

**Making Sense of the Organisation from the Front Line:
The Call Centre Context**

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The candidate confirms that the work submitted is her own and that appropriate credit has been given where reference has been made to the work of others.

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ABSTRACT

Sensemaking is a key concept supporting managerial and organisational cognitive research, and the analysis of various intervening processes that mediate how organisational members simplify and make sense of their environments. This study has directly responded to the challenge set by researchers to extend the utility of the sensemaking concept to contexts other than management. Here it was applied in the context of the United Kingdom call centre sector, where concerns have been expressed regarding a variety of key working practices that have been reported to be less than desirable, and focused upon the call centre front line worker. Reflecting a number of recent methodological debates, the study applied a multidisciplinary approach, and the employment of cause mapping data elicitation procedures. The research methodology developed enabled the collection of 200 cause maps across 5 organisations, spanning public and private sectors, in a manner that was meaningful for study participants and sufficiently rigorous to allow comparisons to be made between individual maps and across various subgroups. A variety of situational factors and individual differences variables were taken into consideration in terms of their potential impact upon, and ability to be influenced and shaped by, the processes of sensemaking. It was found that the various attempts to institutionalise call centres into an industry has not yet penetrated the lower reaches of the organisations in this study, and numerous additional insights were revealed regarding the differences in patterns of sensemaking across organisations and various sub-groups. The study has provided insights ultimately enhancing our understanding of the processes required to improve the working conditions of such front line employees. Management and employee relations were particularly salient issues for this study population. However, the variance in sensemaking revealed in this study implies that the realities of management and employee may be quite different, with these multiple realities potentially leading to fundamental misconceptions between the two parties. This has implications in terms of a wide range of organisational factors, for example job design and performance measurement. More attention is now required to take account of the sensemaking of non-managerial populations who, in and beyond the call centre context, make up the largest part of almost any contemporary work organisation.

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CHAPTER 1

Introduction

The fundamental aim of this study is to engage in, and make a contribution to, the “ongoing conversation” surrounding the sensemaking concept, which is essentially a set of exploratory ideas rather than an established body of knowledge (Weick, 1995: xi). The application of a sensemaking perspective in the context of the call centre environment, taking account of the perceptions of those who are actually working on the front line, will not only develop our theoretical knowledge of this concept but also provide insights ultimately enhancing our understanding of the processes required to improve the working conditions of such front line employees.

1.1 Study Overview

One of the most urgent problems facing contemporary managers is how to engage employees in employment relationships that will enhance individual and organisational performance (Herriot, 2001). Recognising the subjective nature of such interactions, the broad goal of a cognitive approach to managerial and organisational analysis is to identify how people think, how they understand such relationships, and how these mental processes might account for different patterns of behaviour (Eden & Spender, 1998). However, there continues to be an overwhelming tendency to examine such relationships, and the organisation overall, from a management perspective. As succinctly pointed out by Mills (1959: 223) we need to acknowledge that:

"although an organization viewed from the top looks different than it does at the bottom, it is nevertheless one and the same organization, and (that) there is no [one] standpoint that gives the true picture of it".

Sensemaking (reviewed in detailed in Chapter 2) is a key concept supporting recent managerial and organisational cognitive research, and the analysis of various intervening processes that mediate how organisational members simplify and make sense of their environments, which has arisen from Weick’s work regarding sensemaking and the interrelated notion of the enacted environment (see, for example, Weick, 1969, 1979, 1988, 1990, 1995, 2001). The term ‘enactment’ is

used to mean that in organisational life individuals, groups and organisations take actions on what is perceived, ultimately, and to varying extents, shaping their environment and potentially their own well-being.

However, (and as will be detailed in Chapter 2) it would seem that sensemaking appears to have been construed in too narrow a fashion, with the implication that it is only sensemaking at the top of the organisational hierarchy that matter. Certainly there is little evidence that researchers have taken up the challenge set by Weick (1995) and Huff (1997) to widen the scope of sensemaking studies to populations other than management and to contexts other than strategic competition. This study responds directly to this call and that of others who have urged that we focus on the impact of the changing workplace for employees at the lower end of the organisational hierarchy (see, for example, Sparks, Faragher & Cooper, 2001). In the words of Dépret and Fiske (1993: 195):

"We think it is time to bring the concept of power into mainstream social-cognitive analyses, demonstrating that power inequality is a major source of control deprivation and therefore a major motivator of people's efforts to understand their social worlds".

