope and terrain in our postmodern organisational geography requires a new mental set for effectiveness. We are unlikely to satisfy these new needs from within the current stars
of the Third Blueprint regime. So an important issue for the Fourth Blueprint reformer is to identify from which niches within the managerial diaspora current and future we will draw the critical agents of transformational change in the interpersonal, group and organisational dynamic that we are seeking. A corollary of that relates to the likely interactive dynamics among a mix, which includes the old and new ascendant styles.

A not unrelated body of literature has flourished in the last 20 or so years around the issue of gender and management/leadership style. Some elements of this literature suggest there are strong grounds for seeing women as more naturally and experientially inclined towards networking and nurturing, inclusive styles than males. Others refute either the reality or the relevance of these differences within organisational settings. We survey these competing views in Section 3.2.1 with a view to establishing a position on the impact of gender on effectiveness and satisfaction in Fourth Blueprint environments.

Further, equally well developed literatures exist on the impact of specialised professional and occupational training and experience and of national, ethnic and cultural differences on stylistic profiles and managerial behaviours. Sections 3.2.2 and 3.2.3 will assess these literatures with regard to their predicted impact on the factors central to our theory of the stylistic requirements of ‘Collaborative Individuals’. However, in all three of these subsections, a very focused view will be taken as to the relevance of literature directly to the managerial and leadership style issues canvassed above. Thus, three huge “continents” of intellectual endeavour on these issues will be largely ignored as we go to a few peninsulas and rivers of their territory that are jutting or flowing directly into the “sea” of managerial style and the Fourth Blueprint.

Finally, while the research literature on organisational and occupational stress is truly prolific, it is strongly tinted with a Third Blueprint conceptual frame and perception of the key drivers of stress as related to performance expectations. There is much less that relates directly to either the impact of style upon experienced stress in various situations or the impact of situational stress upon stylistic repertoire. Nonetheless, what there is will be important to our consideration of the feasibility and challenges of introducing Fourth Blueprint regimes into uncertain, discontinuous organisational environments. We will address this issue in Section 3.2.4.
3.2.1 Gender and Collaborative Individualism

"Shakeshaft argues that women are more likely than (men) to use an informal style, listen more, while men interrupt more often, are more democratic and participative, use power tactics such as coalition, co-option and personality, (and) are more likely to withdraw from conflict or use collaborative strategies. Such a blend of consensual and relational skills (and) a readiness to use political power tactics is what collaborative individualism is all about. (Rogers suggested) that the male mechanistic world of control and objectivity would be replaced by a female worldview. Loden, focusing on women's creativity, concern for people, interpersonal skills and intuitive management, voices similar (views)"

Limerick & Cunnington (1993: 147)

"We are now in a new economic age of volatile and unpredictable change. It is an age in which information technology may obviate the need for alienating hierarchical arrangements altogether, an age in which women, with their preferred ways of organising based on shared commitment and concern for others, are in the ascendancy. Such preferences translate broadly into a disdain for being at the top of the hierarchy in favour of a structure that places them at the centre of things." (emphasis in original

Richard David Hames (1994: 102)

Perhaps speculation as to the general nature of gender differences has been current since Adam and Eve, but research into the more focused issue of gender differences in managerial behaviour in our organisations and institutions is somewhat more recent. A particular impetus was given to that research in the early to mid 1970's by the seminal US-based work of Virginia Schein (1973; 1975) on sex role and managerial role stereotypes. The general thrust of that work was related to the perceptual stereotypes held by the population of the concepts “manager”, “male” and “female”. The common outcome amongst observers/reporters of both genders was an alignment close to unity between perceptions of the concepts “male” and “manager” and a large degree of distance between both those concepts and the stereotypes of the concept “female”.

This general finding regarding gender-based differences in stereotyped perceptions was replicated on many occasions over a period of around 20 years, including several carefully monitored replications of the initial studies (see e.g.: Brenner, Tomkiewicz, & Schein, 1989; Dubno, 1985; Heilman, Block, Martell, & Simon, 1989; Massingell & DiMarco, 1979; Powell & Butterfield, 1979, 1989; Sutton & Moore, 1985). However, Brenner, Tomkiewicz & Schein (1989) did note that, by 1989, the stereotype of the
female manager held by female managers had become more fluid and also more inclusive of stereotypically “feminine” characteristics even while noting that the stereotypes held by male managers had not changed commensurately.

In a European context, Cames, Vinnicombe & Singh (2001), recently found further evidence that, in balance, support a gender stereotyping model. However, it also suggested that perceptions of the managerial role among European male managers may be moving towards some inclusion of “feminine” characteristics. The researchers used an instrument designed to measure the Hofstede (1998) Masculinity/Femininity variable and adapted to provide “androgynous” and undifferentiated scores as well. They also used a rating scale – The PAQ (see e.g.: Helmreich, Spence, & Wilhelm, 1981) - which allowed them to distinguish between an “instrumental” (or masculine) personality factor and an “expressive” (or feminine) factor. They then asked 66 male and female managers from three banks – one Italian, one Belgian and one Swedish – to rate the concept of “successful manager”. Results showed that “gender differences were more significant than nationality in determining perceptions” (Cames et al, 2001: 108).

Overall, the full sample showed a stereotype that was equally masculine (32%) and androgynous (36%) and emphasised both Instrumental (68%) and Expressive (50%) traits. However, the twist was that it was the males who heavily emphasised the androgynous (45%) and expressive (60%) whereas the women rejected those stereotypes in favour of a view of the successful manager as still dominantly masculine (39% to 27% for androgynous) and Instrumental (66% versus 39% for Expressive). Thus they were denying that they saw any significant movements towards the “new regime” notwithstanding the publicly espoused views of their male colleagues.

Notwithstanding the equivocal findings cited above, throughout the late 1970’s and early 1980’s the consensus position emphasised the need for equal opportunity laws and modification of attitudes to ensure that women managers were treated equitably and developmentally. There was also a sub-theme related to achieving a sense within the community of selectors of managerial talent that was inconsistent with the stereotype. That is, the message was that women were not, in fact, all that different from men and were capable of being as tough and directed as the stereotypically male managers.

However, by the early 1990’s, the interpretative stance had changed again. With the increasing references in the cutting edge literature to the ‘new leadership’ issues we
canvassed above, and especially the emphasis on networking, trust, collaboration and creativity, there was a surge in advocacy for the ‘feminisation of leadership’.

The essential logic of these arguments is captured by the quotes that initiated this subsection. A summary of the critical contrasting characteristics suggested appears in Figure 3.2.1, adapted from Loden (1985).

![Figure 3.2.1: Loden's (1985) Models of Masculine and Feminine Leadership](image)

After years of dodging or neutralising the impact of incongruence between perceived female competence and the hard expectations of the managerial role, redemption was at hand. This new world would favour the unique skills, values and styles of women and render obsolete the intensively trained and socialised rigidities of men. The purveyors of this polemic were indeed prolific (for a sampling of some of this literature, the reader is referred to: Eisler, 1995; Grant, 1988; Gregory, 1990; Helgensen, 1990; Lipman-blumen, 2000; Loden, 1985; Rogers, 1988; Smith & Smits, 1994). While each writer placed different emphasis on the dynamics being considered, the core themes were common to most scholarly offerings on this issue.

Before moving on, we should acknowledge that, in a post-modern world, perceptual stereotypes are an important element of the process of social construction of reality and those described above will certainly be an important focus for collaborative dialogue in any attempt at organisational and individual transformation. However, it is equally important to be aware of the ‘actual’ status of the characteristics under study and not just the, perhaps biased, perceptions of them. Thus we need to know whether men and women managers actually behave and/or feel differently from each other in the managerial role. In research throughout the 1990’s on this issue (see e.g.: Eagly &
Johnson, 1990; Eagly, Makhijani, & Klonsky, 1992), the focus moved towards three alternative findings. They made a distinction between stereotypical findings, counter-stereotypical findings and findings of no difference. For our purposes this literature might best be reported under the two headings below so as to progressively sharpen the focus on the personality issues at the centre of the models in Section 3.1:

- Gender and leadership style, and;
- Gender and brain styles/psychological type.

**Gender and leadership style**

"In contrast to the gender-stereotypic expectation that women lead in an interpersonally-oriented style and men in a task-oriented style, female and male leaders did not differ in these two styles in organizational studies... Consistent with stereotypic expectations about a different aspect of leadership style, the tendency to lead democratically or autocratically, women tended to adopt a more democratic or participative style and a less autocratic or directive style than did men." (emphasis in original)

*Eagly & Johnson (1990: 233)*

In an earlier, more general review of gender and social behaviour, Eagly (1987) makes a critical distinction for the literature on gender and managerial style. That distinction is based upon two types of qualities as follows:

- **Communal qualities**: representing a concern for the welfare of others, and including nurturance, affection, ability to devote self to others, eagerness to soothe hurt feelings, helpfulness, sympathy, empathy and emotional expressiveness, and;

- **Agentic qualities**: displaying assertive, goal directed and controlling tendencies and including aggressiveness, ambition, dominance, independence, self-reliance, directiveness and decisiveness.

Various studies (see e.g.: Gibson, 1995; Rosener, 1990; Spence & Helmreich, 1978; Werner & LaRussa, 1985) support the view that women are more often characterised by communal qualities while men more commonly display agentic qualities. However, that general tendency does not always flow down in a logical and/or consistent pattern to more specific examples of what one would regard as “related” leadership behaviour. The quote above is drawn from Eagly and Johnson’s (1990) now classic meta-analysis of 162 studies of leadership style. As it implies, the stereotypical attachment of task-orientation to males, and interpersonal orientation to women, is not supported by that
meta-analysis in studies conducted in “naturalistic organisational” settings. However, it does strongly support that other classic distinction of the leadership literature: that women use democratic/participative styles while men favour autocratic/directive styles.

It is important to follow up on the distinction that Eagly and Johnson (1990) implied in the quote when they emphasised “organization studies”. They did so because it was one of three types of studies they reviewed in their analysis. The other two were “laboratory experiments” and “assessment studies” both of which the authors termed “research that assessed the leadership styles of people not selected for leadership roles” (Eagly & Johnson, 1990: 233). They made the point that, in these latter two types of studies, there were traces of findings regarding the task and people dichotomy that might be described as “somewhat gender stereotypic”. The general implication behind this observation is that in the actual organisational/career situation, environmental cues and role scripts are clearer and more pressing for all participants, regardless of gender. Thus, there would be less likelihood of falling back on stereotypic background styles (whether gender or socio-economic or ethnic) than in the typically ambiguous performance environment of the laboratory type simulation in which much contingency research had been conducted.

This explanation has now become a commonplace among those arguing for the “no real gender differences” position in regard to managerial behaviour (see e.g.: Brenner, 1982; Gregory, 1990; Korabik, 1990; Powell, 1990). Korabik (1990: 284), for example, states:

“Studies of men and women in actual leadership roles show that persons who occupy parallel positions and perform similar functions do not differ in personality, leadership style, motivation or effectiveness. .... Sex differences disappear when (we control for) factors such as experience, education and age of colleagues... or the type of occupation and level in the organisation.”

Eagly and Johnson (1990) disagree with Korabik about the democratic/participative versus autocratic/directive dichotomy. However, they appear to acknowledge the force of the argument for environmental press in homogenising the senior executive profile. However, underlying Korabik’s position is something more than just the controlling effects of role clarity and immediacy. There is also a sense that the limited sample of women senior managers and executives have been selected to be “closer to the stereotype of the ideal (manager) than their male colleagues.” (Korabik, 1990: 285)

However, as Limerick et al (1998) note, the Fourth Blueprint world is one in which “role as continuity” gives way to “self as continuity”. So Eagly and Johnson’s view
that "in (ambiguous) situations, gender roles may provide more guidance than they otherwise would have and thus produce gender stereotypic behaviour" (1990: 234) is relevant. If cogent, it may be that women managers and executives may be a key source of the new leadership ethos in the networking organisation. However, if the shaping and narrowing of female candidates for critical leadership roles in the Third Blueprint is still impacting upon the next generation, it is possible that our high potential females will remain closer to the old Third Blueprint ideal "than their male colleagues".

This, in some ways, recalls the research of Statham (1987). She found that her open interview study with 22 women and 18 men managers (and their secretaries) across financial service, manufacturing and technical education organisations consistently suggested that "women were both task and people oriented, while men appeared image engrossed and autonomy invested." (Statham, 1987: 409) Her descriptive adjectives for the male managers suggest both their own needs for independence and their expectation that subordinates will accept similar responsibilities as well as their concentration on the reputation and impact that they might achieve or suffer. Her overall implication was that women used a people-invested style to achieve effective performance while men withdrew to some distance from the task conscious of their control responsibilities.

However, she also noted the possibility that the female style might cause resentment among men who prefer to "give everybody space to do their jobs". There was also a hint that women's propensity for "here and now", close quarters involvement in dyadic and group processes was potentially regressive and antagonistic to creative expressiveness. This was definitely written from the perspective of an academic committed to the view that she was seeing real and meaningful gender differences in stylistic approach to the managerial role. However, it is still written from a heavily invested Third Blueprint understanding of the managerial role. This is forgivable, given when it was published, but it suggests that, where there are gender differences in managerial role behaviours;

- they are more likely to show in the fundamental stylistic preferences of the male and female managers (more on this in the sub-section immediately following), and;

- they should stimulate a robust defence of the equal, perhaps superior, quality of the female managerial style - especially in team and operational roles related to performance outcomes.

We will return to these issues in reviewing the data presented in Chapter 4.
A study by Gibson (1995) provides some more generic support for the concept of masculine and feminine leadership styles. In a study of male and female managers in four countries (Norway, Sweden, Australia and USA) Gibson used an instrument measuring Flamholtz’s leadership framework (Flamholtz, 1986) to measure leadership style and hypothesised national and gender differences and interaction between the two. However, she found consistent gender patterns across all four countries and concluded that: “males emphasize the goal setting dimension while females emphasize the interaction facilitation dimension.” (Gibson, 1995: 225) While not fully aligned with task versus people orientation, these results are certainly in a very proximal domain.

Conversely, a study by Toren, Konrad, Yoshioka & Kashlak (1997) on managerial task preferences among managers in five countries (USA, Japan, Australia, Italy and Israel) found some equivocal results on gender. Only two countries showed gender differences. In the USA they were stereotypical with females showing a more “feminine” orientation and the men a “masculine” style. However, the Japanese males showed a distinctively “feminine” preference in managerial style both absolutely and in relation to Japanese women managers. Also, in this study and in Gibson (1995), national effects were more significant and consistent than for gender – an issue we will revisit in Section 3.2.3.

Another area of leadership style that appears to produce some gender stereotypic effects but an inconsistent overall picture is related to transformational leadership styles. As Van Engen, Van der Leeden & Willemsen (2001) note, the literature shows a strong thematic tendency to equate transformational styles with “feminine leadership” (see e.g.: Carless, 1998; Helgesen, 1990; Loden, 1985; Yammarino, Dubinsky, Comer, & Jolson, 1997). However, actual findings are less clear. Carless (1998), Komives (1991) and Maher (1997) found no gender differences in subordinate ratings of managers on transformational leadership but Doherty (1997) and Druskat (1994) reported significant gender-stereotypic relationships. Bass and Avolio (1994) reported results suggesting females as the more transformational leaders among a sample of 150 males and 79 female senior executives in six Fortune 500 companies. However, Bass, Avolio & Atwater (1996) reported inconsistent findings across three studies. The first, similar to Bass and Avolio (1994) showed consistent gender differences but the others – one on lower level managers and one across all levels – failed to show any gender differences.
In considering these inconsistencies in research findings, Van Engen et al (2001) suggested that “gender-typed contexts” might moderate the natural expression of underlying personality and style in enacted behaviour. By gender-typed context, they mean situations where the dominant and majority participants are clearly of one or the other gender – not evenly balanced in the mix. They noted Druskat’s (1994) study in which female leaders were clearly more transformational than the males. However, they discounted the generality of this finding because all the leaders were in religious orders and the females led only females and the males only males. In this regard, Gardiner and Tiggemann (1999) found that female managers were more task-oriented in male-dominated contexts and more people-oriented in female dominated contexts than males.

While this has some echoes of Statham’s (1987) findings outlined above, Van Engen et al (2001) pursued the issue of gender-typed contexts noting the sampling limitation of Gardiner and Tiggemann’s (1999) study. This concerned the diversity of “masculine-“ and “feminine-dominated” industries from which they drew their subjects, confounding variables such as firm size, company policy and corporate mission with the gender-typing issue. Van Engen et al kept “as many variables as possible constant, except for gender-typing by studying a single retail organisation (which) accommodated both ‘masculine-typed’ and ‘feminine-typed’ departments.” They predicted no direct gender differences in leadership scores but differences due to gender typing. However, while they confirmed their null hypothesis on gender, they found no differences due to typing.

In explaining this null finding, they expressed the view that the use of subordinate ratings of the managers (rather than self-ratings) might explain the lack of significant differences as self-reports “tend to be more stereotypical than are behavioral ratings by others.” However, they also noted the “supposedly feminine shopping context” and conceded it may be responsible for the lack of departmental differences (Van Engen et al, 2001: 593-594). Also, we might expect that a single retail company, admittedly spread in sites across Holland, would have a relatively coherent and consistent cultural set on these issues. However, Van Engen et al (2001) report that their measure of gender-typed contexts displayed clear departmental differences. Further, they found that the four geographically dispersed stores they surveyed showed significant differences in people-orientation and transformational leadership. They did not explain this latter finding but it suggests sub-cultural niching within the firm. If contextual impact is to mean anything, it is possible that this effect obscured or confounded the gender effect.
We might also speculate that it tells us to pay less attention to the nominal gender and more to the concept of "masculine versus feminine" leadership styles and climate whichever gender is the driving force behind them. On this issue, a study by Park (1996) provides some illumination. She examined the relationship between gender role (i.e., masculine, feminine and androgynous), decision styles and leadership styles. The decision styles test was framed on a brain styles structure where "Directive" style = Left Limbic, "Analytical" style = Left Cerebral, "Conceptual" style = Right Cerebral and "Behavioral" style = Right Limbic. Leadership style measured task-oriented and relations-oriented styles. On a sample of 50 females and 40 males, Park (1996: 13) found "strong support for the proposed relationships: masculinity/directive/analytical/task-oriented styles and femininity/conceptual/behavioral/relations-oriented styles."

A study by Hackman, Furness, Hills & Paterson (1992) may broaden our insight into the associations at work here. They administered a combined battery comprising 60 items from the Bern Sex Role Inventory (the same instrument as used by Park (1996)) and 79 items from the Multifactor Leadership Questionnaire assessing transformational leadership (see: Bass & Avolio, 1990) to 153 New Zealand Polytechnic students in an introductory management course. The focused issue was to establish the relationship between transformational leadership and masculine or feminine gender role orientation. The correlations they found, between the various transformational leadership factors and both masculine and feminine orientation, are presented in Table 3.2.1.

**Table 3.2.1 Comparison of Correlations of Masculine and Feminine Scores with Transformational Leadership Factors**

<table>
<thead>
<tr>
<th>Transformational Factor</th>
<th>Masculine</th>
<th>Feminine</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charisma</td>
<td>.43</td>
<td>.57</td>
<td>1.65*</td>
</tr>
<tr>
<td>Individual Consideration</td>
<td>.22</td>
<td>.56</td>
<td>3.51**</td>
</tr>
<tr>
<td>Intellectual Stimulation</td>
<td>.46</td>
<td>.29</td>
<td>1.65*</td>
</tr>
<tr>
<td>Extra Effort</td>
<td>.32</td>
<td>.39</td>
<td>0.70</td>
</tr>
<tr>
<td>Inspirational Leadership</td>
<td>.37</td>
<td>.44</td>
<td>0.74</td>
</tr>
</tbody>
</table>

* Significant at $p = 0.10$ (2-tailed). ** Significant at $p = 0.05$ (2-tailed).

As can be seen from the table, there are substantial and significant correlations between several factors derived from the Transformational Leadership questionnaire and both masculine and feminine orientation. However, there are more and stronger correlations
between the feminine orientation and the leadership factors than for masculine. Also we should note that the strongest correlations with feminine orientation were for Charisma and Individual Consideration. This recalls our discussion in Section 2.2.3 regarding the possible limbic component of charisma driven by the Right Limbic or Feeling personality type. It is also a cogent observation with regard to Individual Consideration.

Further, the substantial, but only marginally significant, gap in favour of masculine orientation in the relationship with Intellectual Stimulation is interesting, suggesting a more cerebral rather than right brain quality to this element of transformational leadership. This recalls the “Contributor” and the “light on the hill” dynamic we discussed in Section 2.1.3, and in framing the brain styles model of responsiveness to change in Section 3.1.1. It would also be consistent with the suggestion that males tend to show more cerebral dominance whereas females are more limbic. In reviewing their findings, Hackman et al (1992: 311) emphasised the integrative conclusion that “the results imply that to be effective, leaders must display both masculine and feminine behaviours.” Their conclusions are illustrated in the quadrant-based classification presented in Figure 3.2.2 (adapted from Hackman et al, 1992:318).

![Figure 3.2.2: Gender/Leadership Grid - adapted from Hackman et al (1992)](image)

The figure is based on the premise, common to most researchers on androgyny, that the masculine and feminine gender role orientations are independent. In the Hackman et al (1992) study they showed a non-significant correlation of -0.1. Thus, conceptually, an individual can be low in both, high in both, or low in one and high in the other. In terms of the charting of the leadership styles we discussed in Chapter 2 and Section 3.1, the placement in Figure 3.2.1 of the two “not quite” transformational styles of interpersonal
and task leadership in relation to transformational leadership is interesting and provocative. If we diagonally reverse their placement, we begin to see a model with a close similarity to Figure 3.1.2, the Brain Styles model of distributed leadership roles.

This speculation also adds an intellectual and conceptual element to the concept of “task leadership” giving it a behavioural range similar to the “instructor” to “contributor” flexibility in Nicholl’s (1986) model. Further, it suggest a “non-leadership” quadrant that looks very much like the anchoring, control-oriented regression from development that we suggested might characterize the most emphatic Limbic Left (or SJ). However, in personality terms, it is not clear whether people can be “yin and yang” – or “Left Brain and Right Brain” at the same time. We will return to this issue after we have presented some exploratory data on brain styles in Chapter 4.

The research cited in this section suggests that, although there are strong and continuing stereotypical perceptions of gender differences in leadership, the results related to actual and reported behaviour are more equivocal and clouded by contextual issues. As we found in Section 2.2.3 in more general applications of styles, there is little consistency and clarity in research relating gender to leadership behaviour and image. It may be in a more direct approach to the underlying structure of personality that we uncover more enduring relationships among gender, leadership and interpersonal behavior.

Gender and Brain Styles/Psychological type

“Our database clearly differentiates the left mode style from the right mode style on the basis of gender-oriented preference. The left mode has a strong alignment with male-oriented preferences (logical, analytical rational, structured and organised) and the right mode style has a strong alignment with female-oriented preferences (interpersonal, emotional, expressive, informal and open)... There are two other combination styles that show distinct gender differentiation. The cerebral style is strongly male preferred. The limbic style is strongly female preferred.

Herrmann (1996: 108-109)

Herrmann’s quote sums up the findings on gender differences in both brain styles and psychological types from a range of studies we will cite in this subsection. However, the actual findings paint a picture that is, at once, rather more narrow and specific and also more complex and confused than Herrmann’s quote might lead us to believe. We can best illustrate the issues first by reference to various charts taken from Herrmann (1996)
that he uses to illustrate different gender profiles for differing samples. For example, the charts in Figure 3.2.3 are drawn from the reference in close proximity to the above quote. They illustrate typical positioning of each gender within Hermann’s extensive managerial databases. However, the profile in Figure 3.2.4 is taken from a general population of over 110,000 (around 67,000 men and 47,000 women).

The main dimension on which the genders differ in that population is the Left Cerebral (male dominant) and Right Limbic (female dominant) contrast. This is commonly the key difference and the strength of the female Limbic Right mode is enough to produce right dominance overall, even with no (or little) gender difference on Cerebral Right. Equally their dominant status on Right Limbic explains their Limbic dominance.
overall. Run the logic in the opposite direction for men and we have in concept the overall differences that Herrmann presented in Figure 3.2.3 in graphical form.

The interaction of gender with occupational profiling confuses the picture a little and probably explains the gender gaps at Right Cerebral and Left Limbic in Figure 3.2.3. For example, in the top left graph in Figure 3.2.5 a profile of male and female entrepreneurs taken from Herrmann (1996: 76) is presented. In that we see the total right/left and total cerebral/limbic differences that appeared in Figure 3.2.3. However, the profiling in the top right graph (for ‘Business Managers’) and the bottom graph (for ‘CEO’s’) in the figure shows only Cerebral Left/ Limbic Right gender gaps.

McAdam (1994) conducted an exploratory study across eight national samples of MBA’s. Table 3.2.2, drawn from McAdam (1994: 16) provides the critical data from that study. L-TAS (see: Davies, 1982), the brain styles test used in that study, provided two profile measures – one related to “Relaxed” (or normal operating) conditions and the other for “Pressure” conditions. As Table 3.2.2 shows, there are consistent gender differences on Right Brain styles across all nations with the exception of India where the women are more Left Brain than their male colleagues. The scores for UK and Australian subjects are clearly gender stereotypical but, for the USA and France, male managers were almost as Right Brain as their female colleagues in relaxed conditions. However, under pressure, although all sub-samples moved to the left, the level of Left Brain dominance is generally much higher for males with the exception of the Japanese sample. On the other hand, there was only a marginal gender difference in the Limbic-Cerebral dimension under pressure and no significant difference when relaxed.
Table 3.2.2: Composite 'Thinking-Styles' - National and Gender Differences.

<table>
<thead>
<tr>
<th>Nation</th>
<th>Gender</th>
<th>N</th>
<th>Right-brain¹</th>
<th>Limbic²</th>
<th>Right-brain</th>
<th>Limbic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. UK</td>
<td>Male</td>
<td>353</td>
<td>42.6</td>
<td>47.1</td>
<td>37.1</td>
<td>44.2</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>49</td>
<td>47.4</td>
<td>46.9</td>
<td>39.9</td>
<td>44.4</td>
</tr>
<tr>
<td>2. Australia</td>
<td>Male</td>
<td>281</td>
<td>43.2</td>
<td>46.0</td>
<td>37.9</td>
<td>42.5</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>102</td>
<td>46.6</td>
<td>46.2</td>
<td>40.4</td>
<td>44.4</td>
</tr>
<tr>
<td>3. France</td>
<td>Male</td>
<td>64</td>
<td>49.2</td>
<td>46.1</td>
<td>39.3</td>
<td>43.6</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>38</td>
<td>49.9</td>
<td>49.0</td>
<td>37.9</td>
<td>45.3</td>
</tr>
<tr>
<td>4. Japan</td>
<td>Male</td>
<td>59</td>
<td>45.9</td>
<td>47.2</td>
<td>37.6</td>
<td>45.2</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>17</td>
<td>47.2</td>
<td>42.5</td>
<td>35.9</td>
<td>42.3</td>
</tr>
<tr>
<td>5. USA</td>
<td>Male</td>
<td>76</td>
<td>47.1</td>
<td>46.2</td>
<td>41.1</td>
<td>43.3</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>41</td>
<td>47.8</td>
<td>46.2</td>
<td>44.4</td>
<td>44.1</td>
</tr>
<tr>
<td>6. India</td>
<td>Male</td>
<td>50</td>
<td>43.6</td>
<td>44.7</td>
<td>39.4</td>
<td>43.9</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>17</td>
<td>42.6</td>
<td>47.5</td>
<td>40.4</td>
<td>46.3</td>
</tr>
<tr>
<td>7. Holland</td>
<td>Male</td>
<td>20</td>
<td>42.3</td>
<td>47.1</td>
<td>38.3</td>
<td>43.7</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>16</td>
<td>47.6</td>
<td>46.7</td>
<td>37.1</td>
<td>45.1</td>
</tr>
<tr>
<td>8. Hong Kong</td>
<td>Male</td>
<td>21</td>
<td>41.2</td>
<td>48.5</td>
<td>31.1</td>
<td>43.1</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>7</td>
<td>45.8</td>
<td>52.7</td>
<td>35.3</td>
<td>49.4</td>
</tr>
<tr>
<td>TOTAL SAMPLE</td>
<td>Male</td>
<td>924</td>
<td>43.0</td>
<td>46.5</td>
<td>37.8</td>
<td>43.6</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>287</td>
<td>46.9</td>
<td>46.9</td>
<td>40.0</td>
<td>44.7</td>
</tr>
</tbody>
</table>

F (gender) | 19.4*** | 1.6 | 10.2*** | 4.8**
F (Nation)  | 7.8**   | 1.6 | 5.7**   | 1.6

* p = .05
** p = .01
*** p = .001

A more detailed view of the data using the four-quadrant “Primary” styles presented in Table 3.2.3 below, may be helpful in clarifying the precise nature of gender differences. From that table we can see that, for the total sample, there are no significant gender differences on the Right Cerebral (Imaginist) style in either relaxed or pressure states whereas there are significant and strong gender differences in both relaxed and pressure conditions on Right Limbic (Teamist). On the other hand, while the relaxed profiles seem to suggest support for the Left Cerebral oppositional dominance for males, it leaves open the possibility of a Left Limbic component to the gender differences.

The study by Park (1996) cited in the sub-section immediately above provides some data from yet another brain styles instrument (Rowe & Mason, 1987). The relevant data on the four brain styles quadrants are presented in Table 3.2.4. The male and female scores show consistent and relatively stereotypic patterns supporting male dominance in the Left Brain and female dominance in Right Brain. The F test results in Table 3.2.4 are for combined Left versus Right Brain gender patterns and are clearly significant and stereotypic. However, if we add up the two Limbic quadrants and contrast them with the Cerebral ones, we get scores of 150/152.5 for the men and 150.9/151.4 for the women suggesting no gender differences in that trade-off.

¹ Right Brain: Scores above 45 and rising = increasing Right Brain dominance
Scores below 45 and falling = increasing Left Brain dominance

² Limbic: Scores above 45 and rising = increasing Limbic dominance
Scores below 45 and falling = increasing Cerebral dominance
<table>
<thead>
<tr>
<th>Nation</th>
<th>Gender</th>
<th>L-C¹</th>
<th>L-L²</th>
<th>R-L³</th>
<th>R-C⁴</th>
<th>L-C¹</th>
<th>L-L²</th>
<th>R-L³</th>
<th>R-C⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. UK</td>
<td>Male</td>
<td>23.3</td>
<td>24.1</td>
<td>23.0</td>
<td>19.7</td>
<td>22.9</td>
<td>24.0</td>
<td>20.2</td>
<td>18.9</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>21.0</td>
<td>21.6</td>
<td>25.3</td>
<td>22.1</td>
<td>27.9</td>
<td>22.4</td>
<td>22.2</td>
<td>17.6</td>
</tr>
<tr>
<td>2. Australia</td>
<td>Male</td>
<td>22.6</td>
<td>24.2</td>
<td>21.8</td>
<td>21.4</td>
<td>28.7</td>
<td>23.4</td>
<td>19.1</td>
<td>18.8</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>21.0</td>
<td>22.4</td>
<td>23.8</td>
<td>22.8</td>
<td>27.6</td>
<td>22.0</td>
<td>22.4</td>
<td>18.0</td>
</tr>
<tr>
<td>3. France</td>
<td>Male</td>
<td>21.3</td>
<td>19.6</td>
<td>26.5</td>
<td>22.6</td>
<td>26.6</td>
<td>24.1</td>
<td>19.5</td>
<td>19.8</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>19.8</td>
<td>20.3</td>
<td>28.7</td>
<td>21.2</td>
<td>27.3</td>
<td>24.9</td>
<td>20.4</td>
<td>17.5</td>
</tr>
<tr>
<td>4. Japan</td>
<td>Male</td>
<td>21.4</td>
<td>22.7</td>
<td>24.5</td>
<td>21.4</td>
<td>26.6</td>
<td>25.4</td>
<td>19.8</td>
<td>17.8</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>24.1</td>
<td>18.7</td>
<td>23.8</td>
<td>23.4</td>
<td>28.5</td>
<td>25.7</td>
<td>16.6</td>
<td>19.3</td>
</tr>
<tr>
<td>5. USA</td>
<td>Male</td>
<td>20.9</td>
<td>21.5</td>
<td>24.7</td>
<td>23.0</td>
<td>26.5</td>
<td>22.4</td>
<td>21.0</td>
<td>20.1</td>
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<tr>
<td></td>
<td>Female</td>
<td>21.1</td>
<td>21.1</td>
<td>25.0</td>
<td>22.8</td>
<td>25.1</td>
<td>20.5</td>
<td>23.6</td>
<td>20.8</td>
</tr>
<tr>
<td>6. India</td>
<td>Male</td>
<td>24.0</td>
<td>22.4</td>
<td>22.3</td>
<td>21.3</td>
<td>26.7</td>
<td>24.2</td>
<td>19.7</td>
<td>19.7</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>23.4</td>
<td>24.0</td>
<td>23.5</td>
<td>19.1</td>
<td>25.2</td>
<td>24.4</td>
<td>21.9</td>
<td>18.5</td>
</tr>
<tr>
<td>7. Holland</td>
<td>Male</td>
<td>22.9</td>
<td>24.8</td>
<td>22.3</td>
<td>20.0</td>
<td>27.0</td>
<td>24.8</td>
<td>18.9</td>
<td>19.4</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>20.8</td>
<td>21.6</td>
<td>25.1</td>
<td>22.5</td>
<td>28.2</td>
<td>24.7</td>
<td>20.4</td>
<td>16.7</td>
</tr>
<tr>
<td>8. Hong Kong</td>
<td>Male</td>
<td>21.7</td>
<td>27.1</td>
<td>26.4</td>
<td>21.9</td>
<td>30.5</td>
<td>28.5</td>
<td>14.6</td>
<td>16.5</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>17.9</td>
<td>26.3</td>
<td>26.4</td>
<td>19.4</td>
<td>27.3</td>
<td>27.4</td>
<td>22.0</td>
<td>13.3</td>
</tr>
<tr>
<td>TOTAL SAMPLE</td>
<td>Male</td>
<td>22.6</td>
<td>23.5</td>
<td>23.0</td>
<td>20.9</td>
<td>28.2</td>
<td>23.9</td>
<td>19.7</td>
<td>18.2</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>21.2</td>
<td>21.7</td>
<td>25.3</td>
<td>21.8</td>
<td>27.2</td>
<td>22.8</td>
<td>22.0</td>
<td>18.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>F (gender)</th>
<th>8.9**</th>
<th>9.9**</th>
<th>13.4**</th>
<th>2.8 **</th>
<th>2.8</th>
<th>5.7 **</th>
<th>23.2 **</th>
<th>1.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>F (Nation)</td>
<td>3.3***</td>
<td>6.6***</td>
<td>6.1***</td>
<td>4.3***</td>
<td>3.7***</td>
<td>5.2***</td>
<td>3.5***</td>
<td>5.5***</td>
<td></td>
</tr>
<tr>
<td>F (grp)</td>
<td>1.8</td>
<td>1.4</td>
<td>0.6</td>
<td>1.7</td>
<td>0.8</td>
<td>0.6</td>
<td>2.0*</td>
<td>1.1</td>
<td></td>
</tr>
</tbody>
</table>

* P = .05
**P = .01
***P = .001

Table 3.2.4: Gender differences on Brain Styles in study by Park (1996)

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Male</th>
<th>Female</th>
<th>Combined Differences (combined Left-Brain or Right-Brain)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Brain Styles</td>
<td>Directive (L-Limbic)</td>
<td>81.2</td>
<td>73.2</td>
</tr>
<tr>
<td></td>
<td>Analytical (R-Cerebral)</td>
<td>85.4</td>
<td>76.1</td>
</tr>
<tr>
<td>Right Brain Styles</td>
<td>Conceptual (R-Cerebral)</td>
<td>67.1</td>
<td>75.3</td>
</tr>
<tr>
<td></td>
<td>Behavioral (R-Limbic)</td>
<td>68.8</td>
<td>77.7</td>
</tr>
</tbody>
</table>

However, research by Allinson and Hayes (1996) suggested that "in the general population, women are less intuitive than men." This body of research was mentioned in Section 2.2.3. The comparison was between Intuitive and Analytical styles and the suggestion was that this dichotomy was equivalent to the full, left brain-right brain comparison, or alternatively the more focused Left Limbic/Right Cerebral trade-off. In either case, the finding cited above casts serious doubt on the superiority of women in

¹ = Left Cerebral
² = Left Limbic
³ = Right Limbic
⁴ = Right Cerebral
general on either the Right Cerebral or Right Brain overall. However, the findings of Allinson and Hayes (2001: 164 -166) on managerial samples from a range of countries (Britain, Russia, Nepal, India, Jordan and Singapore) suggested no gender differences on the dichotomy. They suggested the possibility of selection effects, so that more intuitive women were more likely to survive the selection and development process for managerial cadres. The same study also noted the predicted gender differences (ie women less intuitive) among a cross-cultural sample of management students.