One context in which to respond directly to this challenge is the call centre sector, which employs a large and growing number of front line workers, and where (as will be seen in Chapter 4) concerns have been expressed regarding a variety of key working practices which have been reported to be less than desirable. While the call centre sector is essentially presented as a homogenous entity, and the front line agent's job seen to be unique (Health & Safety Executive /Local Authority Enforcement Liaison Committee (HELA), 2001), this form of work organisation is clearly expanding and covers a wide range of sectors, industries and functions. Call centres are unlikely to be uniform (a view supported by recent empirical studies, see for example, Holman, 2002) and there are a variety of situational factors and individual differences variables that may potentially impact upon, and be influenced and shaped by, the processes of sensemaking.

Drawing upon related theory, in particular institutional theory (DiMaggio & Powell, 1983), it is questioned if there is evidence of institutional effects across the overall

sample, or at the level of the organisation, whether key individual differences variables moderate contextual differences, and what part these variables play in the sensemaking process. In her study of children's responses to the mass media Wilson (1994:25) states:

“I believe that children's interpretations and responses are as richly individualistic as snowflakes. However, I also believe that there are common patterns that characterize a majority of young viewers and that those patterns are as predictable and explainable as the basic process by which all those unique snowflakes are formed from water”.

The study investigates important contextual and individual differences variables that might influence idiosyncratic and sensemaking “patterns” on the front line. To facilitate the investigation of what is clearly a potentially complex situation, the study takes a broad interdisciplinary approach. A diverse range of literatures, from the managerial and organisational cognition literature, call centre research to-date, and several adjacent literatures from the field of industrial, work and organisational psychology, are synthesised in order to contextualise the call centre phenomenon and highlight key variables (constructs) that might be expected to feature to varying extents in actors' mental representations of their domain. Which constructs actually feature and how is, of course, very much an open empirical question that the research to be reported sets out to investigate.

1.2 Study Methods

Cognitive mapping procedures are being employed increasingly within the managerial and organisational cognition literature as a means of representing actors' beliefs. One form of mapping which seems most appropriate in this study context is the cause map (the most common form of mapping), which reveals understanding of influence and causality (see, for example, Bougon, Weick & Binkhorst, 1977). It is the direct links to action implicit within this approach that makes it particularly promising.

The study questions set demanded large-scale datasets and five contrasting sites were selected for the fieldwork with a view to being representative of the contemporary call centre sector. This design would thereby allow detection of a possible institutional effect at the macro (industry) level and potentially illuminate

the influences of contextual differences at the micro (organisational) level, which would manifest in cause map content and structure. The data elicitation procedures required an acceptable balance between collection of data in a manner that did not unduly restrict participant sensemaking (ensuring that the research task was meaningful) yet which was also amenable to comparison.

Computer programs that are readily available at the present time, such as Decision Explorer (Eden & Ackermann, 1998) and CMAP2 (Laukkanen, 1994) were not readily suited to such large-scale applications. A professional developer was commissioned and extensively collaborated with in order to produce a suitable software tool (Clarkson & Hodgkinson, submitted). In summary, this software enabled the capture of actors' mental representations in a "reasonably rigorous, reliable and replicable manner" this being the challenge of managerial and organisational cognition researchers set down by Huff and Fletcher (1990: 411) more than a decade ago. In keeping with Weick's (1979: 133) literal sensemaking recipe: "How can I know what I think till I see what I say?" and in line with the good practice guidelines of some researchers (see, for example, Huff & Fletcher, 1990; Laukennan, 1998), it also allowed participants to immediately visualise and validate their personal cause maps. This enabled a deeper understanding to be gained of the call centre sector from the perspective of a large number of front line employees.