So, on balance, there appears to be a consistently strong gender effect on the Left Cerebral versus Right Limbic dichotomy. That may generalise to a Left versus Right Brain difference that is consonant with the stereotypical expectations discussed under Gender and Leadership style above. There is also a less clearly supported suggestion that men are more Cerebral and women are more Limbic. However, if this is substantiated, it is probably largely based upon the strong emphasis of females on the Right Limbic, Feeling and Teamist dimension in opposition to the male emphasis on the Left Cerebral, Thinking and Analytical dimension. Perhaps, we might better evaluate these issues by an overview of the relevant literature on the MBTI and related Jungian instruments.

The first port of call might usefully be the general norms for college graduates on a gender basis. The relevant figures are for US College graduates and refer to a sample of 6814 males and 7952 females. They are presented in Table 3.2.5, constructed from data in McDaid, McCaulley and Kainz (1986). As we can see from those norms, the stereotypic assumptions are supported in relation to the TF dimension and this effect flows through to the functional pairs presented in Table 3.2.5 (b), but no other significant gender differences are suggested.

A more “ancient” study of UK managers by Vinnicombe (1988) casts some useful light on gender differences in specialised “managerial styles” based on the MBTI. The four combined styles used by Vinnicombe (1988) were derived from work done originally at the Center for Creative Leadership by Kiersey and Bates (1978). They included:

- **Traditionalists**: characterised by the fact that they all share “sensing” and “judging” preferences;
- **Catalysts**: all sharing “intuition” and “feeling” preferences;
- **Visionary**: sharing “intuition” and “thinking” preferences, and;
- **Trouble Shooter/Negotiator**: sharing “sensing” and “perceiving” styles.
Table 3.2.5 (a). US College Norms by Gender for the Myers-Briggs Type Index

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Males %</th>
<th>Females %</th>
<th>Gender Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introversion (I)</td>
<td>48.5</td>
<td>49.5</td>
<td>1% variance</td>
</tr>
<tr>
<td>Extraversion (E)</td>
<td>51.5</td>
<td>50.5</td>
<td></td>
</tr>
<tr>
<td>Sensing (S)</td>
<td>49.5</td>
<td>47.0</td>
<td>2.5% variance</td>
</tr>
<tr>
<td>Intuition (N)</td>
<td>50.5</td>
<td>53.0</td>
<td></td>
</tr>
<tr>
<td>Thinking (T)</td>
<td>71.0</td>
<td>43.0</td>
<td>28% variance</td>
</tr>
<tr>
<td>Feeling (F)</td>
<td>29.0</td>
<td>57.0</td>
<td></td>
</tr>
<tr>
<td>Judgement (J)</td>
<td>69.0</td>
<td>67.5</td>
<td>1.5% variance</td>
</tr>
<tr>
<td>Perception (P)</td>
<td>31.0</td>
<td>32.5</td>
<td></td>
</tr>
</tbody>
</table>

Table 3.2.5 (b). US College Norms by Gender for Myers-Briggs Functional Pairs

<table>
<thead>
<tr>
<th>Functional Pair</th>
<th>Males %</th>
<th>Females %</th>
<th>Gender Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST</td>
<td>39.0</td>
<td>22.0</td>
<td>17% M</td>
</tr>
<tr>
<td>SF</td>
<td>11.0</td>
<td>25.0</td>
<td>14% F</td>
</tr>
<tr>
<td>NF</td>
<td>18.0</td>
<td>32.0</td>
<td>14% F</td>
</tr>
<tr>
<td>NT</td>
<td>32.0</td>
<td>21.0</td>
<td>11% M</td>
</tr>
</tbody>
</table>

These categories are of particular interest to us given the relevance of the Catalyst and Visionary styles to the models presented in Figures 3.1.1 and 3.1.2 and the theory on the nature of the “New Leadership” as articulated in Section 3.1.3. The relative gender patterns found by Vinnicombe (1988: 19) are presented in Table 3.2.6.

Table 3.2.6 Gender differences on MBTI Managerial Styles on UK Managerial Samples derived from Vinnicombe (1988)

<table>
<thead>
<tr>
<th>Sample</th>
<th>Traditionalists</th>
<th>Trouble-Shooters/ Negotiators</th>
<th>Catalysts</th>
<th>Visionary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males Cranfield -SC</td>
<td>56.9%</td>
<td>10.7%</td>
<td>10%</td>
<td>22.4%</td>
</tr>
<tr>
<td>Females</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. MBA’s (n=25)</td>
<td>24%</td>
<td>4%</td>
<td>32%</td>
<td>40%</td>
</tr>
<tr>
<td>2. NOWME (n=42)</td>
<td>28.6%</td>
<td>7.1%</td>
<td>40.5%</td>
<td>28.6%</td>
</tr>
<tr>
<td>3. BT Mgrs (n=20)</td>
<td>25%</td>
<td>20%</td>
<td>10%</td>
<td>40%</td>
</tr>
</tbody>
</table>

There are four samples differentiated in the table. The first is comprised of 849 male managers, all of whom completed managerial short courses at Cranfield School of Management in the UK. The second is a sample of 25 female MBA students at Cranfield. The third numbers 42 and is comprised of members of the National
Organisation of Women in Management Education (dominantly from HRM/HRD backgrounds) and the last is 20 female general managers with British Telecom.

We should first note that the figures in Figure 3.2.6, taken directly from Vinnicombe (1988), don’t all add up to 100%. This is the case for the NOWME sample that adds horizontally to 104.5% and for the British Telecom sample that, less alarmingly, adds to 95%. However, the categories used logically capture the full sample: i.e. through combining all Ns under NT and NF and all Ss under SJ and SP. So some, probably very small, numerical error is shown in the NOWME figures but the overall profile patterns they demonstrate, cautiously interpreted are almost certainly still close to reality. This is supported by the figures in Table 3.2.7, drawn from Fisher and Nelson (1996), which cover a comparable gendered sample from US management development programs.

**Table 3.2.7** Keirsey-Bates Leadership Style Norms among attendees at US Management Development programs between 1979 and 1983

<table>
<thead>
<tr>
<th>Sample</th>
<th>(N)</th>
<th>Traditionalists</th>
<th>Trouble-Shooters/ Negotiators</th>
<th>Catalysts</th>
<th>Visionaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>1051</td>
<td>47.1%</td>
<td>7.7%</td>
<td>7.9%</td>
<td>36.1%</td>
</tr>
<tr>
<td>Females</td>
<td>181</td>
<td>22.1%</td>
<td>8.9%</td>
<td>28.7%</td>
<td>41.4%</td>
</tr>
</tbody>
</table>

Once again, we notice the figures provide us with marginally more than 100% women but the more compelling impact stems from the overall distribution of stylistic patterns by gender, which bears a striking similarity to the UK figures. Perhaps, the most interesting insight is that the combined percentage of visionaries and catalysts amongst women approaches 70% in both samples while the traditionalists amongst them never reach 30%. Conversely, in the male samples, catalysts and visionaries reach a combined high in the US sample of 44% (and this largely on the shoulders of 36% for Visionary) while in the UK sample it is only 32%. Equally, traditionalists comprise over 45% and 55% respectively of the US and UK samples of male managers.

In her commentary on the figures, Vinnicombe appears equally enthused about the added value provided by both the catalyst and the visionary components of the alternative profile presented by female managers. Fisher and Nelson, however, focus
more intently on the Catalyst. This is, perhaps, not surprising given that the purpose of their article was to make a case for the conscious inclusion of much more "Feeling at the Top". Their thesis is stated as follows (Fisher and Nelson, 1996: 81):

"The theory presented here (advocates) the inclusion of more executives with the Catalyst (NF) leadership style because of its feeling (F) approach to decision making... As environmental turbulence increases, the organization is required to adapt more rapidly and frequently...(in such circumstances). The executive team's leadership effectiveness is enhanced by sociocognitive diversity achieved by the addition of affiliative leadership skills to the traditional authoritarian model. Finally, the need for affiliative leadership skills requires the inclusion of executives with the feeling approach to decision making, and feeling is recognized as an underutilized strategic resource." (emphasis added)

They go on to advocate the inclusion of more females in top teams on the grounds that they are "more likely to contain Catalyst leadership styles and Feeling (F) decision makers than all male teams." In fairness to them, we should also note their acknowledgement that this is a probability statement that is far from guaranteed of delivery in an executive environment as they state:

"Although the feeling preference is more prevalent among females than males in the general population, it is likely to be far less prevalent among top female managers in today’s corporations who have been rewarded for using a leadership style based on the agentic model of goal setting and initiating structure and the Traditionalist (SJ) style of leadership."

Notwithstanding their caution on the gender issue, the figures in the US and UK data do demonstrate some key differences, even for relatively senior women. These include:

- **A far lower Traditionalist mindset**: which is common across all female samples;
- **A Visionary mindset**: which is at least as frequent among executive and professional women as it is in the male managerial sample – and in the UK is far in excess of the average male profile, and;
- **A Catalyst preference**: that, at least for those investing in, or charged with delivering, graduate management education far exceeds that in equivalent male samples.

Regardless of this apparent endorsement of the presence of gender differences, we should nevertheless consider some important caveats and limitations demonstrated within this comparative database. First we should note that neither Vinnicombe (1988)
nor Fisher and Nelson (1996) reported subjecting the data they presented to any rigourous statistical analysis of differences. Given that the purposes of their articles were exploratory, conceptual and policy-oriented they can perhaps be forgiven for that. However, notwithstanding the fact that the patterns reported are compelling – even on an informal “eyeballing” basis - we should register that further research will be needed to lend confidence to the generality of the findings.

The patterns explicit in the data as they stand raise a further reservation. The example of the norms for BT women managers in Table 3.2.6 should suffice to demonstrate the concern. This sample, small though it is, has the significance of being drawn from currently operating middle managers. However, given the nature of BT’s business, these women are almost certainly highly educated with strong professional and specialist education and experience. They are also typical of the type of professional workers who would be targeted to be the core of the new cadre of collaborative individuals for the Fourth Blueprint networks. The things to note about their profiles are as follows:

- **Their Catalyst percentage**: is as low as for the male samples and between a third and a quarter of the other female samples;
- **Their Visionary percentage**: however, is as high or higher than any female sample and roughly double that for the UK male sample, but;
- **Their Sensing percentage**: roughly equates with their Intuitive scores and so around half of them will be either distinctly control-oriented (SJ's) or will, to use Reymiere’s (1997) phrase, be “highly expedient opportunists in relatively conventional, traditional ventures” (SP's), and;
- **Their Feeling percentage**: is unclear for the S half but only represents one in five of the Intuitives. It seems doubtful that, in the whole sample, Feeling would represent more than 30% so any strategy injecting this sample into executive teams (after Fisher and Nelson) or even into empowered collaborative networking teams with a view to significantly increasing affiliative orientation is unlikely to succeed in its goal.

None of the above points, and especially not the last one, is designed to represent a profound and terminal criticism of the potential of this group, and those they represent, to contribute to operational and developmental outcomes for network organisations. As the models presented in Section 3.1 made clear, this sample’s dominant NT (or cerebral) character will be critical to the effective responsiveness of their organisations and
groups to uncertainty and complexity in the new environment. However, they are unlikely to be immediately at ease and positive within the processes of mature, collegial interaction that requires both space, which they will expect, and consensus and mutual support, which they will find hard to accept or tender. And they most certainly will not bring a premium emphasis on the affiliative motive to their contribution to these teams.

This specific example raises the more general point of the impact of occupational and functional qualifications and experiences on the pattern of brain styles or psychological type demonstrated by aspiring managers and leaders. The other samples appeared to carry a more general management and business development, or alternatively a more specific HRM/HRD/OD, character to the contributions they bring to the functioning of the organisation. It is entirely possible that, irrespective of gender, these formative developmental and learning regimes have a strong homogenising effect on those who experience them and it is to the research on this issue that Section 3.2.2 is dedicated.

However, before considering that, we should summarise the conclusions that we can draw from the brief overview on gender differences presented above. They include:

- Female managers exhibit a greater tendency to use democratic rather than authoritarian leadership styles than is so for male managers;
- No consistent gender differences are demonstrated relating to the task–people dichotomy and what findings that do occur tend to be heavily influenced by task and environmental context;
- It would appear that female managers prefer more transformational styles while males favour transactional styles more than females;
- On tests of brain styles and psychological type, the ubiquitous finding is that women are more Right Limbic (Feeling-oriented) whereas Men are more Left Cerebral (Thinking-oriented), but that;
- The possibility still exists that the gender differences are more generalised than that and that women are more Right Brain (NT) and Limbic (SF) while men are more Left Brain (ST) and Cerebral (NT). However;
- Much research, and particularly the UK/US norms on senior executives we have just been considering, casts severe doubt on the proposition that women managers are more limbic than their male counterparts. In fact, those norms would suggest that the opposite may be the case.
3.2.2 Occupational and functional background and differences in managerial style

"There is a strong relationship between our (stylistic) preferences and the kind of work that turns us on... in looking at over 113,000 profiles, it became clear that there are norms around mental preference and occupational choice...(However) it must be understood that part of the occupational norm data... is influenced by people who occupy positions that are not in strong alignment with their preferences. But our experience in working with these people is clear: those (non-aligned) who engage in this occupation work differently than those who constitute the norm and who are in strong alignment with the mentality of the work. It is also clear that those who are not in alignment with the job norm have a significantly lower level of satisfaction and fulfilment in performing the work." (emphasis in original)

Herrmann (1996: 72&77)

"All of the MBTI continuous dimensions were significantly related to occupational grouping; the relationship was strongest for S-N and weakest for E-I. Greater type homogeneity was found among persons who were confronted with highly similar working tasks, e.g. aviation pilots and industrial workers, than among persons working in situations that allowed for greater diversity in work performance, e.g. social service and health personnel."

Nordvik (1994: 32)

Figure 2.2.6 in Chapter 2, in sketching the terrain of the brain styles characteristics, showed some of the "typical" professions that characterise each of the four single quadrants according to Herrmann (1996). With more specific relevance to the thrust of this thesis, Table 3.2.8 lists typical occupations clustered under "Left Brain", "Limbic", "Right Brain" and "Cerebral" categories by Herrmann (1996: 73-77).

<table>
<thead>
<tr>
<th>Typical Occupations</th>
<th>Left Brain</th>
<th>Limbic</th>
<th>Right Brain</th>
<th>Cerebral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineers</td>
<td>Secretaries</td>
<td>Social Workers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial Analysts/Managers</td>
<td>Office Clerks</td>
<td>Psychologists</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank Managers</td>
<td>Nurses</td>
<td>School Counsellors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lawyers</td>
<td>School Teachers</td>
<td>Human Resource</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production Mgrs.</td>
<td>Sales Personnel</td>
<td>Developers/Mgrs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales Managers</td>
<td>Administrators</td>
<td>Marketing Mgrs</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Developers</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3.2.8: Occupational Clusters according to Brain Dominance Clusters

Obviously, the lists are intended to be illustrative, not exhaustive. Herrmann (1996) makes clear that the small percentage of "un-aligned" subjects in each norm group only
moves the estimate of underlying profiles marginally from their “true” position. However, he also stresses, as in the last sentence of the quote above, that alignment is the desirable outcome for both the individual and the organization.

A study, based on a limited range of occupational preferences indicated by students’ choices of three majors in a graduate management program, also supports the discriminatory power of Brain Styles in relation to occupation. Rowe and Waters (1992) tested 75 students in a US graduate program on MBTI, the Herrmann Brain Dominance Indicator (HBDI), the Learning Styles Inventory (LSI) and the Strong Interest Inventory (SSI). The objective was to assess whether those instruments could accurately identify the students chosen “major” stream among Master of Accounting (MAcc), Master of Business Administration (MBA) or Master of Public Administration (MPA).

No scale from MBTI or LSI discriminated. Three of the six Holland subscales from the SII (Investigative, Entreprenising and Conventional) discriminated majors with the basic finding being that MBAs were highest on all three scales, sharing that ranking with the MAccs on Conventional only. However, all four scales of the HBDI discriminated. The pattern was that MAccs were left brain dominant, MPAs right brain dominant with the MBAs being the most Cerebral Left, the least Limbic Left and mid-range on the Right Brain quadrants, clearly above MAccs but below MPAs. Not only does this show the occupational style patterns that Brain Styles tap, it also reflects the broadening church from which MBA programs have been drawing their applicants since the late 1980’s.

Similar occupational profiles and distinctions to those suggested in Table 3.2.8 have been found for the MBTI. McDaid et al (1986) show clear occupational norms on the MBTI across a wide range of occupations too numerous to cite here but with patterns that are consistent with those suggested by Herrmann (1996). Walck (1992: 19) makes the following points on the impact of occupational/functional classification and level:

- **most lower level managerial functions preferred E, S, T, and J, but;**
- **"Marketers were significantly more E, N and P and less TJ than managers...(and) More human resource planners than managers were Ns and NTs."**, and in relation to business professions;
- **Bank and financial professionals (including accountants) were more STJ and computer professionals more INTJ than the managerial norms but, within these norms, S tended to be more prevalent within commercial**
firms whereas N was more common in research and development roles. Also, in a sample of U.K. software programmers, (Garden, 1989) found INTP profiles in small firms but ESTJ profiles in large ones; and

- As a general effect, "Dominant Ts and dominant Ns also increased at the executive level, while dominant Ss and dominant Fs declined dramatically". As an example, 136 high level corporate executives attending Center for Creative Leadership programs were compared with the MBTI atlas managerial norms and "NTs rose dramatically from 24% to 38%, while NFs dropped rapidly from 19.5% to 4.4%.

Other studies using the MBTI tend to broadly support the conclusions above. This is so for the accounting finance and banking profile (Bennett, Pietri, & Moak, 1998; Laribee, 1994; Satava, 1996), the general ST/SF (left and limbic) style of engineers (Rosati, 1997), the tendency for the occupational profile to narrow and focus over time through professional education (Laribee, 1994; Rosati, 1997), and the overall clustering of occupations in more or less the pattern that appears in Table 3.2.8 (Nordvik, 1994). So, while the general thrust of the MBTI evidence is consonant with the occupational profiling on Brain Styles suggested by Herrmann (1996) and summarised in Table 3.2.8, there are also strong suggestions of two other trends, including:

- a tendency of relatively immobile professionals in business at middle to lower levels to consolidate towards STJ profiles the longer they are in place, whereas we also see;

- an opposite tendency by more upwardly mobile managers heading for senior executive roles to show norms that strongly move towards higher N and T (and away from S and F).

It could be that both the above trends are simply two sides of the one coin of gradual selection of the "right styles" in, and the "wrong styles" out, of the further development race. However, professional specialists such as accountants, engineers and computer/IT personnel seem to retain their unique professional stylistic stamp for longer but even here the data are patchy and inconsistent rather than extensive and definitive. Whatever the force of these more detailed caveats, it is clear that there is strong evidence of a close (almost certainly two-way) relationship between personality type and brain styles on the one hand and occupational choice and adjustment on the other.
So, from the above summary, it can be seen that some fairly consistent relationships between the underlying style/typc structure of personality and occupational choice and adjustment are operative. This is also consistent with the research thrust on occupational behaviour driven by Holland (see e.g.: Holland, 1996: for a recent retrospective on this body of research). Holland's key research instrument for measuring the individual's underlying "work personality" is the Self Directed Search, which is in effect a personality inventory providing scores on six work-related "types". (Holland, 1994) These types are:

- Realistic;
- Investigative;
- Artistic;
- Social;
- Enterprising, and;
- Conventional.

From theory, this RIASEC set was designed and depicted in a hexagon format based upon three dichotomous variables: Realistic-Social, Investigative-Enterprising and Conventional-Artistic. Zhang (2001), using an adaptation of Holland's SDS designed for Chinese subjects, investigated the factorial structure underlying the RIASEC set. He combined two samples: one from Hong Kong and one from Mainland China totaling 789 subject (342 males and 447 females) and comprised entirely of undergraduate students. He found an underlying two-factor structure, with the three RIASEC elements of each factor in proximity to each other in the RIASEC hexagon. The results are illustrated in Figure 3.2.6, taken from Zhang (2001: 891)

While the two-factor solution seemed quite stable for both samples, the greater amount of variance was taken up by the conventional/realistic/investigative clustering for the Hong Kong sample whereas the factor accounting for greater variance in Mainland China was to do with the enterprising/social/artistic cluster. We should remember that the primary data are effectively expressions of alternative "occupational personalities". Thus, compared with any samples from alternative educational and ethnic/national backgrounds, the range of analytical, expressive, artistic or action-oriented personal styles that might display themselves in the factorial data could well be somewhat more extensive and complex than shown in this study.
A study by De Fruyt and Mervielde (1997) might be helpful in further uncovering the systematic relationship among RIASEC variables and their underlying factor structure on the one hand, and the broad structure of personality types/styles that we have been using, on the other. This study used a sample of 934 undergraduate students from two universities in Ghent, Belgium. The sample was roughly gender-balanced. The subjects responded to Dutch language adaptations of both the NEO-PI Big Five Inventory and the Holland SDS. Correlations were computed for the six RIASEC variables with both the 30(5 X 6) “facet” scores for the Big Five and for the five combined factors.

In considering the six facets of behaviour underlying each of the ‘Big Five’, only Investigative of the RIASEC types showed virtually no correlations. The exception was that Investigative was correlated \( r = .26 \) with the “Ideas” facet of Openness. However, the Realistic type showed significant correlations with at least one facet in each of the Big Five but none were more than \( r = .23 \) and the overall pattern of correlations with the Big Five was insignificant, with the exception of Neuroticism \( (r = -.16) \) which was marginal. For the four other types, correlations at both facet and factor level with NEO-PI’s Big five were both significant and, in summary, consistent with expectations. The key results at the factor level are presented in Figure 3.2.7.

The reader will recall our matching four of the Big Five factors with the MBTI/Jungian framework in Section 2.2.3. The relationships were Agreeableness negatively with Thinking/Feeling, Openness positively with Intuition/Sensing, Extroversion positively with Extroversion and Conscientiousness positively with Judging/Perceiving. Also, we
should recall Figure 2.2.4, which described the common territory occupied by Brain Styles and the MBTI. Given the correlations in the Figure 3.2.7, such a division seems at least not surprising and at best quite well supported on an indicative basis.

![Figure 3.2.7: Correlations between 'Big Five' Personality Factors and the Holland RIASEC Occupational Framework]

The proximal merging from Cerebral Left to Cerebral Right between Investigative and Artistic types, from Cerebral Right to Limbic Right between Artistic and Social types, from Limbic Right towards Limbic Left between Social and Enterprising types and finally on to full Limbic Left with the Conventional type, seems well supported by the data. The only type not offering supportive clarification was Realistic, which was found by De Fruyt & Mervielde (1997: see Figure 4 and commentary on page 95) to have both a confused and diffused relationship across the Big 5 Factors and 30 facets.

So, there seems to be a clear consistency between the common style/type structure we presented in Chapter 2 and the motivating and shaping forces that drive occupational choice and adjustment. However, before we conclude this section we should briefly consider the issues raised by functional allegiance – that is, the related experience of working within the tight cocoon of one of the more or less differentiated functions of the modern organisation. The conceptual and theoretical base for this review is the research of Lawrence & Lorsch (1967, 1976), focused on the level of decision-making uncertainty in various organisational environments and the internal differentiation of structure, cognitive framework and operating processes it required. They concluded that high degrees of uncertainty in the operating environment required high degrees of internal structural differentiation and high integration if the firm was to be effective.
From our perspective, it is this concept of *Structural Differentiation* between sub-units that is of most interest. It was defined as "the differences in cognitive and emotional orientation among members of different units and the differences in formal structure among units" (Lawrence & Lorsch, 1969: 12). They contend that these differences are necessary and not minor variations in outlook but involve fundamental ways of thinking and responding. The key dimensions upon which they based their assessment of differences in mental set included:

- Formality of structure (High versus low structural imperatives);
- Orientation towards time (Short versus long-term perspective);
- Orientation towards goals (Market versus costs versus R&D emphasis), and;
- Orientation towards people (Concern for task versus concern for people).

Again, these dimensions of differentiation have much in common with the essential psychodynamics underlying the Brain Styles/Type frameworks. For example:

- **Need for Structural Clarity**: is a variable that is commonly associated with the perceptual dichotomy of Intuition (or Right Cerebral) for low structure/high tolerance for ambiguity and Sensing (or Left Limbic) for high structure/need for clarity;

- **Time Orientation**: as noted in Section 2.2.2, the Left Brain is often associated with a short-term orientation that results in urgent focus on action in contrast to the Right Brain's "timeless", long-range orientation on developmental value. This is certainly so for the Right Cerebral but also relates to the Right Limbic. Though this quadrant is regressive in its focus, its sense of historical emergence is certainly 'long-range';

- **Goal Orientation**: The costs, sales and research categories in this dimension equate to the contrast between simple, single-focused goals to complex, interactive goals where intricate balancing of many forces in concert is needed. Thus, in cognitive terms, from limbic to cerebral, and;

- **Interpersonal Orientation**: equates to the contrasts between Thinking (or Left Cerebral) for Task orientation and Feeling (or Right Limbic) for people orientation.

These relationships are illustrated in Figure 3.2.8.
Also displayed in Figure 3.2.8 are the indicative positions of the Production (Prod.), Sales, Applied Research (App.Res.) and Fundamental Research (Fund.Res.) departments from a large plastics firm as reported in Lawrence and Lorsch (1969: 36). Their relative positions on three of the dimensions (excluding Goal Orientation) are shown using the same colouring as for the dimensions concerned. It will not be surprising to find Production and Sales toward the Left Brain (or Limbic, especially with sales) and Market Development, R & D and Fundamental Research towards the Cerebral and Right Brain. The importance of this common charting lies in the intensity and depth of the impact upon personal and group styles that Lawrence and Lorsch understood to accompany the differentiated mindset. As noted in Chapter 1, this conceptual position was one of the finest flowers of Third Blueprint theorists. Differentiation of this type provided major gains in internal efficiency of sub-units transacting with their own sub-environments. Skill development and procedural training became all the more effective for the more intensive focus that is allowed in a differentiated and “purified” setting.

However, more than abilities and work routines suited to a specific environment are learned by staff in a highly differentiated unit. A view of ‘reality’ and ‘knowledge’, a set of values and typical personality traits are also selected, developed and refined. While these traits are congruent with the sub-unit’s special environment in a relatively stable and/or simple environment, they tend to erode the capacity for fluid transactions across sub-unit and organisational boundaries in times of discontinuous change. So, a strong, effective emphasis on defined performance processes and outcomes may well have characterised the more successful Third Blueprint organisations and institutions in the last two decades of the 20th Century. If so, it is probable that the occupational and
functional choice and adjustment programs that accompanied that congruent focus will have differentially and variously shaped the brain styles and types of staff in their functional specialisations now aspiring to leadership roles in the coming generations.

Lawrence & Lorsch (1967, 1969 and 1976) and their colleagues did provide some examples of different functional styles across the four dimensions presented above. However, as it was not their primary focus, they do not provide a definitive, or even extended, mapping of all the functions in the same way as for the data they provided on the four functions in Figure 3.2.9. Steckroth, Slocum & Sims (1980) undertook an analysis of the differential mindsets of a more extensive list of functions using the MBTI as their primary data. They found no significant functional differences on the S-N and E-I variables. However, they reported differences on:

- **T-F**: with the personnel function being the most Feeling-oriented, Sales tending in the same direction, Finance/administration and Marketing in mid-range moving progressively towards thinking and Operations management/research and economics/planning being distinctively Thinking-oriented;

- **J-P**: with both sales and operations management being at the perceiving end of the dichotomy, personnel and operations research being mid-range and Marketing, Administration, Economics and Planning in that order moving to a distinctly Judging status.

While the first of those two variables produced results that tended to confirm the hypothesized relations outlined in Figure 3.2.8, the implications of the J-P results are less clear. Overall, we need to regard the differentiated functional mindset question as the subject of some provocative research findings but not clearly resolved. However, on the balance of results presented to date, the general structure of relationships in the figure might reasonably serve to guide some tentative exploratory hypotheses, as to the likely style/type patterns we might hope to uncover across various functional clusters.

Finally we should note the important caution embedded in the quote from Nordvik (1994) at the head of the section. Some occupational roles that may, at first glance, seem to be at quite a distance from each other in terms of specific skills required and socio-economic perceptions of their incumbents, nonetheless have in common a tightly defined, routinised and highly determined set of performance demands. Others, though
sometimes requiring similar preparatory and threshold standards of skill, offer less of both constraints and clarity in the processes through which task completion may be achieved and the interrelationships that may attend task performance. Thus, these jobs evolve on a more idiosyncratic basis as each individual enacts the role as an expression of their own style, values and interpersonal dynamics.

Not surprisingly, clustering of occupations according to personality style/type is more commonly precisely supported by data and less complex and inconsistent an enterprise when applied to the former type of roles. However, in the empowered, uncertain and discontinuous world of the 21st Century managers in network organisations, it is just such potentially ephemeral roles and relationship as implied in the latter type of occupation that challenge us to identify the underlying psychodynamics of effectiveness and responsiveness. In such cases, it may well be less about the detailed minutiae of narrow and multiple traits. Rather, is is probably more to do with the superstructure of competing broad types characterising alternative choices in resolving eternal tensions between ambiguity and structure, complexity and simplicity, speed of outcome and engagement of constituents, exploration and focus, performance and learning.

With due attention to the specific and central focus of this thesis, the brief review of relevant literature above properly stopped well short of an exhaustive evaluation of all possible relationships pertaining to occupational choice and adjustment and functional focus. However, in my submission we have considered sufficient consistent findings to justify the following tentative hypotheses and speculative conclusions regarding the relevance of occupational background and clustering to our search for the Collaborative Individual and effectively adjusted distributed leader in the Fourth Blueprint:

- There are clear and relatively consistent patterns of personality types and brain styles that can be associated with different occupational interests, qualification and experiences;
- The indicative listing of occupations, under the four brain quadrant headings in Table 3.2.8, seems, on the evidence, to provide a consistent and supported basis for clustering occupational background as a predictor of stylistic preferences, at least within graduate management groups such as MBA populations. This is especially so in light of the relationships presented in Figure 3.2.7. However, the caveat is that there may be few, if any, candidates from the Limbic list in such samples, but that;
It remains possible that an alternative two cluster approach, with “data and things” and “people and ideas” groupings, after Zhang (2001) - may parsimoniously describe the variability amongst graduate populations, and finally;

It seems clear that the various competing styles/type that make up the psychodynamic terrain we charted in Section 2.2 are crucially interactive (in SLT terms) with the differentiated congruence sought by the best Third Blueprint institutions. We should therefore expect that there will be critical functional differences in readiness for Fourth Blueprint processes within middle career, aspiring 21st Century leadership cadres.

3.2.3 National background and differences in managerial style

"Are there national differences in the cultural dimensions of management that might effect the incidence of the personality or cognitive styles related to Collaborative Individualism? If so, are any of these national cultural differences likely to exert a direct impact on, in concert with gender or occupational background, have an interactive effect upon effectiveness or satisfaction within a Fourth Blueprint environment?"

Supplementary question on national background from Section 1.3.2 above

The supplementary question on national background as it was posed in Chapter 1 is reproduced in introducing this section to remind us of the relatively narrow focus for our considerations here. The literature on cultural differences, even that subsection of it focused on managerial behaviour, is vast and we will hardly have scope to touch its foreshores in this thesis. Even just that literature related to the now classic research of Hofstede (1980; 1991; 1998) on comparative managerial styles in different clusters is the stuff of a myriad of different theses, articles and books. Yet we will need to visit some of the Hofstede literature and its offshoots because the managerial behaviours and dichotomous styles he sought to measure and map were central to the tensions at the heart of the transition between Third and Fourth Blueprint regimes.

Initially, Hofstede (1980) mapped cultural differences in managerial behaviour in a single (hopefully monolithic) organisational culture – in JBM internationally in fact. The four dimensions his data revealed were:

- **Power Distance**: a measure of the difference in power between a manager and a subordinate, which is accepted by both and embedded within their social dynamic;
• **Individualism – Collectivism**: emphasising the relative importance placed on individual goals and freedom to act on the one hand versus group and societal goals and obligation to contribute on the other;

• **Uncertainty Avoidance**: a measure much like the more familiar “tolerance for ambiguity”, reflecting the extent of felt need for highly-structured roles and well defined rules of behaviour and performance expectations;

• **Masculinity/Femininity**: an index that tapped the competitive versus cooperative, and the performance versus support elements of the culture.

There are clearly significant parallels between these four work value variables and the key tensions outlined above between the Third Blueprint/Performance organisation and Fourth Blueprint/Learning organisation. For example, high Uncertainty Avoidance cultures would not be comfortable in the world of “loose coupling” and “Self (rather than role) as continuity” of the Collaborative Individual as we encountered it in Chapter 1. Equally, Collectivist cultures are positive about concerted group action within an obligated sense of roles and prescribed processes. However, they would be likely to find the active conflict and assertiveness of loosely coupled, creative individuals seeking to “construct” an agreed reality through energetic dialogue as insufficiently respectful of responsibilities to the organisation and society overall. Cultures characterised by high Power Distance are not credibly supportive of collegial interaction and participation and the Masculinity/Femininity index taps the same characteristics and issues regarding conflicting gender perspectives as we have just surveyed in Section 3.2.1.

Hofstede’s (1980) research, and consequential related studies, have strongly focused on a cultural clustering schema that has reduced the data generated to a pattern of around five to seven clusters of nations that have common (or similar) underlying positions when charted against the four dimensions listed above. Figure 3.2.9 (a) to (c) illustrate the position of a group of nations (Australia, New Zealand, the UK and USA) that are charted as part of the “Anglo” cluster. While, theoretically, an exhaustive charting of all cross-relationships among four variables requires six charts, the three presented below should serve to demonstrate the common positioning and logic of the cluster.

As indicated above, the Anglo culture is but one of a number identified in this area of research. For illustration purposes, members of this cluster have been circled in the
three parts of Figure 3.2.9 to illustrate how focused a domain they occupy together in
the maps and, thus, how precise and defensible the clustering system seems to be in
their case. As a contrasting illustration, three members of the Asian cluster (Hong
Kong, Malaysia and Singapore) have been boxed in rectangles in the three figures. The
Anglo cluster has been historically found to be low on Power Distance, high on
Individualism and low on Uncertainty Avoidance and Masculine. On the other hand, the
Asian cluster tends to be high on Power Distance, low on Individualism (Collective),
low on Uncertainty Avoidance and distinctly less Masculine than the Anglo cultures.

Using these two cultures as the point of illustration, on issues of group performance and
creative processes that are significantly effected by dimensions such as individualism
and power distance, the clusters would produce distinct, if not diametrically opposed,
stylistic patterns. This is illustrated in Figure 3.2.9 (a). However, on issues of
uncertainty, both clusters are very close together and, in fact, the Asians would seem
even more flexible and dynamic in the face of uncertainty than the Anglos. Also, as
Figure 3.2.9 (b) shows, the two clusters are not that different on the masculine/feminine
dimension, although the Asians might see the open, competitive posturing of the Anglo
culture as a little too assertive. However, as illustrated in Figure 3.2.9 (c), it is in the
ritual adherence to group process based on obligation and clearly structured social roles
that the Asians' collectivist culture would prove quite restrictive to the individual
expressiveness and assertiveness so valued in the Anglo cluster. However, the Anglos
appear to lack, at least on a grouped cultural level, the feminine, integrative touch that
might facilitate both the space for creative, exploratory expressiveness and the active
dialogue and mutual support needed to sustain the Fourth Blueprint.
The above analysis was illustrative rather than exhaustive. The body of research stemming from Hofstede’s (1980) initial study has elaborated and refined the range of clusters under consideration. A recent formulation, by Hickson and Pugh (1995) and based on Ronen and Shenkar’s (1985) review of eight studies lists seven established or developing clusters, including five from Hofstede’s original work and two formative clusters that have attracted attention since the early 1990’s. The list includes:

- **Anglos:** for example, UK, USA, Canada, Australia and New Zealand;
- **Northern Europeans:** covering such countries as Germany, Sweden, Finland, Switzerland and Israel;
- **Latinos:** including, for example, France, Italy, Portugal, Brazil, Argentina, Mexico and Peru;
- **Asians:** including Japan, Hong Kong, Taiwan, Indonesia and Singapore, once again, among many others;
- **Arabs:** for example, Saudi Arabia, Egypt, Bahrain, Kuwait and Jordan;
- **East-Central Europeans:** like Russia, Poland, Ukraine, Latvia and Bulgaria, and;
Developing Countries: covering India, Africa, South-East Asia and Nepal – of course, illustratively only.

The last two clusters are the most recent and, possibly, the most uncertain areas of the classification. However, as with all such research, the schema is there to be modified and evolve. It is being modified currently, and will continue to be so. For example, Ashkanasy (2001) reports on GLOBE – the Global Leadership and Organization Behaviour Effectiveness Project which is gathering data on actual and perceived leadership behaviour and values in 61 countries. Ashkanasy notes that the GLOBE team believes that their data support ten country clusters around leadership behaviour. Their clusters are Anglo, Latin Europe, Nordic Europe, Germanic Europe, Latin America, Indigenous Africa, Arabic cultures, Southern Asia and Confusian (or East) Asia.

The study by Ashkanasy (2001) reported on leadership behaviours and stereotyped ideals from three clusters – Anglo, Southern Asian and Confusian Asian. From our perspective, the interesting data relate to the six leadership dimensions that the GLOBE team uses across all their leadership samples (see e.g.: den Hartog et al., 1999). The six dimensions are described in Table 3.2.9, adapted from Ashkanasy (2001).

**Table 3.2.9 GLOBE Leadership Dimensions**

<table>
<thead>
<tr>
<th>Leadership Dimension</th>
<th>Description and key findings from GLOBE (den Hartog et al., 1999)</th>
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<tbody>
<tr>
<td>Charismatic</td>
<td>Represents endorsing and promoting a vision congruent with followers values and, generally with the culturally dominant norms. <em>Universal Positive</em>.</td>
</tr>
<tr>
<td>Team-Orientated</td>
<td>Represents a style of leadership focusing on the team and emphasising the building of team relationships. <em>Culturally specific</em>.</td>
</tr>
<tr>
<td>Self-Protective</td>
<td>Represents bossy yet self-interested and evasive leadership, relying on formalities and procedure. <em>Universally negative</em>.</td>
</tr>
<tr>
<td>Humane</td>
<td>Represents generosity, compassion, patience and modesty. <em>Culturally specific</em>.</td>
</tr>
<tr>
<td>Participative</td>
<td>Represents working well with other people, encouraging and enabling others to contribute to the task and actively participates as well. <em>Culturally specific</em>.</td>
</tr>
<tr>
<td>Autonomous</td>
<td>Based on the single dimension of individualism, and encompasses an independent and autonomous approach. <em>Culturally specific</em>.</td>
</tr>
</tbody>
</table>
According to den Hartog et al (1999) the dimensions of Charismatic (or Value-based) Leadership – found to be a facilitating factor – and Self Protective Leadership – an impeding factor – could be regarded as culturally "universal". The remaining four factors were found to vary widely between countries in their impact on leadership effectiveness. Ashkanasy (2001) found that, for the three clusters under study, there was a consistently positive evaluation of Charismatic leadership as an enabling factor and Self-Protective leadership as a negative factor, thus endorsing the main GLOBE findings. However, in this study there was also very close agreement between the three cultural clusters on Team-orientated and Humane dimensions (relatively to very positive ratings) and autonomous (distinctly negative ratings). The only real cultural variation found was for the Participative dimension. This was highly rated by Anglos while the ratings from both Asian clusters might best be described as indifferent.

This provides further support for the analysis of cultural readiness for Fourth Blueprint regimes we presented in relation to Figure 3.2.9 above. However, the critical addition is the indifference, perhaps in reality negativity, to participation in the two Asian cultures and the common negativity of all three clusters to the autonomous individual. This might be a fine position from which to maximise efficient productive maximisation in task teams but it is no basis for the open, exploratory, unpredictable independent, but also interdependent building of Fourth Blueprint networking dynamics.

All the research cited to date is exploratory and sweeping in its scope. It is difficult to tightly control to extract clear outcomes but it regularly provides more rich and varied questions than prompted it in the first place. It is presented to illustrate the possibility that a range of cultural dynamics, on dimensions closely related to the reshaping of the organisational structures and managerial behaviours proposed for the Fourth Blueprint, will have strong resonance for efforts to deliver paradigm changes. Also, when using international samples – and many of the richest questions relating to the growth and performance of network organisations will encourage that – we need to take the impact of these cultural dimensions into account when interpreting our findings. Also, neither the Hofstede nor GLOBE traits are the only ones on which international managers might differ. Other characteristics, including primary personality and cognitive styles, and behavioural and leadership dimensions can differ because of both ingrained social
and developmental regimes and conscious and concerted decision-making about selection and promotion of various qualities in preference to others.

For example, the study by Toren et al (1997) compared managerial samples from the USA, Australia, Japan, Italy and Israel according to their preferences for different activities within the managerial role. Across the preferences a common pattern of national differences was found reflecting the significant gap between the "masculine" style of the US managers as opposed to the "feminine" style of the Japanese. The Israelis were close to the Americans and the Italians were "intermediate" between the two extremes. The data were also subject to analysis for gender effects as well as the national differences reported here. Toren et al (1997) state that F tests showed national differences on all ten task preferences, whereas only two showed gender differences. A MANOVA showed the national main effect accounted for 55% of the variance across preferences whereas the gender effect only accounted for 2% and gender x nation 4%.

However, an international study of CEO's reported by Herrmann (1996), though somewhat more descriptive in style, shows a different picture regarding importance rankings of 16 work elements of the chief executive role. The study compared male CEO's in the USA, Germany, France, England and Australia. The profiles of 16 task elements in rank order for the US, English and Australian samples are reproduced in Table 3.2.10 to illustrate the content of the comparisons and also because Australia was the only country among the six to show a distinctly different pattern of rankings. The data are derived from Table 18-3 of Herrmann (1996: 187).

As with many international studies of various aspects or fragments of executive behaviour, these samples are not balanced or even randomly selected but rather are opportunistically obtained. So it is difficult to be assertively confident of interpretation with numbers as variable as 390 to 30 from unspecified occupational and functional backgrounds. However, Herrmann (1996) chose to identify two significant differences between one sample and the other five. The "odd group out" was Australia in that:

- **Problem Solving**: was rated in its bottom four whereas for all other groups it was in the top three, and;

- **Technical Aspects**: was rated fifth by the Australians whereas it was in the bottom three for all the others.
Table 3.2.10  Rank-ordered work elements for USA, English and Australian CEO's.

<table>
<thead>
<tr>
<th>Rank Order</th>
<th>USA (N=391)</th>
<th>England (N=30)</th>
<th>Australia (N=30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Conceptualizing</td>
<td>Problem Solving</td>
<td>Conceptualizing</td>
</tr>
<tr>
<td>2</td>
<td>Problem Solving</td>
<td>Analytical</td>
<td>Organization</td>
</tr>
<tr>
<td>3</td>
<td>Interpersonal</td>
<td>Planning</td>
<td>Planning</td>
</tr>
<tr>
<td>4</td>
<td>Innovating</td>
<td>Organization</td>
<td>Creative Aspects</td>
</tr>
<tr>
<td>5</td>
<td>Expressing Ideas</td>
<td>Expressing Ideas</td>
<td>Technical Aspects</td>
</tr>
<tr>
<td>6</td>
<td>Analytical</td>
<td>Innovating</td>
<td>Interpersonal</td>
</tr>
<tr>
<td>7</td>
<td>Creative Aspects</td>
<td>Implementation</td>
<td>Integration</td>
</tr>
<tr>
<td>8</td>
<td>Organization</td>
<td>Interpersonal</td>
<td>Administrative</td>
</tr>
<tr>
<td>9</td>
<td>Integration</td>
<td>Conceptualizing</td>
<td>Expressing Ideas</td>
</tr>
<tr>
<td>10</td>
<td>Writing</td>
<td>Integration</td>
<td>Innovating</td>
</tr>
<tr>
<td>11</td>
<td>Administrative</td>
<td>Financial Aspects</td>
<td>Teaching/Training</td>
</tr>
<tr>
<td>12</td>
<td>Planning</td>
<td>Administrative</td>
<td>Financial Aspects</td>
</tr>
<tr>
<td>13</td>
<td>Financial Aspects</td>
<td>Creative Aspects</td>
<td>Problem Solving</td>
</tr>
<tr>
<td>14</td>
<td>Implementation</td>
<td>Teaching/Training</td>
<td>Analytical</td>
</tr>
<tr>
<td>15</td>
<td>Teaching/Training</td>
<td>Writing</td>
<td>Writing</td>
</tr>
<tr>
<td>16</td>
<td>Technical Aspects</td>
<td>Technical Aspects</td>
<td>Implementation</td>
</tr>
</tbody>
</table>

The other general comment from Herrmann (1996: 186) was that, with the exception of the Australian anomalies noted above, there was relatively common agreement on the top four and bottom four, as clusters but “significant differences in the ranking of the middle of the list.” While agreeing with that observation, I would also suggest that the above lists, taken as holistic sketches of the balance within each national grouping, do justify some distinctive and contrasting characterisations. For example, if we consider two descriptive continua from “conceptual to administrative” and from “facilitator to actor”, we might reasonably seek to label the American CEO’s as conceptual facilitators, the English as administrative actors and the Australians as conceptual actors. While the sampling limitations mentioned above would preclude affirming those conclusions simply on these data, it may usefully prompt some exploratory hypotheses.

Another comparative study of managerial preferences that casts some light on that issue is that by Gibson (1995). This study, also dealt with in Section 3.2.1, examined national and gender differences in leadership style in four nations (Norway, Sweden, Australia and the USA). These countries were thought to form two clusters, with Norway and Sweden in one camp and the USA and Australia in another (more or less the “Anglo” group). In fact, national differences did account for 28% of the variance but Australia was once again the outlier showing significant differences with all the other three countries while there were no differences between the Scandanavians and the USA. The
Australians were lower on interaction facilitation, higher on benevolent autocratic style and lower on laissez-faire style which does not seem to match the team-oriented, humane and participative tone of the ‘Anglos’ in the Ashkenasy (2001) findings.

It is worth noting that the Australian and Scandinavian samples were all gathered by the Personnel Departments nominating managers in 10 to 20 companies within each country. Gender balance was the same in all at 55M: 45F. There were between 45 and 64 in each national sample and the spread of representatives of various functions, levels and industries was deliberately broad. However, the 45 USA representatives, though all practising managers, were all drawn from the one “managerial assessment course”, and had interacted with each other for over a year. While this may limit our enthusiasm about generalising the USA results from this study, the other sample characteristics, perhaps even the limited N in national samples, are probably as good as it gets in many comparative studies. In seeking to explain her results, Gibson (1995: 273) commented:

“In light of Australian history, it may be that cultural values such as individualism and masculinity have become much more deeply ingrained in the Australian individual than in the American. Given these deep-seated values, goal-oriented and directed leadership practices may be evaluated more favorably by Australians, and... these practices may elicit increased performance and extra-rote behavior on the part of Australian employees.”

Abramson et al (1996) reported another study that casts doubt upon the universally consistent impact of the national clustering (of Hofstedec and others) on all variety of managerial and leadership styles and behaviour. This study also introduces relevant comparative data on styles/types by its use of the MBTI. The study compared 81 Canadian, 71 American and 64 Japanese MBA students on their ‘cognitive process preferences.’ They defended their use of students rather than managers by noting that some researchers (e.g.: Calder, Phillips, & Tybout, 1981; Locke, 1986) believe it results in more homogeneous, balanced and matched samples and greater generalizability – especially with regard to international comparisons. They also note the value of MBA samples in maintaining close equivalence to direct managerial samples.

Results showed significant national differences on three of the four dichotomous MBTI variables, with Extroversion-Introversion being the only scale to show no differences. The Canadians were more Intuitive than the Americans and the Japanese. The Japanese were more Feeling-oriented than the Canadians or Americans, and the Japanese were more Perceiving, the Americans more Judging with the Canadians in between.
Abramson et al (1996) spent some interpretative energy in reviewing these findings focusing on the issue of differences between the two “Anglo cluster” members – the Canadians and Americans. They found the Canadians:

- to be more intuitive while the Americans are more sensing, and;
- to be more perceiving while the Americans were strongly judging.

They concluded that “Canadian and American managers cannot be considered interchangeable in future studies on North American culture.” (Abramson et al 1996: 123) We might add: “And in studies involving members of the Anglo cultural cluster.”

Continuing with the focus on comparative personality type, we might usefully revisit Tables 3.2.6 and 3.2.7 in Section 3.2.1. The reader will recall our initial focus on gender when these data were originally presented. However, if we now consider stylistic differences for the UK and USA male samples in those two tables, we can see that:

- There is a small, but probably significant, overload of Traditionalists for the UK sample (56.9%) compared with the American norm (47.1%), and;
- The Americans have over 1.5 times the number of visionaries in their sample as compared to the UK males.

The gender differences remain but seem to be the same in both national samples.

We should also address the data from McAdam (1994) presented in Tables 3.2.2 and 3.2.3. These showed Brain Styles data for eight countries with separate gender sub-samples. As the F tests at the bottom of both tables show there are significant national differences in Brain Styles patterns in both relaxed and pressure conditions. Briefly:

- Males tend to be Left Brain and women right-brain when relaxed, with the exceptions of;
- France, the USA and Japan, where the male samples are – at least marginally - Right Brain as well, and India where both male and female samples are Left Brain when relaxed, and;
- Both males and females are Left Brain under pressure, but the women are significantly less so, with the exception of;
- France, Japan, and Holland, where the women are more Left Brain under pressure. Looking at Table 3.2.3, we can see that, for France and Holland, the women are still more Right Limbic (or teamist) than their male colleagues (which is consistent with the common finding and gender stereotyping as outlined in Section 3.2.1). However, they are
significantly less Right Cerebral (or Imaginist) accounting for the overall Right Brain deficit whereas for the Japanese sample, the opposite pattern applies. However:

- With the exception of US women, who are in balance between Right and Left Brain under pressure, all other samples show a distinctly common tendency to regress deeply into Left Brain repertoires under pressure.

It is important to repeat the cautions about generalisability from these samples. We saw, in Section 3.2.2, the critical impact of occupational and functional background on stylistic profiles. While the national samples in the McAdam (1994) study were all drawn from subjects engaged in some form of graduate management education, no occupational factor was used to balance the samples. Also, in the case of the French, they were all in their early twenties – part of the elite Grande Ecole de Commerce system which goes through an extended preparatory phase including a quasi-MBA before sending them out into organisations. The other samples all included a spread of ages from typically the mid-twenties to the early forties and a significant variety of past occupational experiences. So while the differences in profiles are strong enough to be provocative, they need to be subject to the rigours of a more complex and balanced sampling process before we can feel comfortable affirming them.

A similar caution applies to the results of the study by Allinson and Hayes (2001) that we encountered in Section 3.2.1. This study used the Intuitive versus Analyst Cognitive Style scale and surveyed samples of managers from Britain, India, Nepal, Jordan, Russia and Singapore and management students from Australia, France, Germany, Britain and France. The managers represented five of the Hickson and Pugh (1995) cultural clusters as listed earlier – Anglos (Britain), Asians (Singapore), Developing Countries (India and Nepal), East-Central Europeans (Russia) and Arabs (Jordan). The students represented four clusters – Anglos (Britain and Australia), Asians (Hong Kong), Latins (France) and Northern Europeans (Germany).

The results (for details see Allinson and Hayes, 2001:165-166) showed the British managers as being more intuitive than all other managerial groups by a substantial margin and then the Singapore managers were more intuitive than the Jordanians and Nepalese. For the students, the Germans were the most intuitive, followed by France, Australia, Britain and Hong Kong in that order. These last four countries show relative
patterns that were very similar to those they displayed on the right brain relaxed comparisons in the McAdam (1994) study as presented in Figure 3.2.2. Also, all student samples were, on average, more intuitive than any of the management samples apart from the British one. Further the within cluster comparisons – for Developing Countries in the management sample and the Anglo cluster amongst students showed no significant differences on main effects. However, for the Anglo students, the Australian women were slightly more intuitive than their male colleagues, whereas the British women were substantially more analytical than their male colleagues who were marginally the most intuitive sub-sample of the four.

In summary, there are significant difficulties in conducting generalisable comparative research relating to complex interactive relationships around the issues of managerial and leadership behaviour and cognitive and personality style. Variability in sampling strategies is one of the major problems. For example, the GLOBE study cited above (Ashkenasy, 2001; den Hartog et al., 1999) used only middle managers in the food processing, telecommunications and finance industries in each of the 61 countries they targeted. They decided on that strategy for good reasons related to understanding the nature of what they had measured against the logistic and interpretative difficulties of broadening their samples in different ways in different countries.

This is forgivable but allows little scope for iterative building of grand theory in a progressive way. Each study needs to set its own sampling guidelines to maximise equivalence of samples across national, gender and occupational dimensions and use complex analysis of variance to assess the interaction between those dimensions. Nonetheless, if treated with due caution as guides to exploratory hypothesis formation, the material we have surveyed here might justify some tentative conclusions and general principles about national differences on the brain styles and personality types among managerial aspirants for the Fourth Blueprint. In this vein, it is suggested that:

- Broadly, cultural dynamics relating to individual and interpersonal behaviour, values and motivation have significant and systematic impact on organisational and managerial behaviour and outcomes;
- Those impacts involve broad issues of values, relational styles and obligations, role expectations and prerogatives and social strategies for ensuring control that are central to the contrast between “Performance”
and "Learning" cultures and so are likely to be crucial to implementing Fourth Blueprint designs, and also;

- They can often be usefully summarised and encapsulated by the device of national clustering which suggests some broad and common styles, probably not exceeding ten and on many aspects of behaviour less than five, will suffice to explain the bulk of cultural variance, but;

- Though between-cluster effects will continue to be critical, within-cluster differences – often at the micro-level of individual and interpersonal dynamics – will also be evident and critical in their impact on managerial and leadership behaviour, which means that;

- More specifically, we should take care to locate our research designs and sampling either between cultural clusters that are thought to tap the specific dynamics we wish to examine (in which case, balanced designs will be crucial to theoretical clarity) or within clusters to eliminate the macro-cultural impact from the "noise" that would otherwise surround our examination of the micro-dynamics of individual differences; and

- At the more individual/interpersonal level within clusters, there appear to be national differences on the overall "mental sets" that managers bring to the task of managing and its psycho-social context;

- These differences which seem to form, and develop in, a micro-climate of stereotypical organisational cultures within countries, seem to include dominant or characteristic personality styles and types, shared values and assumptions and leadership and interpersonal influence patterns, and;

- Even more specifically, within the Anglo culture, it would appear that research is suggesting that these characteristic "cultures of leadership" might see the senior American executive leadership characterised as conceptual (Cerebral?) and facilitative (Right Brain?) in style, their British counterparts as relatively more administrative (Limbic?) and action-oriented (Left Brain?) and the Australian version as more conceptual (Cerebral?) and Action-oriented (Left Brain), but;

- It also appears that these within-culture national differences are significantly moderated by gender and occupational background effects that both directly form their own climatic enclaves and also indirectly limit the application of the core national culture.
3.2.4 Situational stress and its impact on managerial style

"...the work of Fiedler and his colleagues has been directed particularly to how leaders use their cognitive resources under stress, primarily boss stress...they show that policies are durable under stress while decisionmaking is not. Leaders who are under stress behave as though their cognitive resources are restricted. As a result they, perhaps wisely, fall back on experience (policies) rather than trying to come up with new solutions to problems (decisionmaking)."

Beach (1993: 277)

What is the interactive relationship between situational stress and brain styles or psychological type? Do stressful circumstances prompt a reversion to earlier less mature cognitive and expressive repertoires in the individual's attempt to manage the pressures of the noxious environment? Or alternatively, do the challenges of pressure leading to anxiety and stress prompt a more open, risk-oriented enthusiasm for trying responsive patterns that have previously been avoided, overlooked or relegated to the reserve bench of weaponry while a combination of urgency and control delivered the desired results? Perhaps type has a moderating effect where certain types and styles tend to encourage exploratory and experimental responses to discontinuity, uncertainty and stress whereas, for others, such circumstances precipitate such severe anxiety that a defensive and regressive reversion to a narrow and overlearned repertoire is inevitable.

Questions such as these have their perennial interest in any organisational setting but also have a general application to learning environments such as Fourth Blueprint organisations are intended to achieve and foster. They also have a more specific relevance to the issues of implementation raised by Limerick et al (1998) under the heading of Neo-Corporate Bureaucracies, as we encountered in Section 1.2.4. Not only do these mutant forms seem to stand in the way of the positive learning and creative building objectives of the Fourth Blueprint, they seem to exponentially increase stress levels and consequent resort to political manoeuvring, such as tight control regimes and withdrawal from effective contribution. How much of this might be explained by the differential, or even common, responses of various styles/types to the issues of uncertainty and change on the one hand and the impact of assertive, control-oriented social behaviour unencumbered by hierarchical controls on the other?
Historically, much of the research on stress and its organisational and occupational impact has been securely embedded in the Third Blueprint's performance-oriented culture. One such body of research related to the Contingency Theory of Leadership. More recently, the “Father” of the thrust, Fred Fiedler, and his colleagues (see e.g.: Fiedler, 1993; Fiedler & Garcia, 1987; McGuire, 1987) have tended to focus their attention on the “Cognitive Resource Theory” (CRT) of leadership. This approach is strongly grounded in a consideration of the leader’s response to stress – especially what Fiedler (1993) refers to as “boss stress”.

As we noted in Section 2.1.3, Contingency Theory is one of the great flowers of Third Blueprint theorising and concepts such as “boss stress” are a legacy of that attachment. “Boss stress” is seen as particularly focused and intense since “the superior plays such an important role in how we view ourselves and our future in the organisation.” (Fiedler, 1993: 11) To the extent that the relationship with the boss is uneasy and stressful, CRT predicts that leaders are likely to revert to skills and behaviours that have worked in the past. These theorists focus on the distinction between the leader’s intelligence (as a loose and broad surrogate for their capacity to reason and analyse cogently in response to challenge) and experience (representing the tendency to accept blanket nostrums and unexamined routines that have previously been successful).

Fiedler (1993: 12) summed up their findings as follows:

“When stress is low, performance correlates negatively with leader experience; when stress is high, it correlates negatively with intelligence. Thus leaders use their intelligence but ‘misuse’ their experience when stress with the boss is low; they use their experience but misuse their intelligence when job or boss stress is high.” (emphasis in original)

Applying these insights to the Fourth Blueprint is bound to be speculative. First, we should note that the central role of “The Boss” in driving stress is inappropriate to the Fourth Blueprint setting. However, that is not to say that the general pressure of expectations of empowered colleagues in the network might not exercise as compelling a force on each of the collaborative individuals as Fiedler’s “boss”. Also, the reader will have noticed that the analysis begs the question of whether linear, analytical reasoning, as measured by intelligence tests, is necessarily the desirable response to stressful environments. Provided that the stress experienced results from overloaded expectations in an otherwise clear and continuing, strategic performance environment, it may well be a reasonable assumption. However, where the leader confronts a radically discontinuous
environment of the type we sketched through the Eco-cycle model in Section 2.1.2, then the stress itself may be generated, or at least exacerbated, by rigid adherence to linear analysis and “crystallised intelligence”. In such circumstances, the concealed but unexamined lessons of experience are also unlikely to offer many breakthroughs.

Beach (1993), in examining the relevance of Fiedler and his associates for behavioural decision theory, suggests a broadening interpretation that might assist us. He appears to equate the generic use of the concept “intelligence” in CRT with “the ability of leaders to use their creativity and intellect in problem-solving” (Beach, 1993: 285; emphasis added). He contrasts this with a view of “experience” as equal to “staying with policy”. He then notes that, in the McGuire (1987) study, ROTC students making decisions under stress were given a test that distinguished problem solving ability (which Beach labelled “fluid intelligence”) from knowledge (termed “concrete intelligence”). Beach noted that it was the use of problem solving ability that was impaired by stress “but that the use of knowledge, of experience was unimpaired.” (Beach, 1993: 286) On this basis, Beach reached the conclusions in the quote that headed this section. He added; “it is probably the case that this often causes no difficulty. However, when experience is not wholly adequate and creativity and intellect are required to get the job done properly, the leader may be unable to provide what is needed.” (Beach, 1993: 285)

Beach’s view of intelligence is much like the Cerebral (Analytical and Imaginist) Brain Style. Also, the concept of the shared leadership of Collaborative Individuals that is at the heart of the Fourth Blueprint, requires that the creative exploration and visionary reframing (Imaginist) that is central to transformational learning should be undertaken in a dialogic and open yet supportive and collaborative climate (Teamist). This dual ascendancy of the Cerebral and the Right Brain Styles is especially critical to building the jointly empowered, flexible responsiveness and strategic coherence of networks, as outlined in Sections 3.2.1 and 3.2.2. If these two broad stylistic repertoires tend to be surpressed by stress, or even replaced by Left Brain (knowledge-focused) and Limbic (experience-based) response styles, it could prove fatal to Fourth Blueprint regimes. If anything we will regress further from the cognitive and interactive maturity needed to sustain coherence in a loosely-coupled, networking environment under stress.

So it is important to directly assess the likely impact of situational stressors such as performance expectations, deadlines, uncertainty or ambiguity and failure of previously
successful regimes on stylistic repertoire. Unfortunately the literature is relatively sparse on this specific issue. However, what there is seems to be ominous in its implications. For example, a study by Ware, Ryttling & Jenkins (1994) found a general tendency for students to move towards a Jungian style dominated by Introversion, Sensing and Thinking under stress conditions. Stress was 'simulated' by asking respondents to the MBTI to "answer each question as if it were preceded by the phrase 'When I am under stress, I..." (Ware et al, 1994: 40). These same subjects had previously responded to the MBTI, with no modifying instructions, some months earlier.

"Normal" and "Stress" scores were computed for all four dichotomous MBTI variables with three of the variables – E-I, S-N and T-F – all showing consistent movement under stress towards I, S and T. In all cases, those who had been I, S and T became more so and those who, under the "normal" condition would have been classified as Es, Ns and Fs were, on average showing clear I, S and T group scores. The J-P variable, on the other hand, showed no such crossover effect under stress but in fact moderated. Those previously classified J remained so but were, on average closer to P and those who were P remained so but their average approached J. The limit of gender effects was that all the trends outlined above appeared slightly more pronounced for females than males.

To this author's knowledge, there is only one study that examined the impact of stress on brain style profiles among managers. It has already been cited and the relevant data are in Tables 3.2.2 and 3.2.3 above. McAdam (1994) presents compelling evidence of the impact of environmental stress (especially related to uncertainty and performance deadlines) in prompting stylistic regression towards left brain coping styles. These data were gathered using L-TAS, a test that provides parallel "relaxed" and "pressure" brain profiles; each based on nine questions. The pressure questions were all preceded by reference to some stressor (time urgency, performance expectations, lack of information etc). As the data in Figure 3.2.2 show, there is a general tendency for all national and gender sub-samples to move towards the Left Brain and Cerebral styles and away from the right-brain and limbic styles under pressure. The move is most pronounced with the Left Brain/Right Brain dichotomy but reference to Table 3.2.3 shows this is most dominantly based on the move to Analyst (Left Cerebral) style rather then any marked change in Producer (Left Limbic). Overall, both right-brain styles drop by about three points each but whether Cerebral or Limbic quadrants contribute most to the right-brain evacuation under pressure seems to vary across gender and national groupings.
The sample for Warc et al (1994) was 387 US undergraduate students (254F: 133M). Faculty affiliations were not specified. McAdam (1994) used an international, post-graduate management student population that was dominantly part-time and employed. Details of sample sizes are specified in Table 3.2.2. The general findings of both studies are distinctive and consistent. Stress appears to cause a common tendency for regression to Left Brain (ST) and, possibly, Cerebral (NT) styles – although in this case, it appears that both national differences and gender may moderate the tendency to regress towards cerebral (or limbic) styles. However, neither study controls for occupational differences, which, as we discovered in Section 3.2.3, can have a direct impact on stylistic patterns. Also, gender and national samples were not balanced in such a way as to allow for precise assessment of their relative contribution to profile variance.

However, while those caveats regarding interpretative generalisability remain, the implications of the research cited in this section can be summarised as follows:

- Stress appears likely to have the common impact of narrowing and focusing cognitive and personality repertoires and to lead to defensive dependence on less complex and mature responsive regimes;
- In relation to typical styles and types, this general narrowing tends to lead to a Left Brain emphasis that is more common and pervasive among managerial cadres under pressure than under normal conditions, and
- There appears to be an average tendency to move towards Cerebral and away from Limbic styles under pressure but this is moderated by gender and national background and may also be effected by occupation.
Chapter 4

*Brain Style profiles of the new “High Potentials”: An exploratory study*
From our conceptual mapping and theory building in Chapters 1, 2 and 3.1, we constructed a view of the desirable pattern of managerial/brain styles and types that might reasonably be expected to facilitate a move towards organisational environments consistent with Fourth Blueprint principles. We also sketched an understanding of the interactive dynamics between styles/types that might impact upon a positive transition to networking or a regressive and defensive attempt to forestall climatic change in that direction. This led to the conclusion that there was a need for more Right Brain and Cerebral profiles to move into positions of strategic and process influence than would have been typical within the “world’s best practice” Third Blueprint organisation. Also, it seemed likely that a major source of resistance and disruption in paradigm change could be the typically large over-representation of Left Brain and Limbic types within the extant managerial cadres flowing from recent Third Blueprint hegemony.

Given those considerations, the remit pursued in Section 3.2 was to explore the likely sources of this new managerial mindset. In particular, we examined the possibilities of gender differences, occupational background and national managerial cultures as embodying the alternative mental models and styles we had constructed. As we found, there was a rich and diverse research literature on each of these issues. However, given the complexities of the dynamics underlying each of these areas of study on their own (let alone the added complexity imposed by us seeking to integrate across them), there were many gaps and more new and interesting questions than well delineated answers.

One gap was that, although there was a growing body of literature on gender and national differences in leadership behaviour and cognitive styles, the samples used rarely took any account of differences in the occupational background of subjects. As we saw, this latter issue was an important determinant of stylistic differences in managerial behaviour and this omission made it difficult to know the level of artefact that existed in the results. Conversely, the occupational studies were often based in single cultures and, on that basis, may have been producing focused results that were not generalisable. In any case, the opportunistic nature of any data collection across a wide global arena (forced by the fearsome logistics of gaining congenial collegial contacts let alone access to personal revelations in alternative cultures) meant that there were few if any carefully balanced samples to address these specific questions. Also, none of these studies gave us the opportunity to assess the variable impact of stress on the stylistic repertoires of the various sub-samples of interest to us.
Thus, it seemed likely to be advantageous to examine these questions via a design that provided balanced samples according to the subject's gender, occupation and national background. In order to systematically assess the impact of pressure, it also seemed desirable to use an instrument that would allow us to measure differences in stylistic repertoire among these groups between "normal" operating environments and circumstances of uncertainty, time urgency, close supervision and high risk. However, such an international and complex sampling design was difficult to fully plan and deliver from scratch as a doctoral level project.

The solution presented itself from within the other responsibilities of this author while he was researching these issues. From the late 1980's through to the late 1990's, though based in Australia, he has had the opportunity to teach on a range of graduate management degree programs and short-courses in several overseas countries, but particularly in the UK and USA. In the course of these visits, a key course offering he was responsible for delivering related to providing encounters, for practising managers and MBA students, with their own stylistic profiles in workshops with their peers. In these workshops, he had been using an instrument designed to measure Brain Styles entitled Life-Time Analysis Survey (L-TAS: see Davies, 1982). A copy of the questionnaire is presented in Appendix I. The advantages of L-TAS as an educational tool in this setting included:

- **Speed and Ease of Administration**: It took on average only 20 minutes to complete and could be immediately self-scored and placed onto a profile by the student;

- **Clarity and Simplicity of the Basic model**: of stylistic repertoires and their implication for managerial behaviour, which facilitated a workshopping (rather than lecturing) style of learning process in the hands of students and their colleagues;

- **Measurement of Normal and Pressure styles**: facilitating self-review of the students' responses to various sources of stress, and thus;

- **A distinct relevance to New Leadership theory**: could be more easily pursued in more formal classes while preserving the students' sense of the direct relevance of the discussion to their own journeys of transition.
These educational benefits of L-TAS meant that the instrument was completed by just the right pool of applicants—i.e., high potential professionals and junior managers undergoing transition to senior managerial status. They also generated the profiles to facilitate their own learning and only handed the questionnaire back to the lecturer and researcher at the end of the class if they were willing to contribute to research without further being identified or involved. Any questionnaires with identification on them (many had none, in any case, as the name was only taken when the lecturer did the scoring and returned it to the students with a profile) were “cleaned” by the student before handing them in. Over 3000 administrations in around 10 different countries worldwide produced a return to this author of just over 2500 profiles for anonymous research use. Thus, the likelihood of social desirability response bias was minimised.

The other characteristic of the questionnaire that bears mentioning relates to occupational background. Reference to the first page of Appendix I will show that Question 4 provides a list of occupational choices for each individual to use. These were initially generated from a list of categories used by recruiting staff in MBA programs at Phillip Institute (now RMIT, Melbourne) and at the Cranfield School of Management in the UK. They were designed to facilitate the discussion of individual differences within study groups and so some categories—e.g., Sales and Marketing—were listed beside each other early in the program because students rarely differentiated them in their thinking. More recent findings suggest that, from a stylistic perspective, they are different occupational experiences.

So this research program grew up around an educational development. By late 1993, when the research design outlined below was decided, over 1600 profiles had been gathered with over 600 of those being from Australia, 350 from the UK and around 150 from the USA. It was decided that an international sample balancing gender, three occupational clusters and three national groupings (UK, Australia and the USA) might feasibly be gathered and analysed. However, that depended on half the sample being derived by random selection within the total Australian and UK male data already gathered. Some targeted sub-sample recruiting—particularly for USA MBAs but also, to a less extensive level for UK females—would be undertaken but still within the educational/personal development context outlined above. This further data gathering was completed by early 1998, with overseas visits by the author, and some careful delegation to overseas colleagues delivering courses of similar intent.
In the meanwhile, work also proceeded on assessing the instrument. As we shall see below, it proved to be less than psychometrically perfect but the form as originally used was preserved to make the whole task of gathering and analysing 540 profiles in a balanced design of 30 people each in 18 cells feasible. This placed some limits on confident generalisation from the study. However, the validating interrelationships with tests of theoretically equivalent concepts and the findings related to the primary hypotheses that are the focus of this chapter were sufficiently compelling to justify a robust, albeit cautious, consideration of the data that is presented below.

**Hypotheses**

The hypotheses that will be used to guide this study are derived from the literature review in Section 3.2. We should remember the broad focus of the thesis, which is to clarify the likely sources of high performance in the new networking organisations and the refinement of our focus down to alternative brain style profiles. In this context, the following exploratory hypotheses will be evaluated:

- **Hypothesis 1 – Gender Differences:** There will be gender differences in brain styles in that:
  - **1A.** Females will tend to be more Right Brain Limbic and males will be more Left Brain Cerebral, OR;
  - **1B.** Females will be more Right Brain and males will be more Left Brain, AND;
  - **1C.** Females will be more Limbic; males will be more Cerebral.

- **Hypothesis 2 – Occupational Differences:** There will be occupational differences in brain styles, in that:
  - **2A.** Managers from “technical” occupational clusters (e.g. accountants, engineers, economists, lawyers, operations managers) will tend to be more Left Brain than managers from either the “Ideas/Knowledge” cluster (e.g. Science/R&D, Computing/IT, Marketing/Sales and General MGT/Business Development) or the “People” cluster (e.g. HRM/D, OD, Counselling, Training);
  - **2B.** Managers from the “Ideas” cluster will tend to be more Cerebral than those from the other two clusters, and;
• **2C.** Managers from the “People” cluster will be more Limbic than those from the other two clusters

• **Hypothesis 3 – National Differences:** There will be national differences in brain styles and national/gender interactions, in that:
  
  • **3A.** Male managers from the US will be more Right Brain than either UK or Australian male managers;
  
  • **3B.** Male managers from Australia and the US will tend to be more Cerebral than male managers from the UK, **BUT**;
  
  • **3C.** Female managers from all three countries will show no significant differences to each other and be more Right Brained and Limbic than for their male colleagues.

• **Hypothesis 4 – Stress/Pressure Differences:** Conditions of stress and pressure will produce different stylistic profiles, in that:
  
  • **4A.** Managers stylistic profiles under pressure will be more left-brain and cerebral than those they display when in “normal” operating conditions, **BUT**;
  
  • **4B.** The generality of 4A may be moderated by the tendency of female managers to move towards limbic styles under pressure.