1.3 Thesis Structure

Having outlined the main issues to be addressed in this study, it is useful to conclude Chapter 1 by providing an overview of Chapters 2 – 11 in turn. Chapter 2 reviews the relevant literature to illuminate the general theoretical orientation of sensemaking, and management and organisational cognition more generally, and the study intention to extend this work by focusing upon front line workers.

In Chapter 3 consideration is given to the wide debates concerning the key methodological issues that needed to be taken into account in this study of sensemaking. This chapter does not provide details of the particular methodologies to be employed in this study, as these were, of course, also dependent on the chosen study context, i.e. the call centre environment, which is detailed in Chapter 4. In

Chapter 5 the exact nature and details of the overarching guiding framework, and its subject matter (from specific call centre and adjacent literatures), which formed the basis of the material to be mapped by the participants in this study is explained. Chapter 6 includes a review of the work on individual differences variables that have been taken into account within the study.

Chapter 7 briefly reviews some of the key issues that were taken into consideration in the design of the research (drawing together the wider issues of sensemaking methodology as depicted in Chapter 3 and the more particular issues taken into account in the particular study context). This chapter then details the particular cause mapping methods employed in the study. Additional data was obtained by participant questionnaire and this chapter also includes details of construct validation and the measurement characteristics of all scales employed. The chapter describes the research design used in the study, and the profiles of the five participating organisations, together with issues of access, consent and interview administration. The chapter concludes by drawing together the full study hypotheses, and the subsequent testing and results are reported in Chapters 8, 9 and 10.

There are many ways that cause maps can be analysed and they will be analysed in increasing complexity, starting in Chapter 8 with the role of construct salience in the sensemaking process. In other words, the constructs of most importance to the study participants will be identified and various hypotheses tested to reveal whether there is evidence of institutional effects across the overall sample, at the level of the organisation, whether key individual differences variables moderate contextual differences, and what part these variables play in the sensemaking process. This is followed in Chapter 9 by analysis of the structural complexity of the cause maps, which essentially examines the links between the map constructs as a means to examine variety in and the development of complicated thinking, i.e. the simplicity or complexity of the sensemaking process (see, for example, Bartunek, Gordon & Weathersby, 1983). In Chapter 10 the analysis culminates with the use of distance ratios (Markóczy & Goldberg, 1995), which simultaneously take into account both construct salience and structural complexity.

Chapter 11 (Discussion and Conclusions) is the final chapter of the thesis. This chapter reviews the study aims and evaluates the research in terms of its implications for the development of theory and contribution to research methodology. This chapter also considers the implications for policy, and details several areas where further research is now required.

CHAPTER 2

Sensemaking and Related Perspectives – Conceptual and Empirical Issues

The long held and essentially unquestioned assumption that organisational decision processes are driven by rationality is largely now recognised to be unrealistic and, in a context of information overload and ambiguity, individuals are seen to simplify their environments in order to make them comprehensible to themselves (March & Simon, 1958, 1993). Following from this, an important development in organisation science over the past 25 years has been the growing interest in managerial and organisational cognition and the analysis of various intervening processes that mediate how organisational members simplify and make sense of their environments (see, for example, Eden & Spender, 1998; Hodgkinson & Sparrow, 2002; Meindl, Stubbart & Porac, 1996a; Walsh, 1995).

This Chapter introduces the two basic approaches that have been taken to study managerial and organisational cognition, prior to discussing the particular concept of sensemaking and its specific properties. The Chapter details the usefulness of the sensemaking perspective to-date and, by the identification of key contemporary organisational dilemmas, reveals how this study may productively extend the utility of this concept.

2.1 A Cognitive Approach

As indicated by Sims & Gioia (1986:1) people in organisations “do not just *do* they also *think*”. As noted in Chapter 1, the broad goal of a cognitive approach is to identify how people think, how they understand their environments and how these mental processes might account for different patterns of behaviour. As expressed by Spender (1998: 14):

“In the years since the ‘cognitive revolution’ researchers have struggled to reveal intentions and representations, to work out their relationship to the situation perceived and to understand their effects on the behaviour of individuals, workgroups and organizations”.