### 4.1 Research Methodology

In many ways, the challenges for research methodology in this project related not so much to design complexity but to creative exploration in search of conceptual clarity with the measuring instrument. They also involved the logistic difficulties of ensuring proper and consistent administration of the survey to over 500 subjects, with exactly the right frequencies on gender and various occupations in three countries separated by several thousand air miles. Finally, further attention needed to be given to the choice of applicant pool to ensure it tapped common experiential, educational and motivational dynamics in each of the three countries involved but still represented a realistic sub-set of the likely pool of “leadership aspirants for the 21st Century Fourth Blueprint regime”.

In this section, we will address these issues sequentially under the following headings:

• The Research Instrument;

• Operationalising the Independent Variables;

• The Research Sample, and;

• Data-gathering and Data Analysis.
4.1.1 The Research Instrument

As mentioned earlier, an 18-item questionnaire titled the Life - Time Analysis Survey (L-TAS) was used to gather measurements designed to classify subjects according to their Brain Styles profiles. This instrument was published in the early 1980's by Identity Dimensions – a consultancy based in Southern California. While a detailed Interpretation Manual was available that greatly facilitated the use of the instrument in management education as described above, this author can find no references to its use for research in relevant professional and academic literature nor could he uncover a statistical manual.

These limitations notwithstanding, its use in the management education and development sessions described above generated significant and positive endorsements from participants. They were convinced as to its face validity and accuracy in providing individuals (and their significant others) with a “quick sketch” of the personality type and dynamics that was seen as accurate as well as helpful in development. It had also proved useful, in a few preliminary studies undertaken by McAdam (1994) in differentiating a range of international samples largely composed of post-graduate management students. Further, by the time it was chosen for the study, there were over 1600 profiles available from which to test relevant statistics that would allow us to clarify its factorial structure, relationship to other style/type measures and reliability.

The test had another compelling advantage. As the reader will see by scanning Appendix I, the instrument is in two parts, with nine questions contributing to each part. It provides two separate profiles of Brain Styles preferences for each subject, as follows:

- **Relaxed Styles**: measured by generating totals from each of four items in each of the first nine questions, presented a summary response pattern the subject typically employed in environments “in which you do not sense acute time constraints on your activities” (Davies, 1982: 5);

- **Pressure Styles**: uses totals from the columns beside questions 10 to 18 to compute another profile this time related to environments in which “you are sensitive to, and very much aware of, acute time constraints such as deadlines, schedules and appointments” (Davies, 1982: 5)

Such a distinction is, of course, at the heart of our hypotheses related to the impact of stress on style or type. Davies (1982) concentrates strongly on the time-based source of
pressure when he distinguishes relaxed and pressure. However, respondents report that they understand the pressure distinction more broadly to include pressure from uncertainty, lack of information, expectations, conflict, competing demands and “facing crunch time on a project”. A brief scan of the stems printed in bold for questions 10 to 18 in Appendix I should clarify for the reader why this might be so.

Alternative brain styles measures lacked those differential response profiles based on the level of stress within the environment. Many of them (see e.g; McCarthy, 1993; Taggart & Torrance, 1984; Torrance & Reynolds, 1980; Wonder & Donovan, 1984) only measured a 2-quadrant, Left versus Right distinction, in any case. Also, the most attractive 4- Quadrant alternative was the Herrmann Brain Dominance Index (HBDI) which we discussed in detail in Section 2.2. However, it:

- has a much broader validation base now than was extant in 1993;
- was already commercialised in 1993 and therefore financially and administratively difficult to access for hundreds of internationally dispersed students;
- took over an hour to complete and needed to be scored by Herrmann’s staff, and;
- in any case, had no separate measure of stylistic fluidity under pressure.

Thus, it was decided to persist with the L-TAS and conduct relevant research using the assembled database mentioned above. We also added some specifically gathered data on a sample of 312 students who completed the L-TAS, the Hogan and Champagne Personal Styles Inventory and the Team Management Inventory (both Jungian tests) to form as sound a picture of the psychometrics of the LTAS as was possible. Space and focus preclude all but a general summary of the findings of these studies as they might assist in our attempts to clarify, interpret and apply the findings of the primary study being reported here. However, it is the purpose of the remainder of this sub-section to provide just such a brief account under the following headings:

- The issue of Ipsativity;
- Reliability, Item/Scale Relationships and Factor Structure of L-TAS measures, and;
- Validity of L-TAS measures.
The Issue of Ipsativity

"Although the forced-choice procedure giving ipsative scales may be a valid method to investigate interests and values among which people have different preferences, several authors have warned against correlational analysis of ipsative scales (Bauernfeind, 1962; Cornwell & Dunlap, 1994; Guilford, 1952; Hicks, 1970) while arguments for the tenability of ipsative measures have been set forth by Nordvik (1991) and Saville and Wilson (1991). Ipsative scales tend to be negatively correlated and are thus dependent. (However) ... when the number of scales increases (beyond two) relations are not completely decided by the method. The pattern of correlations indicates the pattern of oppositions between the scales according to the endorsement and rejections of the items by the participants."

Nordvik (1996: 266 - emphasis added)

L-TAS is presented in a forced – choice format that results in ipsative scales. It has this in common with many personality scales, and more particularly, with many mentioned in this thesis to date, including the MBTI, the Hogan and Champagne Personal Styles Inventory and the HBDI. A set of measurements is ipsative when the sum of the scores obtained across the scale for each subject is a constant. In practice there are “degrees of ipsativity”. For example, Cattell (1988) distinguishes between “semi-ipsatized” scales that allow the within-subjects variance of scores to vary and “fully ipsatized” scores that equate variances across scales. Also, “partial ipsativity”, involving variations in scale construction (e.g. scales having different numbers of items, respondents not required to rank all items, differential weighting of alternative responses, normative sub-sections contributing to total scale scores) can limit the alleged negative impact of ipsativity.

Nonetheless, ipsativity has generated an energetic debate within the applied statistics literature along the lines referred to in the quote above. The essential concerns relate to the methodologically imposed dependence among the theoretically relevant variables within data constrained to add up to a constant score for each individual’s profile. As a result of this constraint, the data are seen to breach the assumptions underpinning correlational analysis and its derivatives such as Factor Analysis. The key issue is the multicollinearity of the data –as opposed to the desirable independence of measurement across all scales. However, a second and related concern is that the data generated in a forced choice ipsative scale is essentially ordinal data only. Thus it is viewed as unable to sustain parametric analysis due to its inferiority in terms of interval measurement.
Apart from the negative reviews on ipsativity mentioned in the quote above, other articles with similar themes have included Clemans (1966) and Johnson, Wood & Blinkhorn (1988) – ranging across all statistical issues raised by ipsativity - and Tenopyr (1988) who focused specifically on the issue of reliability in ipsative measures. However, more recently, the balance of advocacy has swung towards a view that ipsativity is not automatically statistically unmanageable with parametric methods and that there are some sound theoretical and psychometric reasons for using ipsative scales. Also, it is suggested that, under certain conditions, we can be confident the numerical products of such measures might validly and usefully submit to parametric analysis.

Saville & Wilson (1991: 221) noted the two main reasons for using ipsative measures:

- Better control of response sets, and;
- To reflect that “Life is about choices.”

In regard to the former, they noted a range of distorted response biases that typically contaminate normative scales such as central tendency, acquiescence and negativity, social desirability and strategic impression management. Ipsativity – especially direct forced choice – tends to eliminate the damaging effect of these tendencies which really represent various ways of avoiding indicating clear choice.

This brings us to their latter, and more positive, case for ipsative measurement - that life is about making choices, many of which are between perceptually proximal outcomes. They also note Broverman’s (1962) point that many models in psychology are ipsative in nature. They list the personality theories of Jung (1933), Lewin (1935), Murray (1938), Freud (1943), Rogers (1947) and Cattell (1965a) as stressing the importance of ipsative relationships between different personality and motivational structures. More immediately to hand, we find Chapter 2 of this thesis strewn with such models of complex, interactive structures of personality, cognitions and values, with all variables assumed to interact in fundamental tension with each other.

Perhaps the best vehicle to illustrate the point is the Competing Values Framework (CVF) of Quinn and his colleagues as we encountered it in Section 2.1.1. The CVF explicitly states that each of the quadrants has their positive features and best fitted applications and will be both variously applicable in different environments and variously appealing to different personalities, cognitive structures and value clusters. However, in researching CVF dynamics, Quinn, and fellow researchers, will rarely wish
to hear that all styles should receive a 10 out of 10 — or a 7 or even 1 on some normative Likert scale indicating absolute value. Rather, it is the relative preference of A or B that they assume to be critical and wish to explore. If, in choosing A over B (and then B over C and C over D) — the essence of a forced choice regime — the consequential arithmetic means that you inevitably produce half the number of bi-polar factors rather than relatively independent or positively correlated factors, they will not be surprised. Nor will they feel they have "discovered" bi-polarity rather than prescribed it.

Let us now assume that there are, say nine forced-choice quad-items used to test the relative strength of the four competing values within an individual's value structure — or in a particular environmental context. If so, then they are seen as nine opportunities, from an unknown universe of such contextual settings, to assess the relative strength of each variable/quadrant within the personality/cognitive structure of the individual making the choices. Suppose the method for indicating these forced choices was to give direct rankings such as 4, 3, 2, and 1 for "most like to least like". The advocates of ipsativity would say that adding 9x4, 9x3, etc. to the scale to which they have been assigned and then regarding the four totals as a respectable interval measurement of the concept “strength of preference” is quite defensible. Also, even though each item generates ordinal (ranked) data, somewhere during the consistent adding of ranked data over nine items (or 18 items or more) we reach a threshold beyond which the total can be treated as if it were interval measurement of the normally distributed concept.

In any case, they would regard it as at least as defensible a position as asserting that a normative scale, ranging from strongly agree to strongly disagree, produces non-controversially interval data (see: Baron, 1996: 50 for an expanded consideration of this issue). This common view of normative scales is typically brushed aside in the literature. Nunnally (1967) argues that it is acceptable to treat most measurement methods in psychology as if they are interval scales. Lord & Norvick (1968) argue that if treating the data in that way produces useful and coherent results we should do it. In summing up the relevance of this line of thought to ipsative measurement, Baron (1996: 50) says:

"The same empirical approach can be used with ipsative measurement. If standard analytical techniques produce useful results, they should be followed. Where results are internally inconsistent or fail to accommodate meaningful interpretation they should be avoided. This is not to deny that the interdependence of scales in ipsative measures creates difficulties beyond those found
with Likert scales. (However, to reject the use of standard analytical tools for ipsative data,)...may be a little premature, particularly if there are other advantages attaching to those ipsative measures.

In this regard, Green & Tull (1978) confirm that it is not unusual in applied studies to find agreement between true ratio and ordinal solutions even with 'more' ranking as inputs. Also Miner (1988) demonstrated that a combination of ratings and rankings did not produce superior results to simple ranking data when used in performance appraisal. With regard to Factor analysis, however, there is a technical limitation with fully ipsatised data referred to by Johnson et al (1988: 155-156) in the following quote:

"Spurious correlations arise when correlated variables are not experimentally independent... With spurious correlations present among the scales, ordinary factor analysis breaks down, producing mixtures of positive and negative correlations resulting in degenerate and illegal solutions. (Technically, the matrix is singular and therefore has no regular inverse. In order to produce and inverse, it is necessary to delete a variable – Clemans, 1966)"

Nordvik (1996: 266), on the other hand, is unconcerned with the presence of negative correlations within the matrix. He points out that these are not only known in advance, but also expected. Thus we extract half as many factors that are bi-polar, and the positioning and sign of items and their loading within the factor solution should be internally and theoretically consistent. These loadings then "are not decided by method but by the participants' responses." However, Saville & Wilson (1991) and Baron (1996) both produced evidence related to the Factor Analysis of the OPQ, a proprietary personality inventory, which used both normative and ipsative measures in search of a 32 factor structure on one of its versions.

Both Saville & Wilson (1991) and Baron (1996) concluded that the two different response formats produced largely equivalent factor structures with the exception that the 32nd factor did not emerge in the ipsative version. That was expected given that its structure was already embedded within the 31 other factors and fully known once they had been resolved. In the case of a four-scale inventory (or eight elements arrayed in four bi-polar scales), such as Nordvik (1996) was referring to, and that MBTI, the Hogan and Champagne Personaliy Inventory and L-TAS use, the last factor will be similarly difficult to resolve and clarify. However, the overall structure of factors and their loaded items should display content consistent with theoretical expectations.
Thus, there is some common agreement among protagonists and antagonists alike, that the larger the number of scales to be differentiated the more limited the statistical difficulties presented by using correlational statistics on ipsative scales. Bartram (1996) focused on the implications of using normal internal consistency indices of reliability with ipsative data and concluded that “such ‘reliabilities’ cannot be interpreted in the same way as those derived from normative data.” (Bartram, 1996: 26) He also stated that “For a given level of normative scale reliability, the ipsative scale reliabilites decrease as a function of increases in the correlation between the normative scales and decreases in the numbers of scales” (Bartram, 1996: 33 – emphasis added).

Bartram (1996: 34 – Table 3) computed a chart relating these factors to the likely maximum Alpha coefficient for ipsative data. From that table, we can derive that an ipsative test with four scales, where the ‘true’ (or empirically known) average alpha for the normative equivalent was 0.9 and the average scale intercorrelation for normative scales was 0.3, would be unlikely to show an average alpha in excess of 0.476. This theoretically predicted average alpha reduces to around 0.1 if the “real” alpha for the normative scales is 0.7. To the extent that the ipsatised scales do in fact produce such alphas, their interpretability and the attenuation of their common variance will render them unlikely to produce meaningful relationships under correlation based analysis.

However, Bartram’s point is also that Internal Consistency analysis, using standard indices such as alpha, needs to be interpreted with skepticism in the case of ipsative data. As Baron (1996: 52) notes:

“For practitioners, reliability and construct validity are mainly of interest as precursors to predictive validity. There are many published studies showing correlations between ipsative measures and external criteria similar in size to those found with normative measures... Some studies have found equivalent results for normative and ipsative measures and Hicks (1970) in his review even suggested there may be evidence for saying that, in some circumstances, ipsativity may increase validity.”

Baron’s quote implies that a great volume of research material has been published on the premise that the more rigid concerns expressed by the ipsative antagonists reviewed here are not insurmountable difficulties and that they underestimate the robustness of parametric analysis. Nonetheless, these theoretical concerns have informed our thinking about how data stemming from an ipsative test need to be prepared, presented and analysed. However, those issues are probably more efficiently and productively
considered as we review the specific characteristics of the instrument employed in this study and apply the insights gained here to our treatment of it.

**Reliability, Item/Scale Relationships and Factor Structure of L-TAS measures**

A brief review of Appendix 1 will reveal that the primary data generated by L-TAS are ranking numbers as follows:

- **5**: For the stem in each quad that completes a statement that seems “most like me”;
- **3**: For the stem that seems “more like me”;
- **2**: For the stem that seems “somewhat like me”, and;
- **0**: For the stem that seems “least like me”.

The profile scores are struck twice: once for Questions 1 to 9 – The “Relaxed” profile – and once for Questions 10 to 18 – The “Pressure” profile. The scores for each style can theoretically range from 45 (9 x 5) to 0 (9 x 0). The interpretative logic is as follows. A consistent tendency, over nine action contexts, to rank a particular response style with 5s and 3s indicates a stylistic preference of a strength that is proportionately greater than for an individual who consistently uses rankings of 2 or 0 for that style.

The statistical purist might object to the 2 - gap between the top and second and the third and last rankings – as compared with a 1 - gap between 2 and 3. However, it is no more or less defensible an assumption than for the equality of various gaps in ratings on a Likert Scale. The current arrangements result in 90 points (ten points by nine items) being distributed to determine each of the relaxed and pressure profiles. It is doubtful if changing the rankings to 4, 3, 2 and 1, would markedly change the scale statistics generated. On the basis of feedback, the present arrangements appear to facilitate clearer understanding by self-raters of the distinctions they should be making between scale totals for their own educational or developmental purposes.

From a research perspective, the more critical questions are to do with establishing what each of the scales in each of the conditions is measuring and what relationships exist between them. In pursuing this, it will serve us well to remember that the model we built of Brain Styles and related personality structures in Chapter 2 specifically assumed significant interrelationships between scales. The data in Table 4.1.1 present the intercorrelations for the primary brain styles with each other in the Relaxed mode (in
italics above the diagonal) and in the Pressure mode (in bold beneath the diagonal). As shown in that table, the average intercorrelation between each “4-pack” of scales approximates -0.333. This is to be expected as a bi-product of ipsativity, as predicted by Bartram (1996: 35) under the formula: \(-1/(m-1)\) where \(m\) = the number of scales. Thus, this is determined by method.

**Table 4.1.1 Intercorrelations for L-TAS variables in Relaxed and Pressure Modes.**

<table>
<thead>
<tr>
<th>L-TAS Variables</th>
<th>Producer</th>
<th>Teamist</th>
<th>Analyst</th>
<th>Imaginist</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Producer (Left-Limbic)</strong></td>
<td>1.000</td>
<td>-0.409*</td>
<td>0.008</td>
<td>-0.520</td>
</tr>
<tr>
<td><strong>Teamist (Right-Limbic)</strong></td>
<td>-0.268*</td>
<td>1.000</td>
<td>-0.493</td>
<td>-0.250</td>
</tr>
<tr>
<td><strong>Analyst (Left-Cerebral)</strong></td>
<td>-0.100</td>
<td>-0.510</td>
<td>1.000</td>
<td>-0.310</td>
</tr>
<tr>
<td><strong>Imaginist (Right-Cerebral)</strong></td>
<td>-0.579</td>
<td>-0.195</td>
<td>-0.345</td>
<td>1.000</td>
</tr>
</tbody>
</table>

* Bold correlations represent pressure mode; italicised correlations represent relaxed mode.

Average Intercorrelations

<table>
<thead>
<tr>
<th>Relaxed Mode</th>
<th>Pressure Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.974/6 = 0.329</td>
<td>1.993/6 = 0.336</td>
</tr>
</tbody>
</table>

What is not determined by method is the specific pattern of interrelations between scales under each condition which is determined, to quote Nordvik (1996: 266) once again, by “the pattern of oppositions between the scales according to the endorsements and rejections of the participants.” There are, nonetheless some patterns in the data that are consistent with theoretical expectations. These include:

- the strongest correlations in both conditions, which are clearly for the expected oppositional pairings of Teamist versus Analyst and Imaginist versus Producer. They are, of course, negative, and;
- the secondary correlations between Imaginist versus Analyst and Teamist versus Producer, which are also theoretically consistent.

The data relating to estimation of internal consistency of the scales is presented in Table 4.1.2. The alphas in that table are also consistent with the picture suggested by Table 3 in Bartram (1996: 34). That is, Alphas that are generally low by normative expectations but with average alphas for the four scales in each condition that closely approximate those predicted by Bartram in circumstances where an equivalent normative scale has a reliability approaching 0.9 with scale intercorrelations around 0.3.
Table 4.1.2  Reliability (Alpha) Co-efficients for Primary Brain Styles and Thinking Styles L-TAS scales in Relaxed and Pressure Modes.

<table>
<thead>
<tr>
<th>Brain and Thinking Styles</th>
<th>Relaxed Mode</th>
<th>Pressure Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary Brain Styles</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Producer</td>
<td>0.366</td>
<td>0.399</td>
</tr>
<tr>
<td>Teamist</td>
<td>0.562</td>
<td>0.468</td>
</tr>
<tr>
<td>Analyst</td>
<td>0.219</td>
<td>0.484</td>
</tr>
<tr>
<td>Imaginist</td>
<td>0.554</td>
<td>0.582</td>
</tr>
<tr>
<td>Average alpha</td>
<td>1.701/4 = 0.425</td>
<td>1.933/4 = 0.483</td>
</tr>
<tr>
<td><strong>Thinking Styles</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speculator</td>
<td>0.315</td>
<td>0.306</td>
</tr>
<tr>
<td>Right Brain</td>
<td>0.570</td>
<td>0.574</td>
</tr>
<tr>
<td>Limbic</td>
<td>0.320</td>
<td>0.499</td>
</tr>
</tbody>
</table>

Within those general patterns, we should also note the following specifics:

- **Relatively strong Alphas for the Right Brain styles:** especially Imaginist, among the primary styles, and;

- **Distinctly weaker Alphas for the composite Speculator style:** which, while the lack of internal consistency that that implies is consistent with relevant theory (see commentary in Section 3.1.1 above), will make it difficult to obtain and interpret correlations with other variables.

So, consistent with Barron’s (1996) suggestion to “employ standard statistical methods where they prove useful”, pursuing external correlations between single L-TAS scales (i.e. primary brain styles and thinking styles excluding Speculator) and other variables of interest including validating Jungian scales and our independent variables (gender, occupation, nation and stress) seems warranted. However, before doing so, we should clarify the structure underlying each primary variable. The analyses to be presented in the balance of Sub-section 4.1.1 are based on data taken from 200 MBAs studying at Deakin University in Australia. The sample included 143 males and 57 females with a modal age of 35. All but 23 already held an undergraduate degree. The sample completed L-TAS and the Champagne and Hogan (1980) Personal Style Inventory.

First, in order to understand the structure of each scale better, itemscale correlations have been computed for both the relaxed and pressure conditions. The results are presented in Appendix IIa) and b). It is stressed that only one score from each question appeared in any array of data to be correlated with each of the four scale totals. Each of
the four items that are the subject of ipsative choice were sequen\textit{tially} correlated with each of the scales totally but were not part of any pooled data to be correlated. Perusal of the data in Appendix II a) – for relaxed mode – reveal the following:

- **Matches between item stems and their predicted scales:** were achieved for all nine items, such that the nominated stem was clearly the highest correlating stem in its ‘4-pack’;

- **r’s for the predicted matches exceeded 0.400:** on either three or four of the stems for five questions and reached that level on two stems for another two questions, but that;

- **Right Brain scales were clearly better aligned than Left Brain:** in that only one r for Teamist and two for Imaginist were under 0.4 whereas four r’s for Producer and five for Analyst were all under 0.38.

The data on the pressure condition in Appendix II b) shows that:

- **there were seven questions with four matches between predicted and actual stem r’s:** and two questions where one of the predicted matches did not eventuate (as indicated by a ? amongst the bold Xs in the notes);

- **r’s for the predicted matches exceeded 0.400:** on at least three of the four stems for six questions, and;

- **Right Brain scales were, once again, better aligned than Left:** in that average r’s for Producer and Analyst (both 0.418) were below those for Teamist (0.435) and Imaginist (0.478).

In both relaxed and pressure arrays, the secondary, theoretically negative relationships (for example, see the diagonal of italics in Question 1 running in the opposite direction to the bold matches) were clearly as predicted in 16 of the 18 questions. Overall, then, the data just reviewed suggest that L-TAS is measuring more or less the styles that it was intended to measure in a manner that is logically consistent with theory, but with some individual items within a few of the quads not doing a very effective job. Part of the reason for these less tightly attached, internally inconsistent items is related to the “contextual wrapping” they appear in. Within each of the 18 social action contexts used it is no doubt variously difficult to draft four items that each target their own scale equally precisely. In a normative scale, they would stand or fall on their individual quality. In the ipsative scale, they serve a role in relation to the total context of choice.
This is further illustrated by the data in Appendix II c). In this Appendix, we find the four (x 2-Factor) Factor Analyses of pools of items making up all 18 stem contributions to the Producer, Teamist, Analyst and Imaginist scales in turn. Again, there is only one item from each 4-pack in each of the pools making up the four analyses. Thus there are no methodologically dependent items involved. They give some insight into the key factors underlying each scale given that they seem less internally consistent than would justify viewing them as univariate. Consistent with this, they show positive loadings between items and factors with the only exceptions being two negative loadings on the second Analyst factor. In those exceptional cases, a careful reading of the items and stems suggests that the context might have contaminated the Analyst stem. As usual, the titles of the factors seek to encapsulate the general thrust of items loaded on them. Nonetheless, they appear to suggest qualities of personal style that are consistent with the theoretical framework for brain styles that we encountered in Chapters 2 and 3.

Finally, the data in Appendix II d) - i) & ii) are the results of a Factor Analysis based upon the full pools of relaxed items (in i) and pressure items (in ii). Obviously these pools do include items that are interdependent due to their ipsativity. Thus, as suggested by Nordvick (1996), we find bi-polar factors in all cases and, in each Factor Analysis, the Fourth Factor, though interpretable, is less clear and consistent than the others are. Nonetheless, the structure of bi-polar factors bears a compelling equivalence to the theoretical structure we presented earlier with the Teamist (Feeling) versus Analyst (Thinking) and Imaginist (Intuition) versus Producer (Sensing) dichotomies coming out as clearly as in similar analyses on the MBTI (see Figure 2.2.4 above for example). Interestingly, of the two Analyst items that loaded negatively in Appendix II c) iii) as mentioned in the previous paragraph, Item 4c also loaded anomalously in Appendix II d) i) (See * in the table) and Item 9B did not load on any of the four factors.

**Validity of L-TAS measures**

Transferring our attention to issues relating to the validity of the LTAS styles, we should first consider the data that are presented in Figures 4.1.1 (a) and (b). They represent Multitrait-Multimethod matrices (Campbell & Fiske, 1959) using the relaxed and pressure measures of firstly the primary brain styles (4.1.1 [a]) and then the composite “Thinking Styles” (4.1.1 [b]). Thus, once again, we should note that no variable is correlated with another with which it is directly dependent in these matrices.
In this analysis, instead of trying to establish the status of exact parallel forms of the same variable for the relaxed and pressure measure, we need to establish three separate things:

- That they are measuring very similar underlying concepts, but that;
- There are also distinctive elements to each measure, even though;
- The overall patterns of interrelationships among the variables in each mode are maintained.

To this end, we should note the solid arrow running from the top left to bottom right in each figure and the dotted arrow from bottom left to top right in Figure 4.1.1 (a). The solid arrow traverses the correlations which are the highest in each matrix by a considerable amount, thus indicating that the relaxed and pressure measures of each variable in focus are measuring something that is much more internally aligned than for any of the external relations with other variables. If we treat the two measures of each
variable as equivalent forms, we have established convergent validity. Also, if we look, in turn, down each column and along each row anchored by the diagonal, we find that the focused style in both forms is significantly more related than it is with any other style. Hence, discriminant validity.

However, even the highest correlations (e.g. for Teamist and Imaginist in 4.1.1 (a) and for Right-Brain in 4.1.1 (b)) are under 0.5 suggesting something less than close equivalence. We can also note that the scale interdependencies that represent the "conceptual ipsativity" embedded in the Brain Styles model, and its Psychological Type equivalents, do maintain themselves in both conditions. This is demonstrated by the correlations under the dotted arrow in Figure 4.1.1 (a) and the generally theoretically consistent signs of all the relationship presented in the matrix. On the other hand, the single variable Factor analyses for primary Brain Styles in Appendix II (c), that we considered earlier don't provide clear support for a clean Relaxed versus Pressure split.

However, in terms of Face or Content validity, the verbal weight of the content in Items 10 to 18 compared with items 1 to 9 (See Appendix I) clearly equate to the treatment effect of simulated pressure used by Ware et al (1994) as we reported in Section 3.2.4. Perhaps, the contextual effect of ipsativity (that might have favoured a clearer relaxed versus pressure split) has lost the competition with the inter-scale dependencies in this case to cloud the picture. For the moment all we can conclude is that there remains significant conceptual consistency between the relaxed and pressure measures but also substantial unique variance for each condition that, nonetheless, doesn't prejudice the logically consistent, theoretically predicted negative interdependencies of the scales.

Before leaving these figures we should also note the relative weakness of the Speculator variable among the mix in Figure 4.1.1 (b). Along with its low Alphas, the relatively low direct match correlation and relatively high intercorrelations cast further doubts on this dichotomy as a consistent and interpretable conceptual entity. Conversely, if we focus on the lower right rectangle in Figure 4.1.1 (b), encasing both the direct matches of Right Brain and Limbic dichotomies and their interrelationships across conditions, we see clear, predicted positive relationships and relative independence from each other. This suggests they should be analysed in sequence in exploring external relations in a way that might add clarity in interpretation and discrimination. To examine this further, we will now consider one study relating to the external validity of L-TAS.
Figures 4.1.2 (a) and (b) report the intercorrelation matrices that result from relating scores on each of the four Champagne and Hogan (CHPSI) Jungian dichotomies with the L-TAS variables in Relaxed (a) and Pressure (b) modes. Readers should note that, for the CHPSI, the first letter in each style (i.e.: I, N, T & P) represents the high score. In each figure, a rectangular box has been placed around the two rows initiated by NS and TF to indicate the 8 primary theoretical relationships. If full multi-trait/multimethod validity were to be achieved, the numbers would display as follows:

- We would see the highest correlations with the NS dichotomy in the two “outer” columns (i.e: Imaginist with the highest r and positive and Producer with the next highest r and negative), and;
- For the TF dichotomy, in the middle columns (i.e: Analyst with the highest r and positive and Teamist with the next highest r and negative)

\[
\begin{array}{cccc}
\text{Relaxed Brain Styles} & \\
\text{CHPSI} & \text{Producer} & \text{Teamist} & \text{Analyst} & \text{Imaginist} \\
\hline
\text{IE} & 0.1527^* & -0.4143^{**} & 0.0563 & 0.0582 \\
\text{NS} & -0.3096^{**} & 0.1300 & -0.1483 & 0.3605^{**} \\
\text{TF} & 0.2140^* & -0.4415^{**} & 0.1331 & 0.0406 \\
\text{PJ} & -0.2239^* & 0.2585^{**} & -0.1563^* & 0.2048^* \\
\end{array}
\]

\[
\begin{array}{cccc}
\text{Pressure Brain Styles} & \\
\text{CHPSI} & \text{Producer} & \text{Teamist} & \text{Analyst} & \text{Imaginist} \\
\hline
\text{IE} & 0.0971 & -0.2363^{**} & 0.1118 & 0.0288 \\
\text{NS} & -0.3371^{***} & 0.2483^* & -0.3859^{**} & 0.4351^{***} \\
\text{TF} & 0.2269^* & -0.4896^{**} & 0.3307^{**} & -0.0473 \\
\text{PJ} & -0.1840^* & 0.2415^{**} & -0.2614^{**} & 0.1683^* \\
\end{array}
\]

![Figure 4.1.2 (a): Correlation Matrix for Champagne/Hogan and Relaxed Brain Styles](image)

![Figure 4.1.2 (b): Correlation Matrix for Champagne/Hogan PSI and Pressure Brain Styles](image)
As can be seen from the figures, such clear convergent and discriminant validity is not entirely delivered but is, in many elements approximated. For example:

- **In Relaxed mode:**
  - The NS row of r's strongly supports convergent and discriminant validity consistent with the assumptions of the model, and;
  - The TF row partially supports such validity, with all correlations appropriately signed (except for the Imaginist r, which is near zero) and the Teamist score negative and strong as would be expected. However, the two Left Brain scales lack strong r's and instead of the Analyst r leading those figures, it is the producer r. However;

- **In Pressure mode:**
  - It is the TF row that is now showing r's consistent with the focus on Teamist/Analyst as the theoretical equivalents, whereas;
  - The NS row, while having near-appropriate patterns of correlation, is showing some suggestion of full Right versus Left Brain involvement in the Intuition –Sensing tradcoff.

So it would seem that the primary relationships that would be theoretically predicted from the Jungian and Brain Styles models are largely captured in the measures but that:

- Those general patterns are better and more consistently reflected by the Right Brain rather than the Left Brain scales of L-TAS, and;
- In any case, it seems that one of the points of discrimination between the Relaxed and Pressure response patterns might be that pressure induces a more generalised Right Brain versus Left Brain repertoire rather than allowing more precise selection of Limbic or Cerebral quadrants.

More generally, we might reach the following conclusions from the material presented in this section:

- **Ipsativity, though statistically vexed is central to the conceptual model:** implying a need to find ways to manage it using the statistical insights provided above rather than to attempt to wish it away;

- **If cautiously applied, L-TAS can provide a valid and useful instrument:** for exploring the critical Left Brain/Right Brain and Limbic/Cerebral dichotomies in relation to the impact of independent variables such as gender, occupation and national background;
• More specifically, the limiting impact of ipsativity aside, most of the primary styles and the Right Brain and Limbic composites seemed sufficiently reliable to allow for correlational statistics to achieve significance: the exceptions being the Analyst scale in relaxed mode and the Producer scale and Speculator composite in both modes, and;

• For those scales with adequate reliability, item/scale analyses and Factor analyses (such as those in Appendix II) will facilitate interpretatioin of exploratory findings: at least to the extent of conceptually linking them to key elements of the style/type theories.

4.1.2 Operationalising the Independent Variables.

Consistent with the review of relevant empirical findings in Section 3.2 and the hypotheses articulated above, the independent variables in this study were as follows:

• Between-Subjects:

  • Gender: which was operationalised by self-reported response to Question 1 in background data on the questionnaire (see Appendix I). Male was coded as 1 and Female as 2.

  • Occupation: which was determined by self-reported response to Question 4 in background data. To make a balance stratified design feasible, and consistent with the theoretical and empirical review in Section 3.2.2, these responses were condensed into three clusters:

    • Technical (coded 1) including responses that nominated Engineering/Production, Finance/Accounting, and Law – and “others” specifying economics, operations and analysis;

    • Ideas (coded 2) which includes Sales/Marketing, General Management/Administration, Science/R&D, and Computing;

    • People (coded 3) which includes Personnel/Psychology, HRM, HRD/OD, Counselling, Training, Nursing – and any “others” with a helping theme, and

    • Nation: also determined by self-report response to the question at the head of the title page of the questionnaire (See Appendix I). Only citizens or long-term residents of the country nominated and attending a domestic MBA program in that country were included.
• **Within-Subjects:** A single variable titled “Condition” which had two levels of Relaxed mode and Pressure mode where scores were as determined by the LTAS profile.

4.1.3 *The Research Sample*

Some elements of the issues surrounding sampling have been discussed earlier in this chapter. The initial driving considerations were related to achieving a fully balanced treatment of theoretically relevant differences uncovered in the literatures on gender, occupational and national differences. However, this needed to be done within a population pool that could reasonably be seen to represent the likely aspirants for managerial and leadership roles within the networking organisations of the early 21st Century. As noted in Section 3.2.3, several researchers (e.g. Calder et al., 1981, Locke, 1986 and Abramson et al., 1996) advocate the use of student samples (especially MBAs) with a view to achieving “more homogeneous, balanced and matched samples and greater generalizability.”

Bearing this in mind, and considering the extra level of complexity represented by sampling between national clusters, it was decided to stay within the national limits of the convenience sample already established. This limited our sample to the “Anglo” cluster and, in order to ensure we tested for national differences within that cluster, nation was operationalised as a variable by coding UK as 1, Australia as 2 and the USA as 3. The elements of the sampling design employed are as outlined in Figure 4.1.3.

![Figure 4.1.3: SAMPLE SIZE AND STRATIFICATION](image)

With regard to the specific programs from which subjects were selected, it can broadly be characterised as post-graduate management education students and, most often,
MBA candidates. In the USA it was almost exclusively MBA's. However, both the UK and Australia have preliminary programs to the MBA variously labeled Graduate Certificate, Graduate Diploma and Diploma. Also, a modest number were drawn from action learning Masters of Management programs who quite deliberately avoided the MBA title but had the same outcomes in mind with a dominantly similar population pool. The sample was drawn from a broad cross-section of Universities including:

- **In the UK:** City University Business School, Cranfield School of Business, Manchester University Business School and Salford University’s Master of Management by Action Learning;
- **In Australia:** Deakin University, Australian Graduate School of Management, Monash University, University of Ballarat and the University of Queensland;
- **In the USA:** American Graduate School of International Management, Boston College, Stanford University, Virginia Commonwealth University and University of Southern California.

As age was only ever gathered across five ranges (See Question 2 in the background data for the questionnaire in Appendix I) a precise numerical estimate for the sample or its substrata is not possible. However modal analysis suggests that:

- **Modal age for the total sample:** was just over 30;
- **Gender profiles were similar:** and differed only according to nationality;
- **National differences were apparent:** in that the US mode was late in the 25-29 age range whereas the UK mode occurred early in the 30-34 range and the Australian mode late in that range. This reflected the relative frequency of full-time early/mid-career MBAs in the US sample compared with the dominant presence of mid-thirties, part-time late career change students in the Australian sample, and;
- **No consistent age differences were present across occupational categories.**

For all the Australian sub-samples and the UK male samples, convenience sampling during educational programs had delivered a pool of appropriately scored profiles in excess (sometimes well in excess) of 30 per cell and the specific subjects in this sample were randomly drawn from that larger pool. This was also the case for the UK women’s technical sub-sample and the US males’ people sub-sample. For the other sub-samples,
the number of available profiles when the doctoral study was designed was below 30. In those cases, the researcher continued to seek further profiles in a targeted fashion, but using the same medium of presentation of the profile as part of an educational program. Data gathering finished once the last cell total reached 30.

In conclusion to our comments on sampling, we should note that it overrepresents the female element naturally extant within the MBA programs from which they were drawn. This is so because it was important in pursuing the theoretical issues raised by gender to fully represent that factor in the design. However, the percentage of female enrolments in MBA programs in the UK, Australia and the USA are around 35% and stagnant, if not falling (see e.g. MacLellan & Dobson, 1997: 1202). So, if our study shows that there are gender effects relating to the New Leadership, it will also over-represent the availability of women as the solution sought by the Fourth Blueprint transformers. We will return to this issue in Chapter 5.

4.1.4 Data-gathering and Data Analysis

As indicated earlier, data gathering was logistically demanding but procedurally straightforward. All data were gathered as background demographics or psychometric responses to the one questionnaire in the context of an educational experience for the subjects involved and the greater majority of profiles were handed out and collected by the researcher in conducting a class. Class sizes ranged between 15 and 50 people. Each subject was handed the questionnaire as presented in Appendix I, and requested to complete the background data section on page 1. If they were to return for a later class, after the instructor scored the profile, they were asked to fill in the space for the name. If the class was to proceed immediately, they were told to leave the name space blank.

The instructor then read the directions on page 2 of the questionnaire aloud to the class and allowed them to complete it in their own time, having encouraged subjects not to agonise for too long over marginal 2/3 choices. Once the questionnaires had been completed, the instructor either collected them or instructed the class on how to assemble their own profile from the totals at the end of Question 9 and Question 18. The subjects had been advised before completing the questionnaire that the profiles might usefully be contributed to the database for an international study, should they wish to do so, but that the decision would be up to them. Once the profile had been constructed and the resultant class completed, the instructor as researcher (or agent for the researcher)
advised subjects that he would gather the questionnaires from those who were happy to have them used for research purposes. They were instructed to ensure no identifying names or numbers remained readable on the forms before handing them in.

Once collected, all questionnaire data were coded as indicated above and a profile for each subject was constructed. This profile indicated nationality, gender, age, group affiliation (i.e. which university site they came from) and scores for four primary brain styles (for each condition) and three composite thinking styles (for each condition) was submitted to an international database. From this database the sample described above was drawn. The sample profiles were then subjected to a series of analyses, including:

- **Analyses of Variance (ANOVA):** with each brain styles scale and thinking style analysed separately as the dependent variable (DV) and gender, occupation and nationality as the independent variables (IV’s). Also, as appropriate, post-hoc Scheffe t-tests were conducted;

- **Multivariate Analysis of Variance (MANOVA):** once again with each of the primary brain styles and thinking styles, in both relaxed and pressure conditions together, separately analysed against gender, occupation and nation as between-subjects IV’s and condition (relaxed and pressure) as the within-subjects IV;

- **Profile Analysis:** in which the average profiles of the various samples were mapped across the four primary brain styles and three thinking styles for each condition. These graphs were compiled for illustrative purposes that will be further discussed in Section 4.2.4 when they are presented, and;

- **Frequency analyses:** in which the thinking styles distributions were subject to breakdown into five scoring categories. These ranged from 0 to 29 (labelled 1 – for example “very Left-Brain”), 30 to 39 (2 – “Left-Brained”), 40 to 49 (3 – “In Balance”), 50 to 59 (4 – “Right-Brained”) and 60+ (5 – “very Right-Brained”). These frequencies were computed to ensure relatively normal distributions applied to the data and did not markedly contract or expand in the pressure condition.

The results of these analyses will be presented in Section 4.2 below.
4.2 Results

The analyses presented in this section are designed to progressively unfold answers to the following questions:

- Focusing on each primary brain style (Section 4.2.1) and thinking style composite (Section 4.2.2) in turn as dependent variable, what significant differences result from each of the between subjects independent variables (gender, occupation and nation)? – ANOVAs I & II;

- Still focusing on single styles as the DV, but adding “Condition” as a within-subjects IV, what is the relative contribution of each of the IV’s to explaining variability in the DV? – MANOVA, and;

- Given the pattern of significant relationships between individual styles and the IV’s, what profile differences across the relaxed and pressure 4-pack of styles can be observed to pertain to different sub-samples selected as levels of the between subject IV’s? and, further;

- What frequency distributions characterise these varying sub-samples on the two key composite thinking styles (Right Brain and Limbic) in each of the relaxed and pressure conditions?

4.2.1 ANOVA I: The primary Brain Styles

The ANOVA related to the effect of IV’s on each of the four relaxed primary brain styles is summarised in Table 4.2.1. Consistent with our concerns as to the very low reliability level of the Analyst scale in the relaxed mode (See Table 4.1.2), there are no significant relationships between that scale and any of the between subjects IV’s. Also, the only significant effect for Relaxed Producer is with Occupation. However, all three IV’s show significant differences on the Relaxed Teamist scale and, for Relaxed Imaginist, Occupation and the Gender by Occupation interaction are significant.

The means for sub-samples showing significant relationships between each of the DV’s and IV’s in relaxed mode are presented in Table 4.2.2 and the Post-Hoc t-tests revealing the specific gaps that are significant in IV’s with three levels are presented in Table 4.2.3. In interpreting those means, we should note that an average score of 22.5 represents parity on all four scales (i.e.: 22.5 x 4 = 90). Means above the late 20’s signal added preference for that style and over 35 suggest a very strong preference. Conversely scores of 18 or less on any scale are reflecting avoidance of that style (Davies, 1982: 7).
### Table 4.2.1: Relaxed Primary Brain Styles Relationships: F tests and Probabilities

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Producer</th>
<th>Teamist</th>
<th>Analyst</th>
<th>Imaginist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (G)</td>
<td>2.2</td>
<td>4.8*</td>
<td>NS</td>
<td>0.1</td>
</tr>
<tr>
<td>Occupation (O)</td>
<td>5.3**</td>
<td>5.2**</td>
<td>NS</td>
<td>6.9***</td>
</tr>
<tr>
<td>Nation (N)</td>
<td>1.6</td>
<td>5.4**</td>
<td>NS</td>
<td>2.6</td>
</tr>
<tr>
<td>G X O</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>3.4*</td>
</tr>
</tbody>
</table>

* p = 0.05  ** p = 0.01  *** p = 0.001

As Table 4.2.2 reveals, Teamist is the only scale showing gender or national differences. In the case of gender, females show significantly greater preference for the style although the male sample also scores almost exactly the theoretical average. The national difference is entirely attributable to the gap between the high teamist score for the USA and the relatively low score for Australia (as shown in Table 4.2.3).

### Table 4.2.2: Relaxed Primary Brain Styles: Means for significant relationships

<table>
<thead>
<tr>
<th>Brain Style</th>
<th>Male</th>
<th>Female</th>
<th>Tech.</th>
<th>Ideas</th>
<th>People</th>
<th>UK</th>
<th>Aus.</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Producer</td>
<td>-----</td>
<td>------</td>
<td>24.2</td>
<td>22.7</td>
<td>22.0</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Teamist</td>
<td>22.7</td>
<td>24.0</td>
<td>22.8</td>
<td>22.6</td>
<td>24.6</td>
<td>23.7</td>
<td>22.1</td>
<td>24.3</td>
</tr>
<tr>
<td>Analyst</td>
<td>-----</td>
<td>------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Imaginist</td>
<td>-----</td>
<td>------</td>
<td>20.5</td>
<td>22.9</td>
<td>22.6</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
</tbody>
</table>

### Table 4.2.3: Relaxed Primary Brain Styles: Post-Hoc t-tests of significant Occupational and National differences

<table>
<thead>
<tr>
<th>Brain Style</th>
<th>Significant at 0.05 or better</th>
<th>Not significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Producer</td>
<td>Technical – People</td>
<td>Technical – Ideas</td>
</tr>
<tr>
<td>Teamist</td>
<td>People – Ideas</td>
<td>People – Technical</td>
</tr>
<tr>
<td>Imaginist</td>
<td>Ideas – Technical</td>
<td>People – Technical</td>
</tr>
<tr>
<td>(ii) Nation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teamist</td>
<td>USA – Australia</td>
<td>USA – UK</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UK -- Australia</td>
</tr>
</tbody>
</table>
The most consistently significant effects, however, are attributable to the occupational IV. Clearly significant sub-sample mean differences are showing on Relaxed Producer, Teamist and Imaginist. The significant gaps are shown in Table 4.2.3 and all are consistent with theoretical predictions. In summary: a Limbic Left emphasis for the Technical category contrasting with a strong Limbic Right emphasis for the People category and a common preference for Right Brain styles among the People and Ideas Categories relative to the Technicals. The final significant relationship is the gender/occupation interaction on Imaginist presented in the bottom row of Table 4.2.2. Basically for the males, the ideas group shows a positive preference for Imaginist whereas the other two categories commonly display a weak avoidance response to that style. However, for the females, while the Technical group shows the lowest mean of all, the Ideas and People groups show a preference for the style with the People category showing the strongest mean of all sub-samples.

Overall, the ANOVA for pressure styles shows an even more consistent pattern of significant effects, notwithstanding the absence of any significance related to the Pressure Producer scale, which was identified as the scale with the lowest overall reliability. The summary of effects and their significance is presented in Table 4.2.4 and the means for significant relationships are in Table 4.2.5

**Table 4.2.4: Pressure Primary Brain Styles Relationships: F Tests and Probabilities**

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Producer</th>
<th>Teamist</th>
<th>Analyst</th>
<th>Imaginist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Effects</td>
<td>NS</td>
<td>9.5***</td>
<td>8.4***</td>
<td>8.7***</td>
</tr>
<tr>
<td>Gender (G)</td>
<td>NS</td>
<td>16.4***</td>
<td>4.0*</td>
<td>2.4*</td>
</tr>
<tr>
<td>Occupation (O)</td>
<td>NS</td>
<td>15.0***</td>
<td>15.4***</td>
<td>15.0***</td>
</tr>
<tr>
<td>Nation (N)</td>
<td>NS</td>
<td>0.7</td>
<td>3.9*</td>
<td>5.6***</td>
</tr>
<tr>
<td>G X O X N</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>2.6*</td>
</tr>
<tr>
<td>* p = 0.05</td>
<td>** p = 0.01</td>
<td>*** p = 0.001</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 4.2.5: Pressure Primary Brain Styles: Means for significant relationships**

<table>
<thead>
<tr>
<th>Brain Style</th>
<th>Male</th>
<th>Female</th>
<th>Tech.</th>
<th>Ideas</th>
<th>People</th>
<th>UK</th>
<th>Aus.</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Producer</td>
<td>----</td>
<td>-------</td>
<td>------</td>
<td>-------</td>
<td>------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teamist</td>
<td>19.9</td>
<td>22.2</td>
<td>19.8</td>
<td>20.1</td>
<td>23.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analyst</td>
<td>27.8</td>
<td>26.7</td>
<td>29.2</td>
<td>26.8</td>
<td>25.7</td>
<td>28.6</td>
<td>27.5</td>
<td>26.2</td>
</tr>
<tr>
<td>Imaginist</td>
<td>----</td>
<td>------</td>
<td>17.2</td>
<td>20.9</td>
<td>19.6</td>
<td>17.9</td>
<td>19.6</td>
<td>20.1</td>
</tr>
</tbody>
</table>
The results of the post-hoc t-tests from the ANOVA are presented in Table 4.2.6 and the means of 18 sub-samples on the Pressure Imaginist scale, relating to the three-way interaction effect shown in Table 4.2.4 are presented in Table 4.2.7. Taken together, the pattern of results in those tables confirms the following impressions:

- The classic gender/brain styles/type finding of relative preference for the Teamist (Feeling) style among females and for Analyst (or Thinking) style among males;

- The strong and consistent occupational effect across all three scales;

- The national differences on the “Cerebral” styles with the USA managers distinctly less analytical than either the UK or Australian managers under pressure and the UK managers lower than the other two – especially the USA - on the Imaginist scale, and;

- The complex interaction between gender and occupation also moderated by national background, resulting in profoundly different outcomes on Imaginist style for various subgroups. In Table 4.2.7, see particularly the commonly depressed means for Technicals, the relatively sustained means among the Ideas group (but especially Australian and USA males), the commonly depressed means for all but one UK sub-sample and the gender differences across occupation for the Australian sample.

Table 4.2.6  Pressure Primary Brain Styles: Post-Hoc t-tests of significant Occupational and National differences

<table>
<thead>
<tr>
<th>Brain Styles</th>
<th>Significant at 0.05 or better</th>
<th>Not Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teamist</td>
<td>People – Technical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>People – Ideas</td>
<td></td>
</tr>
<tr>
<td>Analyst</td>
<td>Technical – People</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Technical – Ideas</td>
<td></td>
</tr>
<tr>
<td>Imaginist</td>
<td>Ideas – Technical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>People – Technical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ideas – People</td>
<td></td>
</tr>
</tbody>
</table>

| (ii) Nation  |                             |                 |
| Analyst      | UK – USA                     |                 |
| Imaginist    | USA – UK                     |                 |
|              | Australia – UK               |                 |
|              | Australia – USA              |                 |
Table 4.2.7: Three Way Interaction for Pressure Imaginist: Means for 18 Sub-Groups

<table>
<thead>
<tr>
<th>Country</th>
<th>Gender</th>
<th>Technical</th>
<th>Ideas</th>
<th>People</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>Males</td>
<td>18.2</td>
<td>18.2</td>
<td>17.9</td>
</tr>
<tr>
<td></td>
<td>Females</td>
<td>14.6</td>
<td>20.9</td>
<td>17.5</td>
</tr>
<tr>
<td>Australia</td>
<td>Males</td>
<td>18.2</td>
<td>23.1</td>
<td>19.9</td>
</tr>
<tr>
<td></td>
<td>Females</td>
<td>17.6</td>
<td>18.8</td>
<td>20.1</td>
</tr>
<tr>
<td>USA</td>
<td>Males</td>
<td>17.7</td>
<td>22.7</td>
<td>20.7</td>
</tr>
<tr>
<td></td>
<td>Females</td>
<td>16.5</td>
<td>21.5</td>
<td>21.3</td>
</tr>
</tbody>
</table>

4.2.2 ANOVA II: The Thinking Style Composites

The reader will recall our recent negative assessment of the psychometric viability of the Speculator/Organizer variable as measured by L-TAS. However, the other two composites – Right Brain/Left Brain and Limbic/Cerebral – appeared to offer enough psychometric substance and consistency, as measured by L-TAS, to warrant fully investigating their independent relationships to critical external variables. We should remember that the composite scales are formed by the addition of two of the primary scales and are bi-polar. The closer one goes to zero on the “Right Brain” Scale from the mid-point of 45, the more Left Brain one is. The nearer to 90, the more “Right Brain” and whatever is left from a total of 90 after subtracting the Right Brain score, we know will equal the sum of the Producer and Analyst scores. So this score is equivalent to giving an individual a score for “Tall”. We don’t need to know their score for short after we have their score for tall. The same interpretative principles apply to the Limbic scale. The lower they are below 45, the more Cerebral. The higher over 45, the more Limbic.

With those preliminaries on board, we can now consider the data from the ANOVA’s using Right-Brain and Limbic as the DVs and gender, occupation and nation as IVs. The summary data for the Relaxed ANOVA is presented in Table 4.2.8 and the significant means and post-hoc t-tests related to that summary are in Table 4.2.9.

Table 4.2.8: Relaxed Thinking Styles Relationships: F Tests and Probabilities

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Right-Brain</th>
<th>Limbic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Effects</td>
<td>5.5**</td>
<td>2.5*</td>
</tr>
<tr>
<td>Gender</td>
<td>2.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Occupation</td>
<td>9.6***</td>
<td>3.1</td>
</tr>
<tr>
<td>Nation</td>
<td>3.1</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>* p = 0.05</td>
<td>*** p = 0.001</td>
</tr>
</tbody>
</table>
Table 4.2.9: Relaxed Thinking Styles: Means for significant relationships

<table>
<thead>
<tr>
<th>Thinking Style</th>
<th>Tech</th>
<th>Ideas</th>
<th>People</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right-Brain/Left-Brain</td>
<td>43.3</td>
<td>45.5</td>
<td>47.3</td>
</tr>
<tr>
<td>Post-Hoc Gaps</td>
<td>Ideas – Tech. NS</td>
<td>Ideas – People NS</td>
<td>People – Tech. ***</td>
</tr>
</tbody>
</table>

The clearest and strongest finding in those two tables is the strong occupational effect on the Right Brain variable. In relaxed mode, the People cluster are clearly Right Brain, the Technical Cluster are clearly Left Brain and the Ideas group sits equidistant between the two, “right on the borderline”. While no other differences are clearly statistically significant, the probability level for all the F tests in Table 4.2.8 where F was either 3.1 or 3.0 varied between 0.045 and 0.055. However, none of the individual gaps reached p = 0.05 when subjected to post-hoc analysis. Nonetheless, these results are indicative and consistent with predictions – with the Technical group at 47 clearly limbic but the Ideas group mean at 45 approaching the Cerebral zone. In the same vein, interaction on the Right-Brain variable between gender and occupation, gender and nation and the 3-way combination were interesting in their complexity but not significant (F = 1.8; p = 0.15 for G X O; F = 2.3; p = 0.1 for G X N and F = 1.0; p = 0.3 for the 3-way). For the purposes of illustration, the data are presented in Table 4.2.10.

Focusing first on the Gender/occupation interaction shown in the bottom row of the table, we can see that the female group shows a classic occupational progression from distinctly Left Brain in the Technical cluster to strongly Right Brain for the People cluster with the Ideas cluster, once again, on the borderline. The gaps in this single comparison across the row (e.g. up to 5.2 between the People and Technical cluster) exceed those for the total sample, as presented in Table 4.2.9 above, by over 25%. Alternatively the male group’s occupational clusters show a truncated gap, with the Technical group sharing the Left Brain proclivities of their female colleagues and the Ideas and People clusters just barely over the fence into the Right Brain paddock but, for the males, the People – Technical gap is only 2.8. And yet, reading across the full bottom row, the gap between males and females for the total sample is only 1.1 and this is all but entirely accounted for by the gap of three amongst the People cluster.
Equally, the gender/nation interaction shown in the far right column of the table is theoretically provocative. In this case, the female national groups are all Right Brain and within 0.5 points of each other while the males show strong and predicted differences, with the US group clearly Right Brain and the Australian and UK managers firmly Left Brain in average style. Looking more deeply into the chart, and perusing the means involved in each of the specific interactions, will suggest the complexities that robbed the data of the significance that its provocative nature might otherwise warrant.

Table 4.2.10 Means for Non-significant three-way Interaction on Relaxed Right-Brain by Gender, Occupation and Nation

<table>
<thead>
<tr>
<th>Nation/Gender</th>
<th>Technical</th>
<th>Gap F-M</th>
<th>Ideas</th>
<th>Gap F-M</th>
<th>People</th>
<th>Gap F-M</th>
<th>Total</th>
<th>Gap F-M</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK Male</td>
<td>42.3</td>
<td>+3.0</td>
<td>43.6</td>
<td>+2.9</td>
<td>44.8</td>
<td>+1.2</td>
<td>43.6</td>
<td>+2.3</td>
</tr>
<tr>
<td>Female</td>
<td>45.3</td>
<td></td>
<td>46.5</td>
<td></td>
<td>46.0</td>
<td></td>
<td>45.9</td>
<td></td>
</tr>
<tr>
<td>Aus. Male</td>
<td>40.8</td>
<td>+1.4</td>
<td>45.2</td>
<td>-1.3</td>
<td>45.0</td>
<td>+5.8</td>
<td>43.7</td>
<td>+1.9</td>
</tr>
<tr>
<td>Female</td>
<td>42.2</td>
<td></td>
<td>43.9</td>
<td></td>
<td>50.8</td>
<td></td>
<td>45.6</td>
<td></td>
</tr>
<tr>
<td>USA Male</td>
<td>46.0</td>
<td>-2.9</td>
<td>48.2</td>
<td>-2.6</td>
<td>47.6</td>
<td>+1.9</td>
<td>47.3</td>
<td>-1.2</td>
</tr>
<tr>
<td>Female</td>
<td>43.1</td>
<td></td>
<td>45.6</td>
<td></td>
<td>49.5</td>
<td></td>
<td>46.1</td>
<td></td>
</tr>
<tr>
<td>Total Male</td>
<td>43.0</td>
<td>+0.6</td>
<td>45.7</td>
<td>-0.4</td>
<td>45.8</td>
<td>+3.0</td>
<td>44.8</td>
<td>+1.1</td>
</tr>
<tr>
<td>Female</td>
<td>43.6</td>
<td></td>
<td>45.3</td>
<td></td>
<td>48.8</td>
<td></td>
<td>45.9</td>
<td></td>
</tr>
</tbody>
</table>

Thus, if we focus on the UK male and female comparisons in the top row of the table, we can see that the entire array suggests a conclusion that is consistent with gender stereotyping. That is especially so for the two-thirds of the sample in the Technical and Ideas clusters. If we move on to the Australian figures in Row 2, we see that a study in Australia alone, and focusing only on Technical and Ideas occupations would reach a conclusion that supports the "no gender differences school" quite strongly. To the extent that the entire Australian sample attains any gap that supports the gender stereotype position that is entirely due to the impact of the People sub-cluster. With the USA sample, we confront a different picture. A study based exclusively on the Technical and Ideas clusters would conclude that a "counter-stereotypical" position, where males significantly exceed the Right Brain scores of their female colleagues, existed – and, once again, the People cluster" muddies the water on that trend.
Alternatively, if we change the primary focus to the occupation/gender interaction and examine how it plays out in each nation, we see that the UK/Australian national samples of males have low scores (Left Brain) for the Technical cluster in common. However, the USA starts with its low cluster as the Technicals but they show a comfortably Right Brain mean. Otherwise the male national samples all have in common a similar mean for their Ideas and People clusters. The outstanding difference is that the Australian and UK samples are dominantly left-brain whereas the USA is Right Brain. However, for the females, it is the UK Technical group that is marginally Right Brain while the Australian and USA technical groups are clearly Left Brain. All three UK female clusters stay within 0.5 of each other whereas the Australian and US female samples show markedly higher means as they move through Ideas and People clusters.

In other words, we have some significant, and theoretically provocative, results that are clearly observable. They suggest a degree of interactivity and complexity in the impact of all three of our between-subjects IV's that is, nonetheless systematic, interpretable and of immense relevance to the range of debates that are central to this thesis. But because they are enclosed in a non-linear metric that is reducing the probability that a statistic such as F (which assumes linear relations) will properly assess the full effect of these variables in relation to alternative brain styles patterns, we are statistically blind to them. Nonetheless it provides food for further thought to which we will return when we consider the results of the MANOVA.

In the meanwhile, the data on the Right Brain and Limbic Composites under pressure and their relationships to the between subjects IV's provides a clearer and more significant overall picture. The ANOVA summary statistics are presented in Table 4.2.11. The significant sub-sample means from that analysis are in Table 4.2.12 and the relevant post-hoc t-tests are in Table 4.2.13. From the summary table, we should note that all DV/IV relationships are significant apart from the Nation effect on the Limbic DV. However, again the strongest effect is from the occupational IV, particularly on the Right Brain composite. The key difference in that case is that the Technical cluster is significantly more Left Brain than either the People or Ideas clusters. However, all groups were still distinctly Left Brain with the group least so – the People cluster – still being at 42.8 which is more Left Brain than any sub-sample in the relaxed condition.
Table 4.2.11: Pressure Thinking Styles Relationships: F Tests and Probabilities

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Right-Brain/Left-Brain</th>
<th>Limbic/Cerebral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Effects</td>
<td>11.3***</td>
<td>4.6***</td>
</tr>
<tr>
<td>Gender</td>
<td>3.8*</td>
<td>9.2***</td>
</tr>
<tr>
<td>Occupation</td>
<td>22.6***</td>
<td>5.2**</td>
</tr>
<tr>
<td>Nation</td>
<td>3.8*</td>
<td>1.7</td>
</tr>
<tr>
<td>* p = 0.05</td>
<td>** p = 0.01</td>
<td>*** p = 0.001</td>
</tr>
</tbody>
</table>

Table 4.2.12 Pressure Thinking Styles: Means for significant relationships

<table>
<thead>
<tr>
<th>Thinking Style</th>
<th>Male</th>
<th>Female</th>
<th>Tech.</th>
<th>Ideas</th>
<th>People</th>
<th>UK</th>
<th>Aus.</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right-brain/Left-Brain</td>
<td>39.5</td>
<td>40.9</td>
<td>36.9</td>
<td>41.0</td>
<td>42.8</td>
<td>39.0</td>
<td>40.2</td>
<td>41.5</td>
</tr>
<tr>
<td>Limbic/Cerebral</td>
<td>42.5</td>
<td>44.4</td>
<td>43.4</td>
<td>42.3</td>
<td>44.8</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

Table 4.2.13 Pressure Thinking Style Composites: Post Hoc Tests of Significant Occupational and National Differences

<table>
<thead>
<tr>
<th>Thinking Styles</th>
<th>Significant at 0.05 or better</th>
<th>Not Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>(iii) Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Right-Brain/Left-Brain</td>
<td>People – Technical Ideas – Technical</td>
<td>People – Ideas</td>
</tr>
<tr>
<td>Limbic/Cerebral</td>
<td>People – Ideas</td>
<td>People – Technical</td>
</tr>
<tr>
<td>(iv) Nation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Right-Brain/Left-Brain</td>
<td>USA – UK</td>
<td>Australia – UK</td>
</tr>
</tbody>
</table>

Other significant relationships are consistent with our hypotheses but also show the ubiquity of the Left Brain stylistic emphasis under pressure. They include:

- Females are less Left Brain than males, and;
- Females are less Cerebral than males and remain close to balance on Cerebral/Limbic whereas the males are clearly Cerebral under pressure;
- The Ideas cluster is clearly the most Cerebral occupational sub-sample under pressure, and;
• The People cluster is clearly the least Cerebral occupational cluster approaching balance with Limbic under pressure, and;
• The USA sample is the least Left Brain of the three national groupings but only the gap with the UK group is significant.

The generality of findings outlined in Section 4.2.2 on differences affecting the Thinking Styles composites are illustrated graphically in Figures 4.2.1 [a] & [b] (for the Right-Brain style) and 4.2.2 [a] & [b] (for the Limbic style).

The most striking features of the two figures for each style (for relaxed and pressure conditions) are as follows:
• The strong occupational patterns, producing a marked ascending diagonal trend from left to right for the Right-Brain style and a sharp “V” pointing to the Ideas group for the Limbic style for most sub-samples;
- The clarity of the varying national and stylistic sub-sample patterns, most of which are significant but all of which provide a context of provocative relational propositions, and, most of all;
- The sharpening, narrowing and deepening of the response repertoires under pressure, especially towards Left-Brain but also Cerebral styles.

![Figure 4.2.2 (a): Relaxed Limbic vs. Cerebral Scores for Managers from the UK, Australia and the USA according to gender and occupational](image)

A particularly important finding is for a common retreat into almost universally displayed left-brain, control oriented stylistic behaviour even amongst those sub-groups strongly oriented to right-brain styles in the “business as usual” world of the Relaxed mode. In other words, this stylistic regression seems to swamp or dwarf all effects demonstrated by the between-subjects IV’s. It is to a more quantitative assessment of the precise strength of this effect that the MANOVA’s reported in Section 4.2.3 are directed.
4.2.3 MANOVA: The Relative Impact of Stress on Brain styles

The ANOVA's presented above allowed us to take metaphorical snap-shots of the dynamic interaction of key theoretical variables related to the sourcing of potential "New Leaders and "Collaborative Individuals". We did that in both normal-operating conditions and under conditions of uncertainty, complexity, ambiguity, time urgency and performance surveillance. In those analyses, the impact of stress on Brain Styles became apparent in absolute terms. But what "relative" impact does it have compared with the contribution of the between-subjects IVs to effective Right-Brain and Limbic stylistic repertoires? The two MANOVA's reported here, seek to provide a precise answer to that general question using the Correlation Ratio or Eta. Table 4.2.14 relates to primary brain styles. Table 4.2.15 presents the Thinking Style composites. After the preceding ANOVA's, these tables more or less speak for themselves but have been constructed from the combination of data from both relaxed and pressure conditions.

Table 4.2.14 MANOVA's: Primary Brain Styles: Main Effects and Significant Interactions

<table>
<thead>
<tr>
<th>Brain Styles</th>
<th>Main Effects &amp; Interactions</th>
<th>F</th>
<th>SIG.</th>
<th>Eta</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Between Producer</td>
<td>Subjects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teamist</td>
<td>Gender(G)</td>
<td>1.75</td>
<td>NS</td>
<td>0.003</td>
</tr>
<tr>
<td></td>
<td>Occupation(O)</td>
<td>7.37</td>
<td>0.001</td>
<td>0.027</td>
</tr>
<tr>
<td></td>
<td>Nation(N)</td>
<td>1.35</td>
<td>NS</td>
<td>0.005</td>
</tr>
<tr>
<td>Analyst</td>
<td>Gender</td>
<td>13.36</td>
<td>0.001</td>
<td>0.025</td>
</tr>
<tr>
<td></td>
<td>Occupation</td>
<td>12.92</td>
<td>0.001</td>
<td>0.047</td>
</tr>
<tr>
<td></td>
<td>Nation</td>
<td>3.43</td>
<td>0.01</td>
<td>0.013</td>
</tr>
<tr>
<td>Imaginist</td>
<td>Gender</td>
<td>2.85</td>
<td>NS</td>
<td>0.005</td>
</tr>
<tr>
<td></td>
<td>Occupation</td>
<td>14.00</td>
<td>0.001</td>
<td>0.051</td>
</tr>
<tr>
<td></td>
<td>Nation</td>
<td>3.78</td>
<td>0.05</td>
<td>0.014</td>
</tr>
<tr>
<td></td>
<td>G X O X N</td>
<td>2.45</td>
<td>0.05</td>
<td>0.018</td>
</tr>
<tr>
<td>B. Within Teamist</td>
<td>Subjects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Condition (C)</td>
<td>62.50</td>
<td>0.001</td>
<td>0.107</td>
</tr>
<tr>
<td>Analyst</td>
<td>Condition</td>
<td>337.90</td>
<td>0.001</td>
<td>0.393</td>
</tr>
<tr>
<td></td>
<td>O X C</td>
<td>3.40</td>
<td>0.05</td>
<td>0.013</td>
</tr>
<tr>
<td>Imaginist</td>
<td>Condition</td>
<td>90.60</td>
<td>0.001</td>
<td>0.148</td>
</tr>
</tbody>
</table>

In considering the pattern of data in those two tables, the following general points of interpretation can be made:
- Of the primary brain styles, only Teamist shows significant gender effects: when the data from both conditions are pooled;
- However, virtually all other main effects related to primary brain styles are significant: the exception being for producer, which has the least psychometrically robust scale, and;
- The main effects and relative contribution to variance of the within-subjects IV – Condition: are clearly much greater than any effects from the best of the between-subjects measures – which is Occupation. The largest $\eta^2$ for Occupation being 0.051 (admittedly considerable as a partial effect) but it nowhere approaches the $\eta$'s for Condition in relation to primary brain styles – all of which exceed 0.100 and the largest of which is 0.393, also;
- For the Thinking Styles composites, the analysis produces the same impressions as above wrt large: with all main effects of between-subjects IV's significant but only the $\eta$'s for occupation with Right Brain exceeding 0.020 (at 0.074) and the $\eta$'s for Condition being 0.261 with Right Brain and 0.112 with Limbic.

<table>
<thead>
<tr>
<th>Thinking Styles</th>
<th>Main Effects/Interactions</th>
<th>$F$</th>
<th>SIG.</th>
<th>$\eta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Between Right Brain/Left Brain</td>
<td>Subjects</td>
<td>Gender(G)</td>
<td>3.82</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Occupation(O)</td>
<td>20.80</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nation(N)</td>
<td>4.30</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G X O X N</td>
<td>1.68</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td>Limbic/Cerebral</td>
<td>Gender</td>
<td>5.17</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Occupation</td>
<td>5.16</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nation</td>
<td>3.31</td>
<td>0.05</td>
</tr>
<tr>
<td>B. Within Right Brain/Left Brain</td>
<td>Subjects</td>
<td>Condition (C)</td>
<td>183.96</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>O X N X C</td>
<td>2.04</td>
<td>NS</td>
</tr>
<tr>
<td>Limbic/Cerebral</td>
<td>Condition</td>
<td>65.93</td>
<td>0.001</td>
<td>0.112</td>
</tr>
<tr>
<td></td>
<td>G X C</td>
<td>4.70</td>
<td>0.05</td>
<td>0.009</td>
</tr>
<tr>
<td></td>
<td>G X N X C</td>
<td>3.18</td>
<td>0.05</td>
<td>0.012</td>
</tr>
</tbody>
</table>

There is another contribution the MANOVA can make to our overall analysis of the interaction of gender, occupation and nation across relaxed and pressure conditions.
This relates to the availability of the Correlation ratio (\(\eta\)) to provide an estimate of the variance explained by an interactive effect that does not depend on the assumption of linearity. The reader will recall the intricate and non-linear, but theoretically intelligible and relevant, relationships between and among gender, occupation and nation with the Right Brain Thinking style composite we encountered when considering Figure 4.2.10 recently. F tests suggested non-significance but they depend upon the assumption of linearity. \(\eta\) does not. The relevant statistics are in Table 4.2.15. In Section A of that table are the F ratio, significance of F and \(\eta\) for the G X O X N interaction on the Right-Brain variable. The F is not significant but the \(\eta\) at 0.013 suggests a share of explained variance that compares favourably with several other partial- \(\epsilon\)s in the table that are significant. This suggests the curvilinear nature of the relationship discussed in proximity to Figure 4.2.10 may explain the low F statistic.

Also, the reader should consider the within-subjects interaction on Right Brain marked O X N X C suggesting a substantive difference in the pattern between the relaxed and pressure conditions. The \(\eta\) was 0.015 – once again, not earth shattering but a respectable index of significant levels of explained variance assuming curvilinear effects. These \(\epsilon\)s are, of course, a product of the combined relaxed and pressure databases. The Relaxed pattern was the subject of Table 4.2.10. The pattern of means related to the interaction under pressure is presented in Table 4.2.16 for comparison.

Time and space preclude a detailed review of that table. It should suffice to point out that the effect of pressure is evident throughout the table in the reduced means on the Right Brain variable. However, it is particularly evident in the extremely Left Brain scores for all the Technical sub-samples, and the relatively low variability among all sub-sample means in the Technical cluster. Conversely, we should also note that the People sub-samples clearly retain some semblance of Right Brain affinity – even though moving a little into Left Brain territory. This is especially so for females and most markedly so for those from the USA and Australia. In general, the Ideas group floats in a middle space between the other two but whether they seem closer to the Technical or People clusters appears to vary on both a national and gender basis.

In summary, the overwhelmingly central message of Tables 4.2.14 and 4.2.15, is that whatever attention we pay to the selection or development of specially targeted sub-groups in search of the alternative cadres for the New Leadership and Fourth Blueprint
collaboration it may not suffice. In fact it is probable that stress and pressure brought about by uncertainty, ambiguity and complexity being mixed with time urgency, close supervision and tight performance expectations will result in a near universal retreat into left-brain control systems, tried and true nostrums and attention to the tangible. We will return to these issues in Chapter 5. In the meanwhile, Figures 4.2.3 and 4.2.4 will again graphically illustrate the pattern of interrelationships among each of the two Thinking style composites and their full range of significant IVs.