It is known that people's actions do not transparently reveal the character of their subjective world or mental processes and the cognitive perspective redirects attention from the objective 'out there' to the subjective way in which individuals see the world (Gergen, 1997). When individuals are confronted with an equivocal set of events, they struggle to make sense of them (House, Rousseau & Thomas-Hunt, 1995; Weick, 1979) and question what is going on. Their answer determines how they will engage in that situation, i.e. their social behaviour (Kahn, 1990). Thus, people's social behaviour is determined by environmental factors but is mediated by their cognitive response to their environment (Ashforth & Kreiner, 1999). As expressed by Holsti (1976: 20) an individual's perceptions are:

“filtered through clusters of beliefs or “cognitive maps” of different parts of his social and physical environment. The beliefs that compose these maps provide the individual with a more or less coherent way of organizing or making sense out of what would otherwise be a confusing array of signals picked up from the environment by his senses”.

The notion of a cognitive map is essentially an internal representation of 'reality' by which an individual develops a sense of what is going on and which provides a basis for subsequent action.

There are two distinct branches of managerial and organisational cognition research: the computational approach, which examines the processes by which managers and organisations *process information*, and the interpretive approach, which investigates how *meaning* is created around information in a social context (Lant & Shapira, 2001: 2). The main approach adopted in this study is the interpretive approach. However, as has been observed (see, Hodgkinson, 2003; Hodgkinson & Sparrow, 2002; Lant & Shapira, 2001), to gain a better understanding of cognitive processes both approaches are required and this study also draws upon the computational perspective.

2.1.1 The Computational Perspective

At the extreme position this perspective suggests that symbolic models can represent the nature of even the most complex social interaction and the brain and its cognitive processes are viewed as analogous to a computer and its computational operations (Sayre, 1997: 214). The rational model of decision making has been criticised by, in

particular, behavioural psychologists and considerable work has been carried out on how humans process information, the limitations on their capacity to do so (for example, bounded rationality, heuristics and biases), and how information processing guides behaviour (see, for example, Fiske & Taylor, 1991).

This approach to managerial and organisational cognition suggests that the way in which an individual acts is driven by their perceptions, which are shaped (at least in part) by their past experiences and learning. Drawing upon this experience, and applying it to the present, can enable a simplified response to a complex situation. The term often employed to indicate this type of activity is 'top down' information processing (Walsh, 1995), though, in practice, the balance of top down (conceptually driven) and bottom up (stimulus driven) processes is likely to vary across tasks and situations (Hodgkinson & Sparrow, 2002). Behavioural decision theorists examine these processes but also how actors form preferences and how the context or framing of situations influence choice, often with the intention of enhancing decision-making abilities.

2.1.2 The Interpretive Perspective

The interpretive approach is firmly embedded in the inter-related fields of social psychology (Fiske & Taylor, 1991; Gergen, 1997; Weick, 1979), social identity theory (Ashforth & Mael, 1989; Haslam, 2001; Hogg & Terry, 2000), and self-categorisation theory (Turner, 1985). This approach also has a sociological background, in particular the sociology of knowledge and Berger and Luckmann's (1967) work on the social construction of reality.

From an interpretive view, the issue of whether one's view of the world, or one's choice or decision is 'correct' is not meaningful. The correctness of a decision is contingent on the point of view that is being used to evaluate it and what is perceived as real is seen as being real in its consequences (Gioia, 2001). It is becoming increasingly clear that researchers need to take additional account of perceptions. Individuals, groups and organisations take actions on what is perceived, ultimately, and to varying extents, shaping their environment and potentially their own well-being. For example, longitudinal research provided evidence that anticipation of job loss affects health even before employment status

has changed (Ferrie *et al.*, 1995). Even when the objective data reveals that there is nothing of concern, organisations may suffer financially from heightened employee perceptions of job insecurity due to the associated costs of increased absenteeism and sickness resulting from lowered employee well being.