Table 4.2.16 Means for non-significant three-way Interaction on Pressure Right-Brain by Gender, Occupation and Nation

<table>
<thead>
<tr>
<th>Nation/Gender</th>
<th>Technical</th>
<th>Gap F-M</th>
<th>Ideas</th>
<th>Gap F-M</th>
<th>People</th>
<th>Gap F-M</th>
<th>Total</th>
<th>Gap F-M</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK Male</td>
<td>35.1</td>
<td>+1.1</td>
<td>37.1</td>
<td>+5.0</td>
<td>41.5</td>
<td>+0.5</td>
<td>37.9</td>
<td>+2.2</td>
</tr>
<tr>
<td>Female</td>
<td>36.2</td>
<td></td>
<td>42.1</td>
<td></td>
<td>42.0</td>
<td></td>
<td>40.1</td>
<td></td>
</tr>
<tr>
<td>Aus. Male</td>
<td>36.1</td>
<td>+2.8</td>
<td>41.4</td>
<td>-0.9</td>
<td>41.1</td>
<td>+2.2</td>
<td>39.5</td>
<td>+1.4</td>
</tr>
<tr>
<td>Female</td>
<td>38.9</td>
<td></td>
<td>40.5</td>
<td></td>
<td>43.3</td>
<td></td>
<td>40.9</td>
<td></td>
</tr>
<tr>
<td>USA Male</td>
<td>38.6</td>
<td>-1.9</td>
<td>42.1</td>
<td>+0.6</td>
<td>42.8</td>
<td>+3.1</td>
<td>41.2</td>
<td>+0.6</td>
</tr>
<tr>
<td>Female</td>
<td>36.7</td>
<td></td>
<td>42.7</td>
<td></td>
<td>45.9</td>
<td></td>
<td>41.8</td>
<td></td>
</tr>
<tr>
<td>Total Male</td>
<td>36.6</td>
<td>+1.0</td>
<td>40.2</td>
<td>+1.6</td>
<td>41.8</td>
<td>+2.0</td>
<td>39.5</td>
<td>+1.4</td>
</tr>
<tr>
<td>Female</td>
<td>37.6</td>
<td></td>
<td>41.8</td>
<td></td>
<td>43.8</td>
<td></td>
<td>40.9</td>
<td></td>
</tr>
</tbody>
</table>

4.2.4 Profile and Frequency Analysis: for various sub-clusters of managers.

In Section 4.1, the issue of ipsativity was discussed and the methodological and statistical reasons for focussing our analytical attention on one scale of the L-TAS at a time were clarified. By following those guidelines in Section 4.2 thus far, we have been able to establish a strong overall picture of significant relationships between the independent variables that were the theoretical focus of our study and many of the primary brain styles and thinking style composites. However, as noted in Section 4.1, much ipsativity is embedded in the nature of life and it is most certainly an essential feature of the models we have been building in the first three chapters of this thesis. So, in preparation for an integrative conclusion in Chapter 5, it is time to reconstruct our overall picture of ipsative choice in a context of interdependent responsive options.
Profile analysis, where we compare and contrast the overall contours of the full range choice patterns that, on average, characterise our key sub-samples provides us with a vehicle for achieving such a re-integration. Two sets of such comparative profiles are presented in Appendices III and IV. Appendix III charts average profiles in relaxed and then pressure conditions for occupation X gender groupings for, in turn, UK (App. III [a] & [b]), Australia (App. III [c] & [d]) and the USA (App. III [e] & [f]).
Reading across the page in Appendix III, we can see the dynamic moving towards a tightly defined, common response repertoire across all sub-samples under pressure.

Note, however, that:

- in the Pressure condition, the female sub-samples are systematically and strongly over-represented amongst the highest scoring groups on Teamist and the lowest scoring groups on Analyst but are tightly clustered on the other two scales across all three national groupings, but that;

- the exception to the gender rule under pressure, is that male “People” sub-samples closely approximate the female means on Teamist, and also;

- Reading down the page, we get a sense of the variety within the mix of repertoires each nation has available to it. You can see a dominant proclivity to Limbic (PT) profiles among the UK samples in the relaxed condition as opposed to majority Left Brain (PA) relaxed patterns for the Australians and Right Brain (IT) profiles for the US, but further;

- You can also “spot the outliers” among national clusters. For example, note the somewhat ‘lonely’ yellow, “Limbic” line of the technical females in the US relaxed sample or the distinctive light blue “Speculator” profile of the UK female Ideas group. And, especially, the bright purple, distinctive Right Brain “Slash of Zorro” characterising the female “People” group within the Australian sample.

Similarly analysis with an alternative focus is possible using Appendix IV as the database. In Appendix IV, the profiles are arrayed down the page according to occupational clusters with the male sample on the left and the female sample on the right. Both relaxed and pressure profiles for the relevant groups appear in each chart allowing for a comparative examination of each of the three occupational clusters across nation and gender and including a focus on the specific dynamics of each sub-sample under pressure. Space and the focus of this thesis preclude further detailed analysis here but such data are clearly the basis for many more detailed and specifically targeted studies.

A final pool of illustrative data derived from the study is presented in Appendices V and VI. In these tables, the distribution of scores on each of the Right Brain and Limbic variables has been divided into five ranges, as listed under the heading; “Frequency Analysis” at the end of Section 4.1.4 and shown in the left hand column of the tables.
The third scoring range - 40 to 49 - covers approximately half a standard deviation on each side of the mean. The next bands out (2 & 4) are held to indicate clear preference for each end of the dichotomy, while categories 1 and 5 indicate very strong preference.

So remembering the consistently significant statistical relationships shown in Figure 4.2.15 between these composite variables and the IVs used to structure the tables in Appendices V & VI (Gender and Occupation in V and Gender and Nation in VI), the effect of these frequency tables is to:

- Facilitate a quick review of the near normality of the distributions underlying those statistically significant relationships; while also;
- Allow(ing) us to see the movement towards a degree of skewing in the pressure condition, but nonetheless;
- Show(ing) us that the greater majority of sub-samples maintain some numbers in all five bands of the range, and also;
- Clarify(ing), in “Body count terms”, the weight of human presence that underlies the shift in stylistic preference under pressure.

This last point is important to our understanding of the challenges in implementing Fourth Blueprint designs. To illustrate this, we will consider both tables in Appendix V and focus on the Right Brain/Left Brain dynamic. When relaxed, between 25 and 32% of the males and 15 and 29% of the females occupy bands 1 & 2 (The Left Brain) as opposed to between 25 and 39% (males) and 25 to 45% females in bands 4 & 5 (Right Brain. This suggests at least some level of parity in at least some niches of the polity in the clash of cultures dynamic, in “normal operating” conditions. However, under pressure, the males show between 35 and 63% and the females between 29 and 68% in bands 1 & 2 (LB), but only 1 to 18% (males) and 11 to 28% (females) in bands 4 & 5 (RB). Interestingly, the extreme points in that analysis are represented by the male/Technical (63.3LB: 1.1RB) and female/People (26.9LB: 28.0RB) samples. This demonstrates that occupational background and gender issues are complex but could well have profound implications for staffing the Fourth Blueprint organisation and the transition process designed to implement it. We will revisit these issues in Chapter 5.
4.3 Integrative Summary of Results

The broader implications of the results presented in Section 4.2, as they relate to both the implementation of Fourth Blueprint organisational designs and the concepts and theories embedded in the model of brain styles and the collaborative mindset proposed in Section 3.1, will be discussed in Chapter 5. The purpose of the brief overview to be constructed here is to consolidate the record on what has been found in this exploratory study so as to form a clear platform for that constructive integration of complex theory with empirical findings and planning for future research. We will do that by:

- Briefly reviewing the scope and limitations of the data-gathering exercise described in this Section, and then;
- Presenting in summary fashion a statement of the conclusions we might feel justified in reaching related to each of the hypotheses that were articulated in the introduction to Chapter 4, in the light of the findings presented in Section 4.2.

The scope of the study is potentially quite broad because care has been taken to fully balance the design across two genders, three occupational clusters and three national samples. Thus a substantial array of interactions across the issues represented by these variables can be both investigated on their own merits and controlled for when other issues are the focus of our concern. We have also capitalised on the likely positive set to contribute to the database honestly by our subjects based on what we can be confident is a common set of educational and developmental objectives amongst them. And given their early, mid-career status and common work backgrounds, it is reasonable to see them as a sample from which we could confidently generalise regarding the theoretical target group: “managerial aspirants for 21st Century Fourth Blueprint organisations”.

On the matter of the key research instrument, it has some psychometric properties that impose limitations on the type of analyses we can undertake and the clarity and confidence of our interpretation of certain of its scales. These matters were discussed in detail and, as indicated, we have assembled a range of analyses that help us understand the variables and their interrelationships better. We have also taken care to target the measurements that are more stable, coherent and useful and to ensure that correlation-based analyses are only used in circumstances that avoid artificial or methodological interdependence of measures within the one pool of data. Bearing these limitations in mind, it is suggested that the following summary statement of conclusions regarding
each of the broad hypotheses guiding this study is justified within the context of results presented in Section 4.2 and its associated appendices.

4.3.1 Does gender effect Brain Styles?

**Hypothesis 1 – Gender Differences:**

- **IA. Females will tend to be more Right Limbic and males will be more Left Cerebral:** The evidence presented in relation to primary brain styles (See Tables 4.2.1/2 and especially Tables 4.2.4/5) appears to provide clear, strong and consistent support for this exploratory hypothesis. Men are more Left Cerebral and Women are more Right Limbic.

**OR;**

- **1B. Females will be more Right Brain and males will be more Left Brain:** This relates to the composite styles and the evidence is not highly supportive of the straight Left versus Right Brain gender difference (See Tables 4.2.8 and 4.2.11/12);

**AND;**

- **1C. Females will be more Limbic; males will be more Cerebral:** The evidence here is more mixed. There are no gender gaps on the relaxed Limbic composite but, under pressure, there is a gender difference \( p = 0.001 \) that is consistent with the Female Limbic: Male Cerebral position (See Tables 4.2.11/12)

The data in Tables 4.2.10 and 4.2.16 concerning the complex interaction between gender, occupation and nation in relation to the Right Brain composite, and the discussion accompanying it, might have suggested more support for Hypothesis 1B rather than 1A. However, it is clear that the gender differences uncovered in that analysis were driven by the significantly higher Teamist brain styles in females and not generally applicable increases in female Imaginist scores. That this is so is clearly demonstrated by the Relaxed and Pressure tables in Appendix VII that place Teamist and Imaginist means beside each other for the same 18 cells that appear in Tables 4.2.10 and 4.2.16. So overall for gender, the conservative interpretation on the basis of the data reported here would be to endorse Hypothesis 1A and ascribe any other minor gaps in the Composites to the driving impact of the Left Cerebral/Right Limbic gender effect.
4.3.2 Occupational background and managerial style

Hypothesis 2 – Occupational Differences:

- **2A. Managers from “technical” occupational clusters will be more Left Brain than managers from the “Ideas” or “People” clusters**: The data strongly supports this proposition on Thinking Styles (See Tables 4.2.8/9 for relaxed mode and 4.2.11/12/13 for pressure mode). But the evidence is not so clear for the Ideas group using the primary brain styles because the Teamist scale shows them down with the Technicals (See Tables 4.2.1/2/3 for relaxed and Tables 4.2.4/5/6 for pressure mode);

Which brings us to:

- **2B. Managers from the “Ideas” cluster will tend to be more Cerebral than those from the other two clusters**: which presents a more complex pattern of evidence. While there are some interactions with gender in regard to primary brain styles (See especially Table 4.2.2 Interaction), it would seem that the Ideas group are more Imaginist that the other two groups but are lower on Analyst than the Technicals and lower on Teamist than the “People” cluster. Thus, in pressure Thinking style composites, they are significantly more Cerebral than the People group but not the Technical group (See Tables 4.2.12/13);

Which, also relates to:

- **2C. Managers from the “People” cluster will be more Limbic than those from the other two clusters**: where the evidence is patchy. Table 4.2.12/13 shows the People group is less Cerebral than the Ideas group and the Technical group. If we examine the primary brain styles, the People group is the strongest cluster on Teamist in both relaxed (See Tables 4.2.2/3) and pressure (See Tables 4.2.5/6) modes but is the lowest scorer on Producer in relaxed mode. From the profiles for male and female groups in the People cluster (Appendix IV e & f), Producer seems a less preferred style in most sub-samples and so any overall Limbic superiority would probably be largely driven by the Teamist emphasis.

Overall, the evidence for strong occupational differences is compelling but, in terms of the Thinking style composites, it seems to be concentrated around the clear contrast in the Right Brain/Left Brain variable between the emphatically Left Brain, technical
cluster and the clearly Right Brain People Cluster. At the level of primary brain styles analysis, as strongly supported by the results of the MANOVA, occupational effects are consistently significant for all scales, but the key gaps driving these effects are:

- differential Right Brain quadrant preferences between the Ideas (Cerebral) and People (Limbic) groups;
- contrasting Cerebral preferences for the Technical (Left Brain) and Ideas (Right Brain) groups;
- and alternative Limbic emphases for the Technical (Left Brain) and People (Right Brain) groups.

4.3.3 National differences in managerial style

**Hypothesis 3 – National Differences:**

- **3A. Male managers from the US will be more Right Brain than either UK or Australian male managers:** The evidence supports this proposition for the pressure mode (see Tables 4.2.11/12/13) – although on that basis it would probably best be phrased “less Left Brain” than more Right Brain. Also, the evidence presented in the Table 4.2.10, seems to support the proposed difference in relaxed mode, although the statistics are not significant due to the complex interaction within which the data are embedded. Profiling such as in Figure 4.2.1 [a] also provides support. The overall picture from the quantum of data supports this hypothesis;

- **3B. Male managers from Australia and the USA will tend to be more Cerebral than male managers from the UK:** The evidence from Thinking Styles does not support this. However, in relation to primary brain styles, it suggests that managers from USA/Australia are clearly more Imaginist (Cerebral Right) than those from the UK (See Table 4.2.5/6). Also, the data presented in Appendix VII clearly shows that males from the USA and Australia score higher on Imaginist on average than their UK counterparts in both relaxed and pressure modes and virtually for all three occupational clusters but particularly in the Ideas sub-cluster, BUT;

- **3C. Female managers will not show significant national differences and will show profiles that are more Right Brain and Limbic than for their male colleagues.** The total means across three national samples of women, evenly balanced for occupation showed very close means for the
Right Brain composite (See Figure 4.2.10). However, the detailed
dissection of the three-way interaction strongly suggests significant
differences in national culture at work. For whatever reasons, the UK
managerial culture seems to support gender stereotypic differences, while
in the Australian culture, females tend to score consistently with their
occupational cluster. Also, in the USA, both males and females display
“feminine” (or Right Brain) profiles when relaxed (although the
female/techs are an exception) but occupationally consistent profiles
under pressure. That said, it should be acknowledged that, under
pressure, both males and females were below 42 on the Right Brain scale
for all national samples. As for the Limbic comparison, Table 4.2.15
shows a significant gender effect for the Limbic-Cerebral scale and a
Gender X Nation X Condition interaction. Also, Tables 4.2.11/12 show
that females overall were almost in balance on the Limbic-Cerebral scale
under pressure while the males were clearly Cerebral. This presents a
mixed picture, with the weight of evidence not supporting a common
“female style” such as reported by Gibson (1996). Rather it seems that
systematic differences in managerial culture impact upon both gender
and occupational experiences in creating complex patterns of brain style
profiling across each national sample.

More generally, there are some clear national differences, particularly on the Right
Brain Thinking Style composite and on the Imaginist Primary scale, which suggest that
the USA and Australians are more Cerebrally experimental than the more Left Brain
and grounded UK manager. There is also good evidence that on the Right Brain
composite, the national male groupings show differing preferences not expressed by the
female sub-samples. Further, the weight of evidence points to a common female
preference towards Limbic but some occupational and national differences, moderated
by mode, in the degree of Cerebral preference that is common within the male sub-
samples.

4.3.4 Environmental stress and the brain style profile.

Hypothesis 4 – Stress/Pressure Differences:

- 4A. Managers stylistic profiles will be more Left Brain and Cerebral in
  pressure mode than in “normal” operating conditions: The data on this
are compelling. The statistics can be found in the MANOVAs in Tables 4.2.14/15 and are illustrated in the graphs in Figures 4.2.3/4. This effect is strongly confirmed in relation to both specific predictions. **BUT;**

- **4B. The generality of 4A may be moderated by the tendency of female managers to move towards Limbic styles under pressure:** See also my comments under 3C above. In its specificity, this hypothesis is also supported, particularly by the data in Tables 4.2.11/12. However, the gender effect in relation to Limbic/Cerebral balance is clearly swamped by the overall impact of stress on response repertoires.

The strength and consistency of the stress effect on all stylistic profiles is the key finding of this study and will receive intense consideration in Chapter 5 accordingly.
Chapter 5

In Search of New organisations, new leaders and new mental models: Alternative patterns of interdependence and emergence in the 21st Century organisation.
"As the industrial era evolves into the information age, the scarce resource is shifting from capital to knowledge. But because the organization's vital knowledge, expertise and strategic information exists at the operating levels rather than at the top, the whole authoritarian hierarchy has had to be dismantled and the roles and tasks of each management level radically redefined. From wanting to subjugate individual differences by requiring conformity to a standardised organizational model, companies are recognizing that in a knowledge-based environment, diversity of employee perspectives, experience and capabilities can be an important organizational asset...[Thus]... the "individualised corporation" [is] one that capitalizes on the idiosyncracies and even eccentricities of exceptional people by recognizing, developing and applying their unique capabilities."

Bartlett & Ghoshal (1997: 114)

The above quote captures the thrust of much of the recent literature on the emerging strategic realities of the 21st Century. In an era when knowledge and its generation is to become the central value adding element of human enterprise, it is the innovative, visionary and even creatively loose "characters" that must be released to perform miracles of otherwise unimaginable "morphing" of products, processes and systems. And, to achieve that, we must first recognize the need to be a positive home to diversity and flexible, engaged and accepting hosts to emergent processes where the clowns are set loose to run the managerial circus.

However, it is one thing to advocate empowering the "outliers" and diversifying the internal politics driving social process in our institutional structures. It is quite another to find enough finely honed and exquisitely distorted mental sets to inject into the loosely connected communities of practice that are to generate the new realities by collaborative learning. And when we do find them, what of the assembled ranks of lost souls who were the flower of the Third Blueprint regimes? They are waiting expectantly for someone else to "fit" them to the new realities while all the time clinging to their old mental models, sets to perceive and assured nostrums for "world's best practice".

In the first half of this thesis, we explored the conceptual thrust of the new leadership theories and formed a deeper understanding of the demands it placed upon the cognitive and personality structures and managerial styles of the aspiring "high potentials" of the coming era. In Section 3.2 and Chapter 4, we explored what resources exist within just such managerial cadres to fit them to meet those challenges. In this chapter, we will examine what those explorations have told us about the state of readiness of our future
managers for this new odyssey, and what specific strategies and techniques might aid or subvert our attempts to make an effective transition to Fourth Blueprint functioning. So, in Section 5.2, we will also engage in a little academic reflection concerning the implications of the theory and empirical research, reported here, for:

- the concept of deploying action learning processes within networking organisations as a means of enabling transformation;
- the broader processes currently directed towards managerial learning and development within our societies;
- the conduct and dissemination of further research on these broad issues generally, and on the questions of transformation of individuals and organizations to Fourth Blueprint competence in particular, and;
- the conduct of academic advocacy and consulting related to the achievement of Fourth Blueprint change.

Before proceeding, we should register two important notes of caution regarding the perspective from which the commentary will flow. First, the tone of the introduction might suggest that this author is negatively inclined towards the Fourth Blueprint and associated theoretical frameworks. Nothing could be further from the truth. The vision they articulate of a mature, open, individually developmental but collegially harmonic culture is compellingly attractive. Thus occasional asides to the effect of “the crazies running the circus” or similar are more by way of characterising the reactions of some of the more entrenched mental sets when confronted with the prospect of the new regime. That said, it remains in this author’s view an open question as to whether the prospects for implementing the Fourth Blueprint are very bright and the forthcoming review and integration will be firmly focused on that issue.

Secondly, during the review of the study and its implication in Section 5.1, I will regularly focus on total group and sub-sample means and frequencies to highlight the central tendencies and points of differentiation among them. Suffice it to note that I am well aware of the characteristics and limitations of actuarial analysis. Thus I am alive to the fact that there are always “outliers” and even direct “counter-culturalists” within any group. They are often swamped by the weight of tightly knit group consensus (as discussed in Section 2.2.3). However, the clinical study of their various experiences of expressive creativity and disappointed withdrawal in the face of constraint has a validity of its own in this body of scholarship. It is simply not the key focus here.
5.1 Assessing the state of readiness for the Fourth Blueprint: Brain Styles of managerial “High Potentials”.

The reader will recall that our model of the desirable brain styles mix for the Fourth Blueprint, as stated in Section 3.1.3 called for a superiority of numbers and intensity to be displayed in the Cerebral and Right Brain styles at the relative expense of Limbic and Left Brain styles. We should keep in mind that, while any given individual may display just such a pattern of preferences, our model did not call for that so literally. Rather, we looked for the weight of numbers and commitment within the managerial population overall to move towards a balance between the exploratory, intellectually complex, elaborating and ambiguity-tolerant expressiveness of the Cerebral and the open, supportive, integratively positive engagement of the Right-Brainer.

Equally, we were concerned to avoid an outcome where the dominant styles of our future high potential aspirants were strongly biased towards the themes of precision, rationality, control, groundedness and intolerance for complexity and uncertainty that can drive the strong performance culture of the Left Brain and Limbic styles. Once again, the presence of these emphases within the polity was not only unobjectionable but also essential to the overall repertoire of responses needed in an uncertain environment. However, it was in recognition of the tendency for analyticals to dominate interactive relationship with intuitives, and Limbs to drive “democratic” group processes so as to drown out recognition and exploration of complexity, as discussed in Section 2.2.3, that the need for an alternative balance was advocated.

In Section 3.2, we explored the literature on the critical demographics of the workforce that might impact upon a change in the trend towards the desirable styles and away from the styles likely to inhibit or corrupt collaborative processes. Chapter 4 provided us with a substantial database directed specifically to assessing those impacts and the balance between them. In Section 5.1 we will concern ourselves with digesting the implications of those findings from Chapter 4 for the potential for each of the focus demographics to contribute to the transition to Fourth Blueprint regimes. We will also consider the impact of the situational variable: “Pressure in the managerial context”; on brain styles and the implications of that for the strategies and technologies of transition.
5.1.1 Gender and the Collaborative Individual: What women bring to the processes of networking.

As described in Figure 3.2.1, Loden's (1985) summary of the Feminine leadership model was that it was cooperative, team-based, quality oriented and characterised by a balance between rational and intuitive thinking, more empathetic inclinations and a lower need for control but, nonetheless, maintaining high performance standards. This was contrasted with the masculine style, which was held to be competitive, hierarchical, rational and analytical, control-oriented and uncritical. Though not exhaustive, Loden's list did capture the essential tone and understanding conveyed by most writers focusing on gender differences in management. However, the critical issue highlighted by the relevant research related to the claims concerning "intuitive" superiority for women managers—especially if that included imagination, vision, and innovative, experimental and complex approaches to learning and change. The issue distilled itself, in terms of our focus on brain styles, into a question as to whether women were indeed more Right Brain overall (including more Imaginist) or whether they were simply more Right Brain Limbic (Teamist) while the males were more Left Brain Cerebral (Analyst).

As indicated in Section 4.3.1, the findings of this study strongly support the latter view: that female managers, in general, are clearly and consistently stronger on the Right Limbic (Teamist) style and weaker on the Left Cerebral (Analyst) style than their male counterparts. Also they are consistently (but not universally) weaker on the Right Cerebral (Imaginist) style than their male colleagues. A corollary of this is that the female managers in the sample were on average significantly more Limbic overall than their male colleagues who tended towards Cerebral especially under pressure. A quick review of Appendix VII will show that there were some exceptions to this rule. For example, the UK/Female/Ideas, and Australian and USA/Female/People subclusters when relaxed. However, over 80% of all sub-clusters showed the Female Right Brain score driven by Teamist with the Female Imaginist score being below their male counterparts. The implications of this, for the role of gender in the Fourth Blueprint Distributed Leadership model, are presented in Figure 5.1.1.

This figure shows the illustrative rather than precise quantitative positioning of the two genders. The results clearly and consistently establish that females show the higher Teamist scores and even though their average score under pressure falls just below the
male relaxed score the gender gap actually increases. Alternatively, there is no real gap between males and females on Analyst when relaxed but, under pressure, males show the higher scores (see Tables 4.2.4/5). However these differences, consistent though they are with other research, seem to be swamped by the impact of stress/pressure on brain style profiles. The point is illustrated in Table 5.1.1, which presents the full relaxed and pressure profiles for the total male and female samples.

Table 5.1.1  Gender differences across the primary Brain Styles profile in Relaxed and Pressure modes

<table>
<thead>
<tr>
<th>Brain Styles</th>
<th>Relaxed</th>
<th>Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Producer</td>
<td>23.3</td>
<td>22.5</td>
</tr>
<tr>
<td>Teamist</td>
<td>22.7</td>
<td>24.0</td>
</tr>
<tr>
<td>Analyst</td>
<td>21.8</td>
<td>21.5</td>
</tr>
<tr>
<td>Imaginist</td>
<td>22.1</td>
<td>21.9</td>
</tr>
</tbody>
</table>

As that table demonstrates, both male and female samples show a Limbic profile overall when relaxed, although for males it is driven by Producer while for women it is driven
by Teamist. However, under pressure, the dominant shift for both genders is towards the Analyst style, which becomes the leading preference by far. The difference now is that, for the males the overall profile is clearly Left Brain whereas, due to the retention of a moderately strong teamist average, the females are showing an “Organizer” profile (See Section 3.1.1 above) of equal status to their Left Brain composite score.

It should be remembered that the females in this sample will have almost universally successfully completed some undergraduate degree and, consistent with Korabik’s (1990:284) view reported in Section 3.2 might well be expected to show higher Analyst scores (and lower gender gaps) than for those who have not. However, in a sense, that is just the point. It is exactly those who carry the extra strength of tertiary qualifications who are most likely to mount a serious challenge for placement in senior managerial roles. And yet their first three preferences in the pressure mode are the Analyst and Teamist/Producer (Limbic) styles that form the Performance Loop triangle that we encountered in Figure 2.1.11 and warned about in Section 2.1.4.

In essence, the results encountered here suggest that women as a broad constituency are more likely to prefer approaches that utilize the “clan” control system while the men, when push comes to shove, will revert to an emphasis on hierarchical control. Neither thrust seems to offer much promise of exploratory and open learning, experimentation and collegial support for transforming the essence of what we do and who we are. They are balancing across the age-old contention between task and people, structure and consideration or the hierarchy of roles versus the “web of inclusion”. The results remind us of Statham’s (1987) views as reported in Section 3.2. In her more ethnographic style, using interviews with 40 managers and their secretaries, she found that women managers were seen as both task and people-oriented while the men seemed “image engrossed and autonomy invested”. Looking at the profiles in Table 5.1.1, especially for Pressure mode, we can see how that impression could be generated within a sample randomly drawn from our subjects.

However, we should remember that, as we have seen, there are occupational differences that tend to tap the same differences as those displayed by the male and female clusters. Average profile scores for all 18 sub-samples of the Gender X Occupation X Nation interaction, in each of Relaxed and Pressure mode, are presented in Appendix VIII. As regards gender effects, perhaps the most telling insight can be gained from the Pressure
mode display in Appendix VIII. A close examination of the pressure mode arrays in that appendix will show that a total of eight rows have had two (or three) numbers encased in rectangular boxes. Of the ten that have not, the average profile is clearly Left Brain, with Analyst substantially higher than Producer (as its back-up style). Six of those unboxed profiles are for all the Technical sub-samples (male or female). This pattern was as predicted (and confirmed on average) for the Technical groups.

The four other Left Brain groups are from the Ideas (two male/two female) cluster, which was predicted to be the most Cerebral. Those unboxed weren't, but two groups boxed in royal blue were. The other six boxed groups (in green) are all from the “People” cluster. These were predicted to be more Limbic than the other groups and one is — although it is equally Organizer in dominant style. All the others are clearly Organizers. Thus, while the Teamist score of females in general is clearly stronger than the male score, the gender effect is narrowed and constrained by the impact of occupational background — especially under pressure. Also, in eight of the nine female sub-clusters under pressure, the Imaginist style is clearly their lowest ranked.

So, it would seem that women might yet show a more emotionally nurturant and engaged style of management. However, there is little in that to give the Fourth Blueprint reformist hope of a profound transformation towards flexibility and individual expressiveness in the uncertain and discontinuous operating environment of the 21st Century. In fact, in the female driven network, the difficulties of the overly constraining impact of group think alluded to in Section 2.1.4 loom as a real threat to the genuine open dialogue and creative expression and risk that represents a key pillar of the dynamic of Collaborative Individualism. “Webs of Inclusion” may as easily become “Webs of Exclusion” or, perhaps worse still, “Webs of Containment”. At the very least, the data give pause to our endorsement of “feminine leadership” as the source of the new Collaborative Individual.

5.1.2 Occupational functions and dysfunctions within the “Learning Loop”

“We don’t want to suggest that communities of practice are somehow idealistically sociable. Inevitably, (they) fight. But to the extent that they are a community, members implicitly share a sense of what practice is and what the standards for judgement are and these support the spread of knowledge. Between communities, however, where practice is no longer shared, the know-how, know-what and warrants embedded in practice do not circulate. Thus division becomes prominent and problematic. Different
communities have different standards, different ideas of what is significant, different priorities, and different evaluating criteria. Over time, disciplines increasingly divide rather than combine.”


The above quote highlights one of the more recent themes in the diverse literature that has grown more or less contiguously with networking. From the field of Knowledge Management, comes a strong focus on “Communities of Practice”. While, on some levels, the concept subsumes the older idea of professional and occupational “clusters” or groupings, on others its very point is that communities of practice develop from and are nurtured by a focus on praxis (See e.g.: Freire, 1973). Their interest is in the “problem” and their dynamic is integrative. On the other hand, disciplines, as they are nurtured and developed in Universities and Institutes to generate and protect the sacred verities of a profession, are seen within this thrust as regressive and constraining of generative learning. In another passage from the reference, Brown and Duguid (1998: 97) state:

“In the organisation of knowledge, hierarchical relations introduce their own weaknesses. Hierarchical divisions of labour often distinguish thinkers from doers, mental from manual labour, strategy from tactics. Above all, the mental-manual division predisposes organizations to ignore a central asset, the value of know-how created through its parts.”

This vein of thought is profoundly consonant with the philosophy and focus of the Fourth Blueprint. For both, the core unit of study is the individual (or small operating group) within their networking context. The main content concern is the emergent joint perceptions, agreements and modus vivandi within the network. And, in both cases, one of the major issues raised relates to the walls that are artificially erected between key players within an action context by pre-determined structure, plans and resources that are channeled according to hierarchical divisions and by sets to perceive, evaluative styles or ritual response systems.

It would seem that just such a set of pre-programmed and systematically developed barriers to open, collaborative search and learning might well be at work in our sample as a result of the occupational/disciplinary education and development regimes they have undergone. If so, it would be entirely consistent with the Lawrence and Lorsch (1967, 1969, and 1976) research we canvassed in Section 3.2.2 – in particular, their emphasis on the differentiated mindsets they encountered across various functional
clusters within organisations. However, while strong advocates of disciplinary and functional differentiation, they also stressed the need for organisational integration, especially in high uncertainty environments. Thus, within the overall context of hierarchical structures, they directed much of their research effort to the integration process and mechanisms that might facilitate cross-functional coherence.

In a Third Blueprint environment, active team management became the hallmark of more recent attempts to ensure integration. However, within the Fourth Blueprint the imperative of loose-coupling suggests we should be wary of an emphasis on group-based decision making and collective agreement (as discussed in Sections 2.1.4 and 2.2.3). Rather, the encouragement of open dialogue, constructive conflict and the release of individual creativity and generativity, coupled with collaborative responsibility for the design and delivery of positive outcomes is the central dynamic to be stimulated.

What do our results suggest about our prospect for achieving that within our sample? From an occupational perspective, we see two clearly delineated and somewhat distant positions (See the graphs in Appendix IV and the numbers in Appendix VIII):

- **The Technical cluster**: is strongly and consistently (almost universally) *Left Brain* — the exception being the USA male/technical sub-sample — when relaxed, and even more clearly so under pressure;

- **The People cluster**: shows some variety when relaxed, but with a clearly and commonly dominant *Teamist* scale score and under pressure moves consistently towards the internally conflicted, risk-minimisation style of *Organiser*. Also, for all six People sub-clusters, *Imaginist* is the lowest (or equal lowest) scale in their pressure profile.

The Ideas group, on the other hand, seems more Cerebral than the other two groups (especially the Australian sub-sample), but only two of the six sub-samples in this cluster have *Cerebral* as the most preferred thinking style (See Appendix VIII).

However, the literature suggests that the presence of Sales in this cluster might have injected an artificially high Teamist (and possibly Producer) element into some profiles. So the Cerebral profile could strengthen if this group were removed and placed in the People cluster. It is likely to be the members of this Ideas cluster who, as the product, market, systems and business developers, would be in the vanguard of the transition to Fourth Blueprint regimes. We might have hoped that they would bring a strong emphasis on integrative complexity and exploratory, open learning strategies. Some
selective suggestions of such stylistic preferences have been found in this study but, overall, the results do not clearly differentiate this cluster's stylistic repertoire in those terms.

The relative placement of the three clusters on the Distributed Leadership map is illustrated in Figure 5.1.2. Oval shapes (royal blue for relaxed and red for pressure) have been used to indicate the territory covered by each sub-cluster.

![Figure 5.1.2: Positioning Occupational Clusters on the Map of Fourth Blueprint Leadership Roles](image)

As can be seen, when relaxed the People group occupies a mildly Right Brain position that reflects the terrain identified as critical in the construction of the model in Figure 3.1.2. However, even there, it is a largely Limbic territory with only the Australian and USa female/People sub-samples showing strong Imaginist scores. Conversely, the Ideas cluster shows the strongest Cerebral (including Cerebral Right) scores when relaxed but, with the exception of the USA sub-samples, is not particular strong on Teamist. The Technical group, as previously stated, is clearly Left Brain – with a leaning towards Left Limbic when relaxed. Under pressure, the strong move towards Left Brain and Cerebral styles mentioned above is clearly evident in the red ovals of Figure 5.1.2.
The likelihood that the sample, as revealed in the figure, would easily rise to operating pro-actively, generatively and collaboratively without being driven by clear role scripts is not high. The differentiated mind-sets, that Lawrence and Lorsch identified, are firmly displayed in this table. Perhaps the greatest concern is the common gravitational pull to the Analytical style, and the back up among the People cluster of Teamist highs and Imaginist lows under pressure. However, the Technical and, in particular, the Ideas clusters, represent the likely empowered “associates” within the new networks. The movement away from the “Performance Loop” to the “Learning Loop” will not be congenial for these clusters. Open dialogue, in a spirit of challenging and risky new adventures in learning, will appeal to neither of them, given their brain style profiles.

Thus, it is probable that any Cerebral Right thinkers within the network’s constituent groups will be closed down by either the dominant hierarchical and structuring needs of the Technical specialists or the clannish, group process and conflict minimisation focus of the People cluster. For the logic behind these predictions, see the comments on the Analyticals versus Intuitives relationship and the conflict management styles and democratic process preferences of the Teamist/SF types in Section 2.2.3. The gap between the targeted harmonics of the Fourth Blueprint and the likely process styles of these clusters may be predictable. However, it calls for active intervention in the development process of the new regime, rather than the unconstrained empowerment of all constituents in self-managed groups, if we are to achieve the open, creative, learning-oriented responses envisaged by our Fourth Blueprint reformers.

5.1.3 National readiness for the new regime: Old verities versus emergent processes

“Data are presented to support the argument that motivation to manage is a major cause of managerial effectiveness, that it declined sharply in the college population during the activism of the 1960s and early 1970s and that it is now severely lacking in the United States relative to other countries. Thus America’s competitiveness problems appear to be largely motivational in nature.”


Miner and various colleagues (see e.g.: Miner, 1977, 1990; Miner et al., 1995; Miner & Smith, 1982; Miner, Wachtel, & Ebrahimi, 1989) have conducted a 30 plus year study of what they term the “motivation to manage” among the elite, university educated pool of future managerial aspirants in the United States and internationally. The motivation
to manage is defined as "an internal force, which drives certain people to seek, enjoy and perform well in managerial positions in relatively large hierarchic organizations (such as) bureaucracies." (Miner et al, 1995: 364; emphasis added) Its measurement focuses on six attitudinal components including:

- Favourable attitudes to superiors;
- Desire to compete;
- Desire to exercise power
- Desire to assert oneself (previously known as desire to assume a "masculine" role);
- Desire to be distinct and different, and
- Desire to perform routine duties responsibly.

The quote above encapsulates the key "findings" from this research thrust. "Findings" is in quotes because there is a good deal of polemic encased within this argument that reflects, openly and unashamedly, what we would recognise in the context of this thesis as a clearly invested Third Blueprint perspective. A quick perusal of the list tells us this constellation of attitudes represents a solid surrogate for the cluster of characteristics that Park (1996) labeled as a masculine style (See our report of this study in Section 3.2.1). She reported findings associating it with Left Brain and task oriented styles.

According to Miner et al’s (1995) argument, motivation to manage has been steadily declining amongst USA managers and managerial aspirants since the 1960s. It has now fallen well below a range of other countries (according to their report, their data focused on Asian, South American and some Eur-Asian countries like Turkey). We have no scope to pursue the intricacies of their argument here but would note that the data they present for the relative decline hypothesis seem sound and convincing.

We can now report that our data – gathered from 1989 to 1997 – appear to confirm that the "decline" towards feminine style (to use Park’s label) has continued for the next generation of USA managerial aspirants. Also, that relative decline is against equivalent aspirant cadres in the UK and Australia. However, our data provide a sliver of hope to the Third Blueprint traditionalist in that the response to pressure is to return to the old values and verities of Left Brain, masculine, control-oriented styles, including among the American samples. The relevant data are presented in Section 4.2 and summarised in Section 4.3.3. The argument underpinning the analysis is in relation and
proximity to Figure 4.2.10. The weight of the argument is that, for that segment of all national samples that excludes the People Cluster, in relaxed mode:

- **UK managerial samples show gender stereotypic patterns**: with males presenting as Left Brain and females as Right Brain;
- **Australian managerial samples show no gender differences**: with both the male and female samples showing a clear Left Brain mean, and
- **The US managerial samples show counter-stereotypic patterns**: with all male sub-samples strongly Right Brain whereas the female/technical sub-sample is clearly Left Brain and the female/Ideas group is only marginally Right Brain.

It would appear that policy action and social rhetoric have moved the USA managerial population past the point of direct confrontation across gender lines. They seem to have reached a point at which women are more energetically investing in Left Brain strategies to win the access and respect battles. On the other hand, the males have heard the message (at least cognitively) regarding the legitimacy and urgency of inclusive and developmental styles. The Australian women also appear to have adopted the message that, if they are to succeed, they need to be better at the *masculine* style than their male counterpart. However, the males appear to be maintaining that style – even the Ideas sub-cluster whose near Right Brain average rests on a dominant 24.7 for Imaginist, notwithstanding a low profile score of 20.5 for Teamist. The UK male sub-clusters show relatively higher Teamist and lower Imaginist scores than their Australian counterparts but nonetheless remain classic Left Brain dominants. Their female colleagues in contrast seem consistently, if not overwhelmingly, Right Brain.

So returning to the motivation to manage (MTM) contentions of Mincer et al (1995), if we can distill national styles from this interactive complexity, we might suggest that, in terms of normal operating styles, the USA has lost the MTM battle and moved on. Conversely, Australia has for the moment convinced its aspiring female managers to join the fight with the males on the MTM battleground, and the UK is acting as if nothing has changed and the MTM values remain, unhappily challenged by the aspiring female managers only. The overall position for relaxed profiles is illustrated in Figure 5.1.3. In aggregate, the national positions are largely determined by gender for the UK and Australian samples although in the latter case the gender difference is entirely due
to the female/People sub-sample. For the USA samples no great gender difference is apparent, but what there is suggests that the males are the more "feminine" in style.

As to the implications of these patterns, the stance taken as a Miner MTM theorist versus a Limerick et al (1998)Fourth Blueprinter is critical. For the former, the UK and Australian males are showing the way for the effective management and protection of large-scale organisational structures and productivity. The Australian female sample overall is unexceptional; but on the edge of slipping from MTM grace. However, the UK females and both US samples are demonstrating an unwillingness or disinclination to exert control, direction and personal intent to an extent that might threaten competitive performance.

The Fourth Blueprinter, on the other hand, might reasonably be alarmed at the prospect of assertive, insensitive, ambiguity-intolerant and control-oriented tendencies among the Australian and UK male samples. They would probably also express positive hopes for the other three groups based on the supportive, expressive and collaborative patterns that pertain to their clear Right-Brain position. However, the balance for the USA and UK females is still clearly Limbic and they are, even in relaxed operating mode, still only metaphorically peering over the fence into the transformational territory of the
complex and visionary Right-Brain/Cerebral. There remains some real sense that the clan control imperative might still drive their reactions to turbulence and change.

So in these various gendered national styles there is something for each of the opposing theoretical positions when considering their preferential profiles in relaxed operating modes. However, to the extent that MTM theorists see salvation in the UK/Australian patterns and both vindication and signs of further decay in the USA, they are reflecting the assumptions, made explicit in Miner et al's (1995: 363-364) paper, that:

- large scale enterprises will remain critical to national prosperity for the foreseeable future, and that;
- MTM (or masculine managerial style) will remain a vital ingredient of managerial success and organisational productivity in such situations.

The Fourth Blueprint position, made clear in Chapter 1, is that those assumptions no longer apply in a world driven by the added value of knowledge generation as the key resource and where open, flexible adaptation leads to loosely-coupled and transitory alliances of smaller, but more numerous and diverse collaborators. In those conditions, the Australian and UK male profiles suggest real gaps in readiness for the new process-oriented, generative, exploratory learning climates we have been considering. And, even the more collegial and interactive styles of the USA and UK female clusters give us some pause in terms of the openness and creativity of process they might tolerate. In any case, the contrast may well prove academic if the level of pressure and challenge attendant upon operating in a discontinuous, uncertain and time-urgent environment leads to regressions in style. It is to this problem that we now turn our focus.

5.1.4 Stress, style and the climate for flexible learning and innovation

The results of the study presented in Chapter 4, in relation to the impact of stress on stylistic repertoire are strongly supportive of the summary presented at the end of the Section 3.2.4 literature review. That is, they confirm:

- A common move to Left Brain dominance: under pressure, across all sub-samples in the study, even though there was some evidence that nation and occupation may moderate those effects slightly;
- A common, but less emphatic, move to Cerebral dominance: under pressure, with evidence supporting the moderating effects of gender
(females less cerebral) and nation (UK less cerebral than USA or Australia) in this case;

- **Overall, an extremely strong, across the board, move towards Cerebral Left (Analyst) primary style:** as the common left-brain response under pressure, with;

- **A gender X occupation X nation interaction moderating whether Right Cerebral (Imaginist) or Right Limbic (Teamist):** was the most likely style to be most heavily evacuated under pressure.

The patterns of stylistic dynamics in Relaxed and Pressure mode were illustrated in Figure 5.2.2. The first point to note is that the entire terrain covered by the blue (for Relaxed) and red (for Pressure) ovals seems to be anchored along the now ancient Task-People dichotomy and all sub-samples regress to the left/upper corner under pressure. Thus, while a more “feminine”, nurturant style seems possible when relaxed, the old style “masculine” culture clearly reasserts itself under pressure. Also, while our sample occupies cerebral space under pressure, it is a Left-Cerebral, control-oriented, formula and rules-driven stylistic emphasis allowing little scope for conceptual, spatial, artistic and creative exploration and transformational learning. Two further data-based insights will illustrate the profound impact of this trend for Fourth Blueprint functioning.

In Appendix III, each national cohort’s brain style profiles in Relaxed and Pressure modes are graphed in a cluster of six occupational sub-samples (for males and females). Looking down the left-hand graphs (for Relaxed mode) we can see a good deal of stylistic variety. However, in the three Pressure mode graphs on the right, that variety is largely gone with the exception of the tendency for female samples (and people-oriented males) to maintain higher Teamist (Right Limbic) scores. Secondly, we have the numerical rendering of those profiles in Appendix VIII. Focus on the Pressure Imaginist scores and remember that 22.5 points represent an “average, fair share” score for each style. The Imaginist score only approaches that level in one sub-sample from 18 (Australian Males/Ideas group). Our boxes also show the dominant Organiser (risk minimiser) style for the People sub-samples under pressure and the strong Left-Brain profiles for Technical groups, along with a low average of 17.5 for their Imaginist score.

The implications of these results for the likely functioning of these managers in complex, turbulent Fourth Blueprint environments are profound. We have already
touched on some of these in our discussion of the Cognitive Resource Theories of
Fiedler and his colleagues in Section 3.2.4 and in discussing the impact of gender,
occupation and nation in Sections 5.1.1/2/3. When under stress, our sample shows a
clear tendency towards regression to rules and formulae (policy) rather than the use of
exploratory problem solving and creative reframing. The female samples generally
show a tendency to back the strong analytical dominance with a residual emphasis on
Teamist values leading to a risk-minimising and interpersonal engagement emphasis
that will tend to close-out the entrepreneurial and conceptual activists in favour of group
cohesion and performance maintenance cultures.

We should remember the type of 21st Century environment we projected in Section 1.1.
A fluid, complex, discontinuous and contested environment will be experienced as
stressful by most people, most of the time. However, the learned response patterns of a
majority of our sample are likely to further exacerbate that stress as they strive to
control (Left Brainers), simplify (Limbics) and constrain it in process (Organisers). This
tendency will be even more pronounced if we seek to implement Fourth Blueprint
reforms such as deleting role-scripts, weakening hierarchical referral, increasing
strategic autonomy and accountability in loosely coupled teams and dropping long-
term employment relationships in favour of temporary, task-based contracts. In such
circumstances, we would hope to see our Collaborative Individuals staying with the
moment, focussing on the task and joining an open and exploratory learning dialogue
followed by reflective action in practice. Instead, what these newly empowered warriors
will probably produce is what Limerick et al (1998) noted: the collusive construction of
“Neo-Corporate Bureaucracies” (See Section 1.2.4). This suggests the “vicious” (rather
than virtuous) cycle that can arise from the interactive dynamics between environment,
personality and behaviour as posited by SLT (see Sections 1.3.1 and 3.2.2).

Instead of opening up confident, group-supported exploratory learning process tolerant
of paradox and ambiguity, our Analyst majorities and Teamist backups will probably
write their own role scripts, force them to agreement through group process and work
even more strenuously on designed answers and protocols and performance targeting
and review. Even as they are doing it, they will conceptually appreciate the need for a
more unstructured, experimental approach but the added pressure that realisation brings
will only further accentuate their unconscious stylistic dysfunctions, much as for
Quinn’s executives fudging the transition to formalisation as discussed in Section 2.1.1.
5.2 Unfolding paradox and tension in the transition to the Fourth Blueprint organisation.

"We now know that a whole-system crisis is almost always necessary if a whole-system response is to be made. The whole organisation must, in David Hume’s phrase, be ‘shaken from (its) dogmatic slumbers.’ Ironically, a key role of industrial age management is to ensure, by their control, that such a whole-system crisis never happens. As commonly practiced to date, the work of management to rethink its world is still tied too closely to the habits of head and heart that have dominated administration for several hundred years.”

Nelson (1996: 24)

We can now say that the results of our exploratory study suggest that the brain styles of our balanced sample of high potential managerial aspirants do not show the patterns that were articulated in Section 3.1. The reader will recall that those patterns were proposed, in light of the earlier literature review, as most likely to aid transition to, and adjustment within a 21st Century, Fourth Blueprint environment. While, on balance, the male samples show a common and significant move to a cerebral dominance under pressure, this is entirely accounted for by a major shift into the analytical, Left Cerebral quadrant rather than a balanced development of conceptual and visionary skills on both sides of the brain. It is important to remember that, under pressure, the Imaginist, Right Cerebral quadrant is, almost universally, the most avoided style. Also, only five of the 18 subsamples showed Right Brain dominance when relaxed and none under pressure.

We should acknowledge here that, although not large, there are consistent gender differences reflected in our sample. They relate directly to the rational versus emotional and task versus people distinctions. Whereas our males concentrate on the task and their own performance in relationship to it, our females just as fiercely focus on the integrity and performance of the group overall and value its cohesion and harmonics. They are nonetheless two strains of the one interwoven fabric of coherence, continuity and performance that is based on assumptions of temporal and environmental consistency and responds defensively and reactively to discontinuity and ambiguity.

In short, our high-potential aspirants for early 21st Century leadership are dominantly “Performance Loop” warriors not “Learning Loop” heroes. In relaxed mode, several of our sub-samples display some range in their repertoire but, overall, they are still more Limbic and Left Brain than Cerebral and Right Brain. Under pressure all the stylistic
paraphernalia of the control and constraint culture that provides the focus for the Performance Loop to blossom and dominate. This may well be an understandable outcome of half a century of societal and organisational emphasis on objective, tangible product and three centuries or more of scientific and educational positivism. However, it certainly poses a profound challenge to a paradigm that advocates transformation to a search orientation and sees social reality as a jointly constructed and negotiated “congenial fantasy” among open, experimental and supportive individuals.

Thus, as the quote from Nelson implies, our sample is ill-suited – as a collection of individuals – to the type of learning processes that are necessary to address a world characterised by significant and widespread discontinuity. However, the quote implies more. The very nature of their dysfunctions in radically changing environments is that the primary mental models they represent lead to the investment of massive amounts of energy and social dynamics in maintaining the fictions of control in the face of environmental chaos. The dilemma this poses for organisations within the Learning Loop and the various learning regimes that are suggested to confront such dysfunctions will be canvassed in Sections 5.2.1 and 5.2.2 below.

Having considered how we might apply the insights gained from this study to assisting the transition to effective Fourth Blueprint functioning, we should also consider the continuing research issues that this study raises. This will be the subject of Section 5.2.3. Finally, in Section 5.2.4, we will briefly canvas the implications of the possibility that the very thrust of paradigms such as the Fourth Blueprint are stylistically exclusive positions, reflecting the perceptions of reality of only a limited range of organisational constituencies and are, thus, unlikely to ever achieve mass acceptance and application.

5.21 The challenge of transformation: Changing who we are before refining what we do.

“At a time when we need to learn faster than ever before, we constrain learning and feedback for the sake of maintaining control; at a time when we need flexibility and responsiveness, we choke our systems with rules in the name of accountability; at a time when we need creativity and innovation, we remove slack (an essential ingredient for creativity) and introduce conformity (which chokes innovation); at a time when we need to critically evaluate our basic assumptions, we slavishly follow the dictates of economic rationalism.”

Passfield (1998: 37)
Our essential strategic and developmental challenge can be stated as follows. The desirable patterns of individual and group stylistic dominance is for Right Brain and Cerebral preferences so as to facilitate open, experimental and ambiguity tolerant as well as collaborative, supportive and nurturant approaches to the complex and discontinuous learning challenges to flourish (See Section 3.1.3). However, our most common patterns of stylistic response are Left Brain and Limbic in Relaxed mode and Left Brain – especially Cerebral Left - (for the males) and Left Brain and Organiser (for the females) in Pressure mode. Of course, we have some individuals displaying the desired profiles for the new regimes, even when under pressure, but as shown in the frequency charts in Appendix VII all too few of them, especially under pressure.

As Fourth Blueprint design assumes that network membership will be determined opportunistically by the emergent demands of the new tasks to be performed, a whole range of the specialist occupations we sampled are likely to provide the most frequent nominees for temporary project group roles within the networks. And these occupations are most likely to show Left and Limbic dominance. Further, the emphasis placed by Fourth Blueprint theorists on the empowerment and collaborative engagement of all contributors to the network precludes the previous use of role specifications and hierarchical preference to ensure the prerogative of the few carefully selected but stylistically isolated souls best fitted to the new environment. Hence we will need substantial and widespread transformation amongst the broad constituency represented by our current crop of “High potentials” if we are to hope to achieve effective responsiveness to complexity and discontinuity on the one hand and internal coherence and maintenance of group development and solidarity on the other.

The development and learning challenge is primarily an existential one. They need to consciously (at first) and emotionally (in the medium term) shed the values that tend to fuse their identity around competence in the provision of answers and effectiveness in maintaining group harmony. They need to be people who aspire to ask vexed but helpful questions and who find conflict tolerable, within their own perceptual and cognitive frameworks as much as within the social dynamics of their groups. The pressures that will be continually upon them in attempting to achieve this fundamental transcendence are captured in Figure 5.2.1, taken from Harvey and Brown (1992: 380). It charts the degree of conflict likely to be generated within an organisational setting based upon three variables, including the degree of goal conflict inherent among group
members, the direct conflict for resources and the interdependence of constituents in terms of their immediate operational interactions.

We can see from that chart that a Fourth Blueprint environment will be inherently highly conflicted. Interdependence is likely to be close and reciprocal (see e.g.: Thompson, 1967) and is therefore of high intensity. There will also be direct and continuing competition amongst all members for a share of the group’s pooled resources as the emergent strategies unfold in action. And, while the range of values and styles within our sample under pressure might suggest low goal diversity, the nature of the environmental forces (as discussed in Section 1.1) will be such as to demand the expression of diversity within the group dynamic or exact decay in its absence.

So conflict not only will, but should, be high and protracted to stimulate transcendence through the confrontation with paradox and the clash of opposites as we discussed in Section 3.1.3. What we are seeking is a dynamic directed towards the gradual emergence of new group values, identity and mix of skills. In the discontinuous and ambiguous environment of the Learning Loop, this requires open experimentation and collaborative learning processes that allow each member of the network to both contribute to and take from the interactive construction of new perceptions as to the character and scope of the group and organisational mission. How might such a search-oriented approach to transcendence be sponsored among the Left Brain and Right Limbic styles dominating our sample? We should remind ourselves of the import of the quote from McMaster (1996: 74) that appeared on page 148 of this thesis:
"Organizational transformation... is a process of learning and development rather than a process of intervention. It is a process of dialogue and experimentation, not one of decision and decree. It is an inclusive process rather than one of directed expert design... Transformation is an emergent process and cannot be accomplished by a corporation unless it is a coevolving process between the corporation and its participants."

Thus, the challenge to our samples in discontinuity and turbulence is to open themselves to fluid movement in their identitics, self-concepts and interpersonal styles. They must first create and adopt a new identity based on mixing deep reflection with collaborative dialogue and mutual experience. Of course, the very nature of that style of performance and development is perhaps the most profound learning challenge our sample could encounter. And so the message for designers and implementers of the Fourth Blueprint is to recognise such internal realignment and perceptual transformation is not spontaneously engaged in by adults whose stylistic preferences have for years been honed to ensuring that they never have to confront such fundamental and threatening learning environments. So we will now address the learning dynamics, mechanisms and vehicles, that will be necessary if we are to successfully confront such challenges.

5.2.2 On Learning and transformation

"Warriors are the real impediment to sustainable growth, productivity and profit. The warriors, with their myopic vision and lack of internal strength, stand between learning and sustainable profitability. Not only do they fail to learn themselves by clinging to their outdated mindsets, but they also impede the learning of others who could otherwise contribute substantially to organisational productivity and profit."

Passfield, (1998: 42)

In the introduction to Section 5.2, we used the terms "Performance Loop Warrior" and "Learning Loop Hero". This distinction is drawn from Cairnes (1998). Behind the warrior myth is "an emphasis on maleness, toughness, strength, force, guile, and an instrumental view of relationships" (Passfield, 1998:41). Cairnes (1998:25 - emphasis added) concludes "warriors live largely on the surface of life, concentrating on image rather than the intrinsic value of heart and soul". Conversely, according to Passfield (1998:43), heroes "recognise the interconnectedness of all things, work creatively and flexibly, admire and respect diversity and manage their relationships as an art form." He explicitly equates this concept of "hero" to Limerick et al's (1998) concept of the
"collaborative individual". This piece of mythology tells us much about the central challenge of learning in uncertain, ambiguous and discontinuous environments. In short, it speaks to the essence of transformative learning processes. The essential message is embedded in Figure 5.2.2 drawn from Catford (1987).

Thus, the "warrior's" challenge is to take hold of tangible threats and meet them with courage and the direct application of force and will. His enemy is tangible and omnipresent. The "hero's" task, however, is much more challenging. She must look within and forego the old verities on which self-concept and esteem were grounded and trust in the capacity to discover a new, more powerful identity in transcending the old one. But, as for the butterfly from McMaster's quote at the start of Section 3.1.3, the disintegrating caterpillar has no vision of, nor control over, the emergent outcome. The figure illustrates the journey. Our Left Brain and Limbic warriors would much prefer to proceed on the solid ground of "naïve contentment". However, the ground opens up through the chasm of discontinuity at the point marked "The call". This is equivalent to the Crisis point at Stage 3 in Hurst's Eco-cycle model (See Figure 2.1.7).

The essential learning discipline here is to surrender at the point of crisis and decline and desist from struggle. Instead, our Left Brainers seek to design a world's best practice bridge across the chasm of uncertainty to a smooth connection with the point of transformation, which, in 'reality' does not exist at that point. The accountants among them then ask for quantitative assurances that the cost of the new bridge can be shown on past performances to be recoverable through new revenues. Finally, having actively and collusively misunderstood the profoundly different nature of the new reality, they
can expend resources and energy in the security of knowing no fundamental change within their identity structure and no judgement on their part is required since they have applied all the accepted nostrums underpinning past successes.

The real “hero” first confronts the unknown and second strips out all past rules of action and accepts her vulnerability and incompetence in the face of the unknown. Then after ridding herself of the dysfunctional past through unlearning, she stands ready to experiment widely with novel approaches and open to a collaborative learning journey with diverse colleagues in search of a new gestalt. Just as the new skier must learn to lean forward into the slope, the heroic learner must release herself into the uncertainty of the “encounter with death” in order to engage in transformative learning. Of course, the hero knows that the point marked “apotheosis” (or ‘AHA’) does not exist until it emerges organically from the open and collaborative journey of the interdependent souls striving, in their collective ignorance, towards a new modus vivendi.

The journey in Figure 5.2.2 is, of course, apocryphal, dating from the ancient Greek myths and legends. More recently, it has been commonly used to signify the essential dynamics of creativity – even in the case of individual creative insight in solitude. However, it can also demonstrate the essence of socially constructed and negotiated transformation, with the entire shape of the new “terrain” on the right-hand side of the figure depending on the joint contributions of the questing “heroes” within the loosely-coupled network. Thus our Collaborative Individuals in Fourth Blueprint terms are both comforters on the harrowing journey through uncertainty and transformation and also joint “warranters” of a new reality that will only be enacted by their common consent.

It is the fusion, of these questioning and collaborative elements, that give the learning process necessary to drive genuine Fourth Blueprint dynamics its unique and profoundly challenging character. And it is this challenge that our sample of “High Potential” aspirants seem least prepared to confront. Limerick et al (1998: 178) suggested that Action Learning may provide the answer to this learning challenge calling it “potentially, a quinessentially Fourth Blueprint technology.” This author agrees that Action Learning (AL) offers some scope for addressing the learning dynamics outlined above but feels that specific provisions need to be made within its application to reflect the stylistic limitations uncovered in our sample. These will be addressed immediately below.
Action Learning as Collaborative emergence: Transcendence and regression in the clash of opposites

"Action Learning must be the permanent state of the organisation. If we face discontinuity, and our past does not prepare us for the future, then we have no option but to learn from our own action. Moreover, action learning is the one process able to link periods of continuity with periods of transformation. Organisations need to develop the philosophies and systems that will turn every collaborative sub-system into an action learning community."

Limerick and Cunnington (1993: 236)

Once again, there is no scope or space for a proper review of Action Learning (AL) on its own merits at this time in this thesis. All that is possible is a brief explanatory exposition of those aspects of AL that seem to have been most central to Limerick and Cunnington’s (1993) thinking when they generated the above quote. We can then consider the implications of organisation- or network-wide use of AL as a modus operandi and strategy for development in the light of our exploratory study. Limerick et al (1998: 178-179) explain their endorsement of and hopes for AL in the following quote:

"Discontinuity requires that the organisation be able to challenge its own identity...looking at the organisation during periods of equilibrium, it is possible to see a stable, deep structure. But, within that, at a microscopic level, change and fluctuation are taking place. An organisation that actually encourages many fluctuations is in a far better position to take advantage of environmental discontinuities than one that does not...AL provides a systemic process that allows it to do so. It has the capacity to turn the reactive organisation into the learning organisation, one that, to use Senge’s terms is ‘continually expanding its capacity to create its future.’"

The classic mode of distinguishing AL is through the “Learning Equation” (See Dilworth, 1998: 35): That is: \( L = P + Q \)

Where: L is Learning; P is Programmed Knowledge and Q is Questioning Insight.

The equation was not really intended to equate Programmed Knowledge with Questioning Insight as precursors to learning. Rather, it was to re-affirm the critical value of Questioning Insight in the generative learning processes that were critical to individual and organisational change in identity and capacity. And in doing so, to sound a clarion call against the dangers of ascendant and ever present positivist assertions for the primacy of pre-packaged, objective knowledge. It was fundamentally a philosophy of transformative learning and, as such, clearly qualifies for the Limerick et al (1998)
label of “quintessentially Fourth Blueprint”. Dilworth (1998: 36) provides a summary
list of AL fundamentals as follows:

- **Questioning insight**: is always the starting point;
- **The focus problem**: must always be real;
- **The problem can be tactical or strategic**: but the learning is always
directed to strategic development and change;
- **Reflection**: is always as important as action;
- **Three basic questions**: commonly drive the process:
  - *What should be happening?*
  - *What is stopping us from doing it?*
  - *What can we do about it?*
- **Learning is the primary goal**: even though the problem solving is real
  and important, and;
- **Learning is facilitated**: to ensure “breaking out of well-established
  mindsets”.

The other common key feature is that AL almost always proceeds through the vehicle of
a small group of between four and eight (but mostly five to seven) usually referred to as
the “Learning Set”. Sometimes each individual within the set has their own “real”
operational problem to focus on and the set overall has the common goal (or problem)
of maximising group and individual learning through the experience. At other times, the
set has a focus problem in common but, if this is the case, it is usually a multi-faceted
and strategically critical problem and there remains an expectation that group and
individual learning will be maintained as at least an equal priority with problem solving.
This specifically excludes the Task force/Project group forms from legitimate AL. As
Dixon (1998: 57) says: “The issue is not that team members cannot learn on AL teams
that model themselves on task teams but that a great deal of potential learning is lost. At
the heart of this loss is the separation between work and learning...task force teams view
learning as something that occurs as preparation for work, not as integral to it.”

Dixon’s cautions outlined above are particularly relevant to our sample. There is a
common tendency for AL programs to be welcomed as focussed problem-solving and
project development aids at the middle to lower levels of the organisation but with
worthy commitments from senior executives to be involved in mentoring roles.
However, as these events unfold, the focus is on the tangible project outcomes and
whether or not the set members have "got it right" according to the views and biases of the expert "mentors". That is, there is a great deal of unacknowledged stylistic backsliding towards programmed knowledge and expert problem solving and away from question driven learning and reflective self-development.

Also, it is not only the senior “outsiders” who drive such backsliding. Many (but not all) set members are also more comfortable with an outcomes and action focus that provides an escape hatch from genuine self-confrontation and the reconstruction of identity in collaborative dialogue. While he could find little research evidence on this to date, it is this author’s sense that style/type differences are critical to learners’ adjustment to the more extensive and deep AL designs and to the interactions of set members with each other, critical sponsors and the “problem” itself.

In support of this notion is the common experience of programs that have been genuinely successful at reaching profoundly reflective and strategically transformational levels of dialogue. They often get “killed” by whatever “powers that be” might otherwise have to deal with the turbulence and unease that they create in the process of achieving genuine organic transformation (see e.g.: Billard, Brooks, & McAdam, 2001). If our sample is close to representative, this is not surprising. A brief revisit of the “psychic bungy-jumping” we encountered in Figure 5.2.2 should be sufficient to illustrate the dynamics of resistance and the generators of anxiety involved.

Nonetheless, it is clear from the quote that initiated this subsection that Limerick et al (1998) are advocating an inclusive and pervasive use of AL. They seek to profoundly transform not only our individual and collective identities but also the ways in which we discourse about both what we do and who we are. They seek “double loop” learning (Argyris & Schon, 1978) so as to “challenge the basic assumptions underlying action – including the very identity assumptions of the system.” (Limerick et al, 1998: 180) They also seek to establish “a learning community” integrating “those responsible for action (and) informed outsiders who are capable of challenging assumptions. (p.180) Of course, they also intend these developments to be pursued along with increasing empowerment both individually and across the organisation.

Hopefully, it can be done. But the message from this study is that, if it is to be achieved, then the AL processes set up to facilitate the transformation must:
be universal and pervasive across the entire system, network or organisation, including its loosely-coupled potential allies;

- focus initially and extensively on the learning goals of “unlearning" analytical, rigorous, performance-oriented and group-cohesive but limiting rituals and achieving comfort with paradox, ambiguity and conflict;

- be actively facilitated by people from outside the network who concentrate exclusively on refining the learning processes and developmental competence of their set (s) but who have;

- a protecting contract for an extensive developmental period with the learning program but who are not otherwise sustained by the organisation’s largesse, and;

- provide sufficient resources, relative to other routine and maintenance functions, such as to be seen as the most lushly supported of any of the organisation’s activities in terms of the “slack resources” of time and experimental capacity.

The complexity of the facilitative issue justifies further elaboration. Much in the AL tradition, especially that associated with Revans (1980; 1982; 1983), is at least equivocal if not hostile to the use of facilitators in the AL process. While some light introductory presence focused on familiarising participants with the concept and process involved is tolerated, there is also a strong emphasis on avoiding extended presence of the facilitator as the group evolves. Rather, this tradition prefers autonomous control and development decisions by actual set members. It is particularly suspicious of the “group process” expert purporting to be able to teach (or coach or mentor) the “correct” way to relate to others and maximise group functioning and harmony.

This author shares those concerns. However, as noted earlier, the overall stylistic patterns within our samples suggest profound difficulties with both question-oriented learning and intensively conflicted learning climates. An extended period of external provocation and determined holding of the group process at the point where it genuinely confronts paradox and ambiguity is unlikely to be achieved by the spontaneous self-direction of sets composed from our sample. Thus, the facilitator I am advocating is more like the “Devil in Orpheus’ underworld” ensuring that all the fearsome challenges so necessary to personal transcendence are undergone and reflected upon – individually
and collectively - so that genuine learning and stylistic transformation are achieved. David Casey (1982) captured the concern in the distinction between “Benedictine” and “Jesuit” approaches to learning and noted its relevance to the role of set advisors.

The “Benedictine” approach assumes that developmental learning requires a climate of love, support and trust to flow freely and positively around the learner until they feel safe to risk radical and profound change. Certainly, one of the key roles of the set is to provide such a climate so that the individual learner can benefit from the unconditional support of his “fellows in adversity”. The “Jesuit” approach, conversely, assumes that genuine transformative learning requires suffering and will often include episodes that balance between confrontation and withdrawal. Casey suggested that spontaneous “Benedictine” development was less difficult to achieve within set members than a willingness to play the role of the confrontational Jesuit. He thus suggested that the continuing role of a set supervisor may progressively focus on ensuring effective processes of confrontation and transformation are not subverted by tender-minded sets.

In summary, broadly applied programs of AL appear to offer the potential to access processes that will stimulate and support transformative learning outcomes. However, some specific conditions will need to be met if our current pool of 21st Century managerial aspirants is to operate in Fourth Blueprint regimes in a positive, flexible, supportive, collaborative and empowered manner. These include the following:

- The programs will need to include all key strategic members as equal and open partners in the process of transformation and collaborators in the quest for personal and organisation transformation;

- The early periods within the transformational process will need to concentrate on the challenges of personal confrontation and stylistic development for all participants so as to profoundly change the understanding of, and facility and confidence with, emotional and personal and interpersonal transformation and, thus;

- Effective and extensive facilitation will be necessary to support genuine transformational maturation amongst the likely candidates for managerial and professional roles in network organisations.
Graduate management education as a preparation for the new managerial roles.

“Our enormous success in developing and teaching analytical tools has caused management education not only to neglect, but to suppress individualistic pathfinding. ... we seem to teach our MBAs...to value right answers over imaginative ideas; right solutions over interesting problems. In this fast changing and unstable world, however, imaginativeness and innovativeness are very valuable attributes.”

Leavitt (1991: 136)

In the previous subsection we concentrated on the implications of the stylistic patterns of our sample for approaches to achieving radical transformation within the newly emerging networks of the Fourth Blueprint. In this subsection we will briefly explore the implications of our study for the regimes of development commonly in place in centres of graduate management education in the countries from which we drew our samples. In the short term, evolving network forms will have to shape the pool of potential aspirants that appear before them as it engages in managerial experience. In the longer term, however, it makes sense to question the processes of selection and education/development that determine the future pool they will encounter. The educational institutions involved seem likely to need radical revision directed at changing the readiness of their graduates for the more complex, ambiguous, interactive and collaborative organisational environments they will face.

Given the arguments developed in previous sections on the dynamics of learning in Fourth Blueprint settings, little further elaboration is required here. During the late 1980's to mid 90's, national reviews of graduate management/business education programs (GMEPs) have been undertaken in all three of the countries from which we drew our sample (Constable & McCormack, 1987; Karpin, 1995; Porter & McKibbin, 1988). While all mentioned some concerns related to the under-servicing of “soft skills” (as creative, interpersonal and group maintenance and development competencies are often labelled) the overwhelming emphasis was on hard areas such as advanced finance, marketing, international strategy and technology management. Further, even in the softer areas, the tone of remedial advice was still of improvement in defined quality and performance in areas of agreed goals and objectives. Consequently, evolution of the “cutting edge” programs in our three countries has maintained that tone and emphasis.

Perhaps the most efficient way to access the core issues for us in this otherwise broad-ranging and complex debate is by considering Figure 5.2.3 below. This figure was
adapted from Stacey (1996) by Aram and Noble (1999: 326) in their recent profound critique of the state of management education programs in a complex, fast changing world. It is derivative from the Stacey figure depicting “Control, Chaos and living ‘on the Edge’” (See our Figure 1.1.3) and charts the various zones of differential teaching and learning process that are appropriate to differing levels of certainty and agreement within the operating environment.

Aram and Noble (1999: 321) encapsulate the implications of Figure 5.2.3 well in the following summary quote:

“This article questions whether we can educate managers according to linear principles based on Newtonian laws and expect them to subsequently operate successfully in a world of increasing change and complexity where non-linear processes dominate... We argue that the increasing focus on outcomes in learning/teaching practice, both as a measure of learning and of quality in teaching, closes valuable areas of learning/teaching experience to all participants in the process. Managers facing lives of ambiguity and anxiety for themselves and their organizations are let down by the very institutions whose role is to support and prepare them.”

The implications that can be drawn from the results of our study in relation to these issues, include the following:

- **Our sample is a systematically selected one:** In common with the greater majority of graduate management education students, they do not represent all those who seek senior management roles – only those who have successfully gained entry to elite training for those roles;
• Our sample suggests Zones 1 to 3 are still dominantly the limits of explored territory in GMEPs;

• GMEPs are in urgent need of a profound transformation: at least as extensive and traumatic as that suggested for their clients and client organisations, if they are to effectively serve the preparatory needs of managerial aspirants for 21st Century network environments as they are articulated by Fourth Blueprint theorists, and;

• We can expect major resistance and disruption from many of the current staff/students within GMEPs: if any such profound remodelling were to be attempted. Thus, we should expect to see symptoms accordingly and encounter a need to work through an extended journey of intercine warfare and negotiated reframing before operating in a manner consonant with Fourth Blueprint principles.

5.2.3 Researching the Fourth Blueprint: The need for diverse paradigms in a constructive dialogue

"Organizations are complex dynamic and difficult to observe, which means that whenever we think about them, the thinking will be guided by indirect evidence and visualizations of what they may be like, often captured in metaphors. Theorists have no choice, but can be more deliberate in the formulation of these images and more respectful of representations and efforts to improve them. Metaphors... are one of the few tools to create compact descriptions of complex phenomena. The fact that theory construction makes full use of representations is its strength, not its weakness."

Weick (1990: 529)

In Section 1.3.3 we discussed the difficulties of constructing and maintaining actual, "fully-fledged" Fourth Blueprint organisational structures. As the Heckscher (1994) quote in Section 1.3.3 implied, it was certainly going to be difficult to conduct "classic", cause and effect, positivist research on the inhabitants of such a domain so as to "prove" exactly which types are most productive, creative and adjusted in such an environment. The results of our exploratory research have nonetheless provided a substantive understanding of why the social construction of such open, interactive, ambiguous and freely emergent organisational structures is so vexed an enterprise in practice.

As noted previously, while our sample does not fully capture all available avenues into management, it seems to be a good representation of the pool of aspirants for senior
managerial and professional roles in 21st Century knowledge-rich networking environments. If so, and as discussed in Section 5.1 the response repertoire we uncovered is likely to be highly resistant and disruptive in the face of Fourth Blueprint, small group, distributed responsibility designs, at least initially. Thus, not surprisingly as suggested by Heckscher (1994: 17), our empirical opportunities to directly test Fourth Blueprint designs may be limited to "a set of (largely partial and short-lived) examples of organisations that seem deliberately to violate bureaucratic principles."

If that is the case, as we discussed in Section 1.3.3, we will need to find research context and meaning in the type of "disciplined imagination" and "constructive" theory building suggested by Weick (1990). One range of enabling techniques for achieving such constructive and disciplined theory building uses the integration of partial formulations from a range of fellow travellers in the particular domain of theory in focus and conceptual maps those formulations into a common framework. Stage 1 of this thesis utilized such a process mapping the positioning of constructs and their interrelationships onto common terrain and subjecting the resulting models to:

- The tests of logic, coherence, usefulness and integration: suggested by Weick (1989) and outlined in Section 1.3.3, and then;
- Progressive explorations of focused issues raised by the theory building process: through the filter of empirical data – both reported and specifically generated – to further tax the model on its believability, operational relevance and applicability to change and implementation.