It is also known that people can go through what outwardly appears to be the same experience and end up ‘knowing’ quite different things as a result (Antonovsky, 1987; Gabriel, 1999; Gabriel, Fineman & Sims, 2000; Nicholson & West, 1988). Once again, people display behaviours and go on to take actions based on their knowing and, following from this, the environment is, once more, seen to be at least partially contingent upon the individual, or group, who perceive it (Lincoln & Guba, 2000).

2.2 The Concept of Sensemaking

A key concept supporting recent managerial and organisational cognitive research has arisen from Weick’s work (see, for example, Weick, 1969, 1979, 1988, 1990, 1995, 2001) regarding sensemaking and the interrelated notion of the enacted environment. The term ‘enactment’ is used to mean that in organisational life people often produce part of the environment they face. In other words, by doing something that produces some kind of outcome, constraints are then placed upon what that person does next (Weick, 1979: 130). For Weick, the sensemaking concept is unique and distinct from interpretation, understanding, and attribution. For example, and clearly simplifying what is a rather more complex process, while people attribute causes to events (see, for example, Kelley, 1967), for Weick (1995: 8) “Sensemaking is about authoring as well as interpretation, creation as well as discovery” and thus implies a higher level of engagement by the actor. Indeed, for Weick (1979: 133), the concept of sensemaking quite literally equates to the making of sense: “How can I know what I mean till I see what I say?” Weick refers to this phrase as his sensemaking “recipe” which he traces to the response of a young girl in the 1920s who uttered the definitive sentence when cautioned to be sure of her meaning before she spoke.

Nevertheless, rather than a body of knowledge, the sensemaking concept remains as little more than a clearly developing set of ideas with explanatory possibilities, i.e. an “ongoing conversation” (Weick, 1995:xi), in which this study is keen to engage and develop further, and the research literature offers a number of alternative definitions of sensemaking. For some, sensemaking is an interpretive process (Feldman, 1989) or a metaphor for interpretation (Morgan, Frost & Pondy, 1983). In their work on executives’ perceptual filters, Starbuck and Milliken (1988) divide perception into noticing and sensemaking, thereby placing stimuli into some kind of framework, whereby noticing has to come prior to sensemaking so that there is something available to be made sense of. The concept can be seen from many perspectives, such as structuring the unknown (Waterman, 1990), explaining surprises (Louis, 1980), or the interaction of information seeking, meaning ascription, and associated responses, i.e. interpretation coupled with action (Gioia & Chittipeddi, 1991; Gioia, Thomas, Clark & Chittipeddi, 1994; Thomas, Clark & Gioia, 1993). Some view sensemaking as always being a conscious process, coming into play at times of shock or surprise (Louis, 1980) or other particular occasions, for example in times of perceived environmental uncertainty, information overload, complexity, turbulence, or ambiguity (Weick, 1995). Others believe that, though much of organisational life is routine and unsurprising and, as such, does not demand our attention, we nonetheless make sense in those habitual situations via the assimilation of subtle cues over time (Gioia & Mehra, 1996).

Weick may be seen to construe sensemaking too narrowly (Gioia & Mehra, 1996). Nevertheless, his proposal of seven key sensemaking properties has given researchers an invaluable theoretical framework from which it is possible to identify fundamental agreements regarding this concept, highlight where divergence occurs, ascertain how this concept links into related theoretical perspectives, and locate areas of sensemaking that require further investigation.

2.3 The Seven Properties of Sensemaking

Reviewing the literature, there is no suggestion of argument with Weick's (1995: 4) observation that:

“How they construct what they construct, why, and with what effects are the central questions for people interested in sensemaking”.