This thesis has described one approach using just such a phased exploration to research the problems of emergence and ambiguity within ephemeral, discontinuous, collaboratively constructed environments. In doing so, it has answered some questions that appear to be of real interest and practical significance to a broad range of writers on organisational design and functioning as documented in the text. However, as is the case with all good research, it has hopefully raised many more questions than it has answered. The "iceberg" of those questions will, no doubt, be 80 to 90% out of view at this time, awaiting the various readers of this text and the collaborative extention of thinking that comes from their varying and alternative perspectives. However, some of those, as yet unresolved, questions have already been raised in this text and might usefully be summarised and illustrated here (their very nature precluding a more definitive discussion than that). They will be considered under three headings:
Questions directly focused on the primary research agenda of the thesis: and needing further exploration as a follow on to this study;

Questions raised by the thesis that have indirect implications for research in other areas of theory: for example, the nature and essence of “true” transformational leadership, and;

Meta-Questions regarding the way forward in conducting research on issues such as those highlighted in this study.

Questions directly related to the research focus of this study.

The core focus of this thesis was distilled in Sections 1.3.1 (for the guiding and broad supplementary questions) and 1.3.2 (for the more detailed, empirical questions flowing from the theoretical focus). The reader is encouraged to briefly revisit those summary statements before proceeding. In this author’s submission, and consistent with the summary at the end of Section 3.1.3, the theory building process in Stage 1 of this thesis strongly supported the explanatory value of concepts related to Jungian and Brain Style typologies for adjustment to the 21st Century managerial environment. Further, those issues of personality and cognitive style were demonstrated to have direct relevance to the micro-processes of leadership and influence – perhaps especially in ephemeral, discontinuous and collaboratively constructed environments.

At the empirical level, this study then focused on the practical issue of how to locate and nurture the styles more likely to make a key contribution to transition to the Fourth Blueprint organisation and the more experimental, creative, collegial and supportive “Learning Loop” culture it appeared to require. Those results were discussed in Section 5.1 and will not be canvassed again here. However, in their context, further questions are prompted. They include issues related to stylistic differences in response to group and interpersonal process demands. Some research was cited in Section 2.2.3 on this issue. However, there is a level of complexity inherent in open, empowered dialogue within small operating groups that also have a web of complex external relationships that suggests the need for more complex research strategies. Thus:

- How do the various styles perceive/understand/construct their obligations and rights in the face of their colleagues (and vice versa) when it comes to group compliance versus individual space to be distinctive?
- Are there stylistically different preferred methods of resolution of tensions between group coherence and individual creativity, and if so;
- What is the impact of these stylistic differences on group process, performance and, perhaps especially, learning?

A useful research arena for exploring those questions might be within the context of an Action Learning development program (See Section 5.2.2). As Limerick et al (1998) note, approaches such as AL are critical to achieving the open, collegial and developmental climate needed for effective and empowered operation of Fourth Blueprint regimes. While there is a growing body of research on AL systems, processes and outcomes (See e.g.: Argyris & Schon, 1978; Boshykh, 2000; Marquardt, 1999; Mumford, 1998; Pedler, 1996; Revans, 1982; Watkins & Marsick, 1993), this author could find no reference to studies that specifically measured, let alone focused on, personality and cognitive style as a critical variable in mediating AL processes or outcomes.

A study by Billard (1999) illustrates some of the characteristics of the research suggested here. She used a group of women who were charged with responsibility for introducing a participative redesign in an Australian government department and who effectively became an AL implementation set for the program. Billard (1999) used Q-sort methodologies to construct a picture of the individual and group perceptions of the issues related both to participation and its implementation. However, no data were gathered to allow separate assessment, based upon differing personality styles, of the perceptual profile that resulted from the Q-sort and, in fairness, one group of less than a dozen participants did not provide scope for that differentiation. So, investigating stylistic differences relating to the processes of AL (and, by implication, Collaborative Individualism) would probably require:

- The collective experience of a significant number of sets – say, 20 or so – with around 6 subjects per set;
- The treatment of each different project/learning experience in which a set (or sets) was (were) immersed as a level of a variable styled “organisational context” or something similar;
- Desirably, the placement of members of sets according to brain style or type – to produce homogenous and heterogeneous sets from which to gather richer qualitative data.
Such a study could have a range of useful foci in extending the conceptual and theoretical model building at the core of this thesis. Billard’s (1999) focus on implementing industrial democracy would certainly qualify as a relevant focus both for learning and research. So too would issues related to the interaction of styles and process in producing novel responses while maintaining high positive tone within the set. Another important focus would be on the learning climate of the set itself, including its, perhaps, differential impact on the various styles as a vehicle to promote or inhibit learning. This approach illustrates the value of flexibly engaging both quantitative and qualitative approaches in more closely appreciating the diverse processes underpinning the perception/construction of “reality” and differential styles of responding to it.

Indirect Questions raised by our theory building and conceptual mapping

In generating a model that allowed us to interpret the empirical reality we uncovered in a richer and more elaborate fashion, this study facilitated a broader enquiry into the extensive and complex range of dynamics that effect adjustment in discontinuous and ephemeral organisational environments. And, in wandering some of those by-ways we encountered some potentially vexed questions that we could only briefly review and set aside rather than resolve or place at the centre of our own research agenda. For the purpose of illustration, two such issues were as follows:

- **More generally, what is the stylistic explanation of transformation or transcendence?** Are different styles/types more naturally open to significant change in the elements of their being: their personality, values and self-concepts? Or are all styles equally resistant to change in those structures and is significant and extended confrontation with diverse yet powerful contenders and the paradox that such clashes bring essential to all styles, if they are to achieve genuine transcendence?

- **More specifically and empirically, what are we measuring by the various instruments that we refer to as Transformational Leadership indices?** Are the “Transformational” Leaders we uncover really largely those who have a strong “Feeling” or Right Limbic orientation and, if so, what impact does that have on their own willingness to surrender to the “Hero’s Journey” of profound transformation let alone provide context and encouragement for others to do so? Or is the context in which others report on the leadership style of the focus leader likely to determine
whether status maintainers such as “Feelers” or status disrupters, such as Intuitives/Perceivers will be described as transformational?

In the spirit of paradox, we will deal with the second point first. It would seem that studies of the relationship between personality type/style and leadership style would benefit from the systematic use of balanced designs comparing relatively First to Third versus relatively Fourth Blueprint environments in regard to which type(s) are seen as more or less transformational. Also, we should assess the personality style of anyone who is asked to evaluate leadership style. We should do so both because the data might be systematically skewed by stylistic perceptual bias and because those individuals form part of the critical social context within which the focus leader is operating. From the theoretical framework developed here, it is clear that this extended understanding of the dynamics underlying transformational leadership will be critical to generating a more refined application of that concept in the type of organisational environments that generate the “weak situations” that so vexed Shamir (1999: see Section 2.1.4).

Now returning to our first issue regarding the more generic dynamics of transformation and transcendence. From Section 3.1.3, the reader will recall McMater’s (1996) point that organisational transformation is “a process of learning and development (not) intervention” and that it is “an emergent process (only accomplished by) coevolving processes between the corporation and its participants.” Also, recall the caterpillar with no conception of the emergent butterfly (McMaster, 1996: 69). From a research perspective these insights provide an extremely demanding set of challenges. In reviewing the literature related to researching the concept of paradox, Lewis (2000: 771) had this to say about the reasons for a scarcity of relevant studies:

“One reason for this scarcity is the inadequacy of traditional approaches to examining tensions. As Teunissen (1996: 18) notes, how can researchers ‘investigate an intangible phenomenon, like paradoxes, with sophisticated research methods which are based on logic, rationality and consistency?’ Exploring paradox requires remaining acutely aware of the contradictions and anomalies and expanding our research strategies accordingly.”

Lewis (2000: 771-774) then identified an eclectic range of research strategies including narrative, psychodynamic, multiparadigm and conceptual mapping approaches all designed to “develop a frame that encompasses opposites, enabling a more complicated understanding of their coexistence and interrelationships.” (Lewis, 2000: 774) And, in
relation to our interest in the role of style in the processes of transformation, that same range of methods would appear to be appropriate. However, given our specific focus on style, they should be accompanied by the identification of stylistically balanced samples allowing the full exploration of the different constructions (if any) that characterise the experience of transformation by differing types. Mitroff and Kilmann (1975) successfully used such a fusion of creative/expressive data gathering tools and quantitative assessment and segmentation of samples according to style when they used stories told by managers as a projective technique to assess different views of the managerial role according to Jungian type. Equally, the AL set environment with type-diverse membership, might be a fine setting for applying some of these more qualitative and expressive methods. Exploratory foci might include the impact of colleagues of varying styles on the willingness to undertake transformation and the processes that will be successful in facilitating paradoxical learning and transcendence. This mix of methodologies leads us nicely to the third group of issues.

Meta-Questions: Researching complex, uncertain, interactive and collaboratively constructive social environments

In some respect, the point has already been demonstrated by the integrative, cross-paradigmatic nature of the body of research reported in this thesis. It is also captured in the quotes from Weick (1990) that headed this section and Section 1.3.3. The socially constructed, interactive, and politically mediated nature of the phenomena we are studying requires that a flexible and extensive array of strategies and devices be used. We need them both for gathering useful, vivid and accurate data on the dynamics underlying the phenomena and for generating theory that allows us to better understand those dynamics and more fully appreciate and measure the key variables at work.

In the current study, a creative, metaphoric and spatially based view of the phenomena was constructed in a spirit of experiment, risk, collaborative conception and integration. That allowed a relatively rigorous and positivist empirical examination of some of the more demographic realities that might impinge upon the dynamics and processes we had conceptually modelled. At the next stage of exploration, the need will be for the creative application of a range of relatively qualitative strategies and methods that allow us to focus on processes as they unfold and by reference to how they are individually and collectively constructed by those who experience them.
However, if we are to gain further understanding of the stylistic variable and its impact, some device(s) for credibly identifying the differential styles of our participants will remain crucial to a successful research outcome. For the moment, at least, given the logistics of qualitative methodologies for uncovering styles, that will encourage, if not mandate, the injection of some quantitative, individual difference measurement into the research design. At that point, the more committed qualitative paradigm advocates will need to show as much flexibility and grace in their acceptance of quantitative rigour and sample differentiation and segmentation as has been required of the committed positivist in displaying a willing suspension of the demand for “objective” proof and focus on validation in the conceptual mapping process. The field cries out for a creative and continuing balance between exploration and collaborative unfolding of complex and idiosyncratic perceptual frames on the one hand and grounded reality checks and challenges on the other. Anything less is likely to freeze theoretical development and practical implementation along current paradigm fracture lines.

5.3.4 **Stylistic biases in the intellectual development of loosely coupled post-modern organisational forms**

“Come to the edge, he said
They said; We are afraid
Come to the edge he said:
They came, he pushed them and they flew!”

*Guillaume Apollinaire*

In this thesis we have explored the psychodynamic and stylistic demands upon aspiring leaders within the network organisations of the early 21st Century. The combined results of creative and integrative theory building and quantitative, empirical assessment of the critical managerial cadres suggest that it will be difficult to find the right pool of empowered “Collaborative Individuals” to positively and successfully develop, and operate in, Fourth Blueprint environments. More than that, it appears that many decades, and arguably centuries, of social construction and psycho-social “sculpting” of personal style has left our prime, “high-potential” cadres with stylistic repertoires that are much more reflective of the “Performance Loop” than the “Learning Loop”.

So what then are the implications of our findings for the future advocacy, and implementation, of transition to Fourth Blueprint designs? An alternative interpretation of our findings that has received only scant attention to date is that the values,
expectations and processes underlying Fourth Blueprint designs are themselves social constructions that are more typical of, and congenial with, the stylistic proclivities of a limited range of personality types. For example, Kirby (1997: 24) provides MBTI norms for 192 “Consultants to Organizations” that show dominant NF (34.4%) and NT (30.7%) preferences with ST a distant third preference at 22.9%. While not attempting to tar all advisors/theorists/consultants with precisely the same brush, it is easy to see how Fourth Blueprint designs and values might flourish in such a psychosocial collegiate. Many of the academic and popular advocates of the network designs in particular and post-modern approaches generally, would probably show a similar stylistic pattern – although NT is likely to be the lead style among academics.

An anonymous wit in the 1960’s observed that the “Get Fit Gyms” at the vanguard of what was then a developing trend seemed like “a cluster of mesomorphs trying to turn endomorphs into ectomorphs.” Similar dynamics may be at play in the approach of our networking advocates and designers. Perhaps we are advocating and seeking to create an organisational form that is congenial, even self-evident, from our own perspective but which makes little sense, in fact creates significant difficulties and angst, for the vast majority of those seeking to serve organisations in positions of leadership and influence.

Our results indicate that, for most of our sub-samples, such a gap between the advocates and the participants is reflective of current realities. However, as suggested by the weight of literature reviewed in Chapter 1, the developing imperatives of the “knowledge economy” and the open, competitive world environment seem to be commonly perceived by all – at least on an intellectual level. When the environment becomes highly uncertain, the capacity for organic adaptation of relatively rigid, single-focused stylistic repertoires will prove to be inadequate leading to internal dysfunction or lack of strategic coherence. As the environment becomes more complex, the need for those more focused styles to be subject to transformational learning challenges becomes as acute as the tendency for the pressures involved to further constrict their range. So perhaps the key challenge for the designers and advocates revolve more around the appropriate strategies for learning new stylistic repertoires as discussed in Section 5.2.2.

For example, where do the distinct stylistic differences that we observed across our occupational clusters come from? We were not born as nurses, engineers or IT
consultants and I am sure no one would willingly give birth to a “financial analyst”! No, these profiles are evidence of the pervasive influence of educational and cultural environments on development and on the resultant patterns of behaviour, by which we seek to know, understand and interact with our world. From this we can conclude that:

- if we keep educating and developing people up to the age of (say) 30 the way we have been doing for the last 50 years or more, we should not expect three weeks (or even six months) in an intense group workshop to reignite their dormant Cerbral Right quadrant, and;

- As SLT would predict, the stylistic outcome of any given moment of environmental shaping is also among the diffuse causes of future states (such as the emerging organisational climate). Thus, the culture of the organisation may be gradually reshaped by slowly modeling and approximating more Right Brain and cerebral approaches to organisational problem solving, decision-making and strategy formation. This will be an extended learning process and, like any interactive process, its impact will accelerate as the interchange between people and their culture loosens the “transactional” framework encasing relationships.

Thus, if we are to contribute to the gradual but determined movement towards more experimental, open, responsive and collegial styles, it will most probably turn around our advocacy, shaping and delivery of staged learning programs of the style discussed in Section 5.2.2. Here again, we encounter some paradoxes and dilemma bred within our own stylistic commitments. While we intellectually recognise the danger of the Left Brainers’ commitment to dominance and rationalistic closure and the Limbic fear of the complex and use of group “democratic” imperatives to shut down those who would generate it, active and early intervention in developmental settings is not a congenial strategy for us. Those who advocate the transition to the kinder, gentler, more human and mature functioning that underpins effective network operation and development are understandably reluctant to assume proactive roles in the processes of transitions. And they will hope for the transformation of their less flexible, experimental, creative and collaborative colleagues to spontaneously emerge from open, supportive, benedictine nurturance within the empowerment process of the new regime.
These are not new dilemmas. As suggested in Section 5.2.2, the history of all the variants of AL and Action Research as approaches to profound individual and organisational transformation is littered with debates and confrontations about the role of intervention and change facilitation. However, these learning challenges are essentially about "ways of being" not "things we do". Our research reinforces how far our prime aspirants for the positions of leadership and influence are from "being" in harmony with the new essence. An extended development process designed and defended by those who know that essence (rather than experts on what to do) will be vital if transformation – or even a few enlightening skirmishes with paradox, complexity and ambiguity – are to be achieved by our typical aspirants.

A study by Driver and Svensson (1996) illuminates the demands of this learning process. Using a decision styles test very similar in structure to Brain Styles, they assessed the managerial style of 48 senior level managers of "a major oil company" as dominantly "decisive" (equivalent to Left Brain Limbic) and "hierarchic" (or Left Cerebral). They were also low on the "Flexible" (or Right Limbic) and "Integrative" (or Right Cerebral) styles. Driver and Svensson then conducted a 12 months intervention with a view to making the managers "less controlling (decisive and hierarchic) and more participative (integrative and flexible)." The intervention involved groups of eight to 12 managers with a facilitator meeting about once a month over the period to:

- Assess, discuss and develop their decision styles;
- Openly discuss and attempt to resolve stylistic clashes within the group;
- Foster collaboration rather than competition among team members;
- Increase the group’s capacity to work with other groups throughout the organisation, and generally;
- Enhance the individual and group capacity to operate as an open, supportive, creative and positive learning team.

In this process, the facilitator was an active presence and guide and, occasional, process redesigner on an extemporaneous basis. Driver and Svensson (1996:51) report that the most frequent stylistic profile for the sample after the year showed significantly lower scores on decisive style and had almost doubled a previously very low flexible style average. They also increased their integrative score but only very marginally. However, they had also increased their hierarchic mean by the same amount. They explained this last outcome by pointing to the fact that all team members were fairly
hierarchical in the first place. Thus, as the mode of development involved understanding and managing their styles through interactive dialogue, their past culture could have anchored their learning around the hierarchic style with which they were all familiar.

So over 12 months of intensive development, the outcome was some movement away from individual focus and a directive style towards a little more openness and collaborative search. All this is, of course, greatly to be desired. However, it was still anchored by the dominant “right answer” culture from which they had all come and of which they were all still shining examples. Driver and Svensson (1996: 52) conclude: “It is evident that to change deeply rooted culture, a much more intensive intervention is needed.” It would seem an intervention with a somewhat different style involving a profound confrontation within the learning groups is needed if the force of historically entrenched style is not to reassert itself.

The role of the program designer and facilitator is vital to that but it is not a role that should be characterised by immersion in the development of the technical skills for solving problems and content of interactions within the group. Rather, the role is as depicted in the Hero’s journey in Figure 5.2.2 and in the quote that headed this section. The systematic selection of heterogeneous, clashing styles in the groups and the crafting of unfamiliar tasks as exercises in learning that “neuter” the skilled “authority shields” many decisive managers used to avoid deep learning are central to the role. As is using the authority of the outsider mandating proper process to ensure that the group confronts its dilemmas and paradoxes rather than ignoring them by consensus. Put simply, personal transformation is a fearsome and demanding challenge for most humans.

So the reality that confronts us here is that the advocacy and installation of the elegant social interactive processes of the Fourth Blueprint regime is likely to be a long and, at times, tedious struggle. It will mostly involve the gradual shaping of stylistic emphases at the margin while taking every opportunity to find programs offering slack resources in time and space to allow genuine and extended confrontations in personal learning and development. Learning under pressure and stress is highly unlikely to be transformative and generative. On the other hand, learning that is supported by genuine resources of time and space and distance from the old operating culture may well produce profound new insights. This will only be so if the challenges involved go deeply enough to the
participants' sense of self and continuity and they can be held long enough at the point of resolution for unlearning to take its toll on their defensive regimes.

This facilitative role is complex and vexatious. It requires souls who are willing to focus on challenging development as their core purpose and who can achieve sufficient distance from the social processes they are orchestrating and the organisations and individuals undergoing them to feel secure to challenge and provoke. It is a brave and mature sage who can push very senior managers off the edge of the precipice of uncertainty and into the "encounter with death" knowing that, with the grace of fellow fledglings and the power of the process, they will emerge on the other side with a new perspective on the balance between learning and doing. The history of organisational change is littered with the metaphorical bones of such sages of organisational change as sacrifices to the Gods of Rationalism and Clan Harmony.

However, it may be worth the effort. Profound insight in individuals leads to growth and change in social environments. Changed social environments produce different individuals. Scope for action and experimentation leads to responsibility and integration when it is coupled with an acute sense of emotional investment in joint purpose not when it is exercised in a situation of individual threat or promise. A continually interactive process of challenge and reintegration is the essence of organic adaptation – at least within the constraints of a single human lifetime. Perhaps Quantum Leaps are only for Quarks! Hal Leavitt (1978) may have summed it up best, as he is wont to do:

"We need, don't we, both analysis and imagination. We need symbols; we need pictures, and we need to feel. We need many kinds of people with many kinds of education and training and many kinds of thinking propensities. But beyond that, we need some way to bring them together into that beautiful blend that will yield the best of all possible worlds."
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## APPENDICES

**Appendix I**: Decision Styles Survey  

**Appendix II (a)**: Item/Scale Correlations for Relaxed Brain Styles  
**Appendix II (b)**: Item/Scale Correlations for Pressure Brain Styles  
**Appendix II (c)**: 2 Factor Analysis of LTAS items – Relaxed and Pressure Combined  
**Appendix II (d)**: LTAS: Factor Analysis of all items by conditions

**Appendix III**: Brain Style Group Profiles by Gender and Occupation in Relaxed and Pressure conditions for UK, Australian and US subjects

**Appendix IV**: Brain Style Group Profiles by Condition and Nation for Male and Female subjects in Technical, Ideas and People Occupations

**Appendix V**: Relaxed/Pressure Frequencies for five levels of Right Brain/Left Brain and Limbic/Cerebral across three occupational sub-clusters

**Appendix VI**: Relaxed/Pressure Frequencies for five Levels of Right Brain/Left Brain and Limbic/Cerebral across three national sub-clusters

**Appendix VII**: Means for non-significant three-way Interaction on Teamist and Imaginist by Gender, Occupation and Nation

**Appendix VIII**: Average Primary Brain Style Profiles for 18 subsamples based on Gender, Occupation and Nation in Relaxed and Pressure Mode
Appendix I: DECISION STYLES SURVEY

PARTICIPANT'S NAME: ________________________________

NATIONALITY: ______________________________________

BACKGROUND DATA

1. SEX: [ ] Male   [ ] Female
2. AGE: [ ] Under 25   [ ] 25 - 29   [ ] 30 - 34   [ ] 35 - 39   [ ] 40+

3. Level of education already completed:
   [ ] Doctoral  [ ] Undergraduate  [ ] No tertiary qualifications
   [ ] Postgraduate  [ ] Certificate

4. The profession most characteristic of my background/experience to date is:
   [ ] Engineering/Production  [ ] Administration
   [ ] Finance/Accounting  [ ] General Management
   [ ] Sales  [ ] Science/Research & Development
   [ ] Marketing  [ ] Computing
   [ ] Personnel/Psychology  [ ] Other (please specify)
   [ ] Law

If you would like to talk to someone about this test, please contact
Neil McAdam on (053) 27 9645, Fax: (053) 27 9405

Survey continues next page ....
INSTRUCTIONS
This survey measures the dimensions of your time perception to help you develop an awareness and understanding of how time influences your expectations and behaviour. There are no right or wrong answers, only different answers. Do not select answers based on how you would like to be, but on how you actually would act.

Directions for Use

1. Read each statement and the four responses.

2. Rank every response to each statement by writing a ‘Priority Number’ in each of the four boxes on the right side of each statement.

3. In ranking each response, use the following numbers (but only once) for each numbered statement:

```
  5 – Most Like Me  3 – More Like Me
  2 – Somewhat Like Me  0 – Least Like Me
```

Example
Notice in the example below that each response is ranked with a Priority Number, but that each number is used only once.

```
When I have to get something done:
A. I get to work on it
B. I lay out a good plan
C. I seek a fresh approach
D. I try to get help

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>5</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>
```

B = 5 – Most Like Me  C = 3 – More Like Me
A = 2 – Somewhat Like Me  D = 0 – Least Like Me

Notice also that four columns are provided to the right of each set of responses. You should place one of your ‘Priority Numbers’ in each column. The underlining in each column is horizontally aligned with one, and only one, of the responses. You should use the relevant underlining to indicate your ranking of that response. Which column is for which response can differ from question to question.

Survey continues next page ....
PART A: Relaxed Mode

1. I feel satisfied with my day when I:
   A. Accomplish practical tasks, get things done.
   B. Enjoyed social contact with friends.
   C. Executed plans to logical conclusions.
   D. Discovered or learned something new.

2. The way I prefer my work environment is:
   A. Alive with ‘people contact’, friendly.
   B. Structured with systematic plans and actions.
   C. Intellectually stimulating, innovative.
   D. ‘Bottom-Line’, results oriented

3. In working with others, I sometimes:
   A. Get bored with talk of ‘details’, plans.
   B. Become impatient with ‘small talk’, opinions.
   C. Lose interest in unoriginal thoughts.
   D. Ignore people who don’t ‘get to the point’.

4. In meetings with other people, I usually:
   A. Work for practical results.
   B. Listen for their point of view.
   C. Keep things on a timely schedule.
   D. Like to discuss new theories or concepts.

5. What annoys me about conversation at work is:
   A. People lack warmth and sincerity most times.
   B. People ‘ramble on’, lack facts or data.
   C. People have nothing enlightening to say.
   D. People waste time, interrupt work.

6. If I waste time, it’s usually caused by:
   A. Talking to others, being too friendly
   B. Poor planning on my part; losing direction.
   C. Failure to seek new approaches; routine habits
   D. Not seeking help, attempting to do it myself

7. In setting priorities on my time, I usually:
   A. Look for practical payoff and results.
   B. Seek other people’s opinions and thoughts.
   C. Formulate a plan to achieve my goals.
   D. Evaluate long-range or future consequences.
8. Productivity in business would improve if people:
   A. Would learn to cooperate more; work as teams.
   B. Would take time to plan better.
   C. Would learn to be more creative.
   D. Would simply learn to work together.

9. Of the following activities, I'd use my weekend:
   A. For something social, romantic or adventurous.
   B. To solve some business problems, plan ahead.
   C. To read a new book, attend a lecture.
   D. To get something done at home like repairs.

TOTAL FOR QUESTIONS 1 - 9 (90 =)

Survey continues:

PART B: Pressure Mode

10. When faced with disagreements, I save time by:
    A. Taking personal action, doing things my way.
    B. Getting the facts, data, proof.
    C. Seeking expert thinking on similar problems.
    D. Listening to others' points of view; getting help.

11. When something unexpected happens:
    A. I go with my feelings about events.
    B. I re-think my plans to develop new ones.
    C. I take practical steps to keep working.
    D. I look for original, new alternatives.

12. When others pressure me, I am:
    A. Likely to be analytical, critical or judgmental.
    B. Likely to be outspoken, upset or sensitive.
    C. Likely to retreat into my world of thought.
    D. Likely to prove myself with quick action

13. When faced with several demands on my time at once, I:
    A. Tackle things quickly, one at a time.
    B. Set priorities and use proven methods.
    C. Tend to procrastinate or escape pressure.
    D. Get personally upset, depressed
14. When pressured to make a decision, I:
   A. First consider how it will affect others.
   B. Make certain of my facts before proceeding.
   C. Decide on what must be done immediately.
   D. Try to project or conceptualise future results.

15. When I'm interrupted when busy at work, I:
   A. Let people know how much time I have.
   B. Take time to listen to them, show concern.
   C. Take time to explore their thinking, ideas.
   D. Remind them of work I have to do.

16. I sense time pressure whenever I:
   A. Let work pile up because of others.
   B. Work without a logical plan or direction.
   C. Fail to produce new or creative results.
   D. Feel like a machine, not a person.

17. In tense work situations, I prefer to:
   A. Pull a team together; to co-operate.
   B. Maintain my objectivity, keeping emotions down.
   C. Move ahead with concrete, deliberate actions.
   D. Reformulate the problem, find novel solutions.

18. When the chips are down, I prefer to:
   A. Stick to a systematic, proven approach.
   B. Be spontaneous and follow my feelings, hunches.
   C. Create a fresh, imaginative solution.
   D. Concentrate on getting what I want accomplished.

TOTAL FOR QUESTIONS 10 - 18 (90 =)
### Appendix 11 (a):

**Item/Scale Correlations for Relaxed Brain Styles**

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<th>Analyst</th>
<th>Imaginist</th>
<th>Notes</th>
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<td>0.53</td>
<td>XXXX</td>
</tr>
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## Appendix II (b): Item/Scale Correlations for Pressure Brain Styles

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<tr>
<th>Question</th>
<th>Producer</th>
<th>Teamist</th>
<th>Analyst</th>
<th>Imaginist</th>
<th>Notes</th>
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Appendix II [c]: 2 Factor Analysis of LTAS Items – Relaxed/Pressure Combined.

i) Producer Factors

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Brief Content Description</th>
<th>Factor 1 Time Urgency/ Action Outcomes</th>
<th>Factor 2 Results Focus &amp; Scheduling</th>
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<tr>
<td>4A</td>
<td>In meetings... work for practical results. Something unexpected? - I take practical steps to keep working.</td>
<td>0.598</td>
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<tr>
<td>11C</td>
<td></td>
<td>0.559</td>
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<tr>
<td>7A</td>
<td>Priorities? Look for practical payoff and results.</td>
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<tr>
<td>14C</td>
<td>When pressured, I decide what must be done immediately.</td>
<td>0.490</td>
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<tr>
<td>3D</td>
<td>Working with others. Look to “get to the point”</td>
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<tr>
<td>17C</td>
<td>Tense? Move ahead with concrete actions.</td>
<td>0.444</td>
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<tr>
<td>16A</td>
<td>Time Pressure? When I let work pile up because of others.</td>
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<td>Chips down? Stick to a systematic/proven approach</td>
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<td>If interrupted? Remind them I have work to do</td>
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<td>1A</td>
<td>A good day? Accomplish practical tasks, do things</td>
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<td>9D</td>
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<tr>
<td>5D</td>
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<td></td>
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<tr>
<td>13A</td>
<td>Several demands at once? Act quickly, one at a time.</td>
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<td>10A</td>
<td>Disagreements? Take personal action, do things my way.</td>
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<td>0.516</td>
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<tr>
<td>2D</td>
<td>Prefer work? ‘Bottom Line’ Results.</td>
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<tr>
<td>8D</td>
<td>Improve Productivity? If people simply learn to work together.</td>
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<td>12D</td>
<td>When others pressure?, I am likely to prove myself with fast action</td>
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<td>6D</td>
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### Teamist Factors

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<th>Factor 2</th>
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<td>Social Relations/ Consideration</td>
<td>Emotional Expressiveness/ Reactivity</td>
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<td>When pressured? Consider how it will effect others.</td>
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<tr>
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<td>Improve productivity? Learn to cooperate work as teams</td>
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<tr>
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<td>Tense Work? Pull team together; cooperate.</td>
<td>0.531</td>
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<tr>
<td>5A</td>
<td>Irritating conversations? People lack warmth and sincerity.</td>
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<tr>
<td>10D</td>
<td>Disagreements/ Listen to others' point of view, get help.</td>
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<tr>
<td>9A</td>
<td>Use weekend? Something social, romantic or adventurous</td>
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<tr>
<td>15B</td>
<td>Interrupted when busy? Listen to them, show concern.</td>
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<td>6A</td>
<td>If I waste time? Talking to others being too friendly.</td>
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<tr>
<td>3A</td>
<td>Working with others? I get bored with talk of 'details', plans</td>
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<td>12B</td>
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<td></td>
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<tr>
<td>11A</td>
<td>Something unexpected? I go with my feelings</td>
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<td>0.782</td>
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<td>Chips down? Be spontaneous, follow my feelings and hunches.</td>
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<tr>
<td>7B</td>
<td>In setting priorities? Seek other's opinions and thoughts.</td>
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<td>13D</td>
<td>Facing several things at once? I get personally upset, depressed</td>
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<td>16D</td>
<td>I sense time pressure when?: I feel like a machine, not a person</td>
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### Appendix II [c]: 2 Factor Analysis of LTAS Items – Relaxed/Pressure Combined

#### iii) Analyst

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<th>Factor 1 Planned/Systematic</th>
<th>Factor 2 Emotional Control vs Rational Time Allocation</th>
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<td>Setting Priorities? I formulate a plan to achieve my goals.</td>
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<td>Several competing demands? I set priorities and use proven methods.</td>
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<td>10B</td>
<td>Disagreements? I get the facts, data, proof</td>
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<td>14B</td>
<td>When pressured? I make certain of my facts before proceeding</td>
<td>0.470</td>
<td>0.411</td>
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<td>11B</td>
<td>Something unexpected? I rethink my plans and make new ones</td>
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<td>15A</td>
<td>Interrupted at work? I let people know how much time I have.</td>
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<td>Chips are down, I stick to a systematic, proven approach</td>
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<td>Improve Productivity? I would take time to plan better</td>
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<td>A satisfying day? When I have executed plans to logical conclusions.</td>
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<tr>
<td>16B</td>
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<tr>
<td>6B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17B</td>
<td>Tense work? I maintain my objectivity, keeping emotions down</td>
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<td>4C</td>
<td>In meetings? I keep things on a timely schedule.</td>
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<td>--0.488</td>
</tr>
<tr>
<td>9B</td>
<td>I use my weekend? To solve some business problems, plan ahead.</td>
<td>--0.444</td>
<td>0.418</td>
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<tr>
<td>5B</td>
<td>Annoyed conversations? When people 'ramble' on, lack facts or data.</td>
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<tr>
<td>3B</td>
<td>Working with others? I become impatient with 'small talk', opinions</td>
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### Imaginist Factors

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<th>Factor 1 Novel output/Reframing issues</th>
<th>Factor 2 Intellectual Stimulation/Reflection</th>
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<td>18C</td>
<td>Chips down? I create a fresh, imaginative solution.</td>
<td>0.720</td>
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<td>17D</td>
<td>Tense work? I try to reformulate the problem, find novel solutions.</td>
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<td>11D</td>
<td>Something unexpected? I look for original, new alternatives.</td>
<td>0.660</td>
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<td>16C</td>
<td>Time Pressure? Whenever I fail to produce new or creative results.</td>
<td>0.479</td>
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<td>When pressured to decide, I try to project or conceptualise future results.</td>
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<tr>
<td>3C</td>
<td>Working with others? I lose interest in unoriginal thoughts</td>
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<td>10C</td>
<td>Prefer work? Intellectually stimulating, Innovative,</td>
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<td>Satisfying day? When I’ve discovered or learned something new.</td>
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<td>Facing several demands at once? I tend to procrastinate or escape pressure.</td>
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<tr>
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<tr>
<td>1D</td>
<td>Interrupted at work? I take time to explore their thinking, ideas.</td>
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<td>0.522</td>
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<tr>
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<td>Meetings with others? I like to discuss new theories or concepts.</td>
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<td>Improve productivity? We need to learn to be more creative.</td>
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<tr>
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<td>Setting priorities? I evaluate long-range or future consequences.</td>
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<tr>
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<td>0.365</td>
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### Appendix II (d) LTAS: Factor Analysis of All items by Conditions

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* Both these items, though formally Analyst, are heavily biased towards the structure/judgement/time urgent focus that is more reflective of Producer or Left Limbic styles — see details of content in Appendix II (c), iii.*
### Pressure Factors

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Appendix 111: Brain Style Group Profiles by Gender and Occupation in Relaxed and Pressure conditions for UK, Australian and US subjects

Figure III (a): Relaxed Brain Dominance profiles for UK managers according to Gender and Occupational Background.

Figure III (b): Pressure Brain Dominance Profile for UK managers according to gender and occupational background.

Figure III (c): Relaxed Brain Dominance profiles for Australian managers according to gender and occupational background.

Figure III (d): Pressure Brain Dominance Profiles for Australian managers according to gender and occupational background.

Figure III (e): Relaxed Brain Dominance profile for U.S. managers according to gender and occupational background.

Figure III (f): Pressure Brain Dominance profiles for U.S. managers according to gender and occupational background.
Appendix IV: Brain Style Group Profiles by Condition and Nation for Male and Female subjects in Technical, Ideas and People Occupations.
Appendix V  Relaxed/Pressure Frequencies for 5 Levels of Right Brain/Left Brain and Limbic/Cerebral across 3 occupational sub-clusters

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Appendix VI  Relaxed/Pressure Frequencies for 5 Levels of Right Brain/Left Brain and Limbic/Cerebral across 3 national sub-clusters

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<td>52.2%</td>
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<td>10.0%</td>
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<td>Limbic/ Cerebral</td>
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<td>46.7%</td>
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Appendix VII: Means for non-significant three-way Interaction on Teamist and Imaginist by Gender, Occupation and Nation

a). Relaxed Mode

<table>
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<th>Nation/Gender</th>
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<th>Ideas</th>
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<th>People</th>
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<th>Total Sample</th>
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<td>24.4</td>
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b). Pressure Mode

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<tbody>
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<td>22.1</td>
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Appendix VIII:  Average primary Brain Style Profiles for 18 sub-samples based on Gender, Occupation and Nation in Relaxed and Pressure Modes.

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<th>PRESSURE</th>
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<td>Producer Team- Analyst Imaginist</td>
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<tr>
<td>UK</td>
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<tr>
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<td>22.4</td>
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<tr>
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<tr>
<td>Aus.</td>
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<td>25.9</td>
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</tbody>
</table>

* M = Male;  F = Female
# 1 = Technical;  2 = Ideas;  3 = People