Sensemaking is viewed as an essentially up-stream process whereby people extract patterns of meaning from an inherently ambiguous environment (Meindl, Stubbart & Porac, 1996b). From the mass of information and activity around us, we attend to only certain elements that become the targets and the grist of the sensemaking process. The explicit seven properties of sensemaking identified by Weick are as follows:-

Focused on and extracted by cues

From a sensemaking perspective, and turning to the first of Weick's sensemaking properties to be considered, extraction of a cue is taken to be equivalent to the whole data set it comes from. In other words, from a mass of information people extract only partial knowledge and data and it is on the basis of this that they make sense of the whole. What is actually extracted and how it is made sense of is complex and dependent on a variety of issues, including context and goals. For example, it has been found that members of different interaction groups attach qualitatively different meanings to similar organisational events, while people who interacted with each other had similar interpretations of such events (Rentsch, 1990).

Plausibility rather than accuracy

It appears that what is required in sensemaking is a good story rather than an attempt at accuracy, as while filtered information will almost certainly be less accurate it will be more understandable. As concluded by Frost and Morgan (1983: 207), when people make sense of things they:

“read into things the meaning they wish to see; they vest objects, utterances, actions and so forth with subjective meanings which helps make their world more intelligible to themselves”.

Holsti (1976: 20), quoting the words of the philosopher Joseph Jastrow, states: “the mind is a belief-seeking rather than a fact-seeking apparatus”. In line with Weick (1979), Sutcliffe (1994), examining the accuracy of perceptions in top management teams, concluded that having an ‘accurate’ environmental map may be less important than having *some* map that brings about some kind of order to a complex world and one which prompts action.

Retrospective (and also prospective)

A third property of sensemaking is its largely retrospective nature, i.e. there is a retrospective gathering of events that makes the outcome reasonable, believable and configured in such a way that makes one’s part in the whole story clear (Polkinghorne, 1988). For example, Weick (1987) supports the notion that strategic planning often involves the ability to write the story that fits recent history. However, it is also seen to be prospective (Gioia & Mehra, 1996), i.e. if retrospective sensemaking is making sense of the past, prospective sensemaking is an attempt to make sense for the future and it is the very act of envisioning the future that supplies an impetus for action. The use of multiple perspectives links into Langer’s (1989) concept of mindfulness (see also, Fiol & O’Connor, 2003), which is defined as a state of alertness and awareness that is manifested in active information processing and openness to new information. Those who manifest mindfulness are said to engage in thought patterns that allow them to make a larger number of currently relevant, more precise distinctions. By remaining alert to potential changes in their situation, mindful individuals are credited as being more adoptively responsive to shifts in their environment. In contrast, mindlessness is characterised by relying on past categories, acting on automatic pilot, precluding attention to new information, and fixating on a single perspective (Weick, Sutcliffe & Obstfeld, 1999).

Enactive of sensible environments

This fourth property of sensemaking essentially means that people produce at least part of the environment they face. Porac, Thomas & Baden-Fuller’s (1989) study of the Scottish knitwear industry is cited as an empirical demonstration of this social construction process, termed ‘enactment’ (Weick, 1979: 130). Porac *et al.* examined the consensual identity and causal beliefs constructed by top managers in firms

producing Scottish knitwear to make sense of transactions within their competitive environment. This examination revealed an overwhelming tendency for managers from a number of rival firms to disregard as competitors firms located outside their immediate vicinity within the borders region. This tendency then enabled members to define the competitive space and their place in it and subsequently guided strategic choices. The authors suggested that a combination of selective perception and enactment produced what amounted to a “cognitive oligopoly”. The institutionalising of social constructions into the way things are done, firmly links ideas about sensemaking with those of institutional theory (see, for example, DiMaggio & Powell, 1983, 1991; Scott, 2001; Scott & Christensen, 1995) and the notion of ‘isomorphism’, i.e. the observed tendency for firms to develop shared beliefs, structures, practices, strategies and networks of relations. Institutional theory would argue that (1) competitive or task environments may encourage divergence of management cognition between organisations, management functions and among senior managers and (2) that the institutional environment may encourage cognitive convergence at the level of the industry, the strategic group and within institutionalised practices linked to management functions and levels (cf. Daniels, Johnson & de Chernatony, 1994a, 2002a; Hodgkinson & Johnson, 1994; Sutcliffe & Huber, 1998).

Ongoing

The fifth property of sensemaking is that it is seen to be an ongoing, constantly negotiated, process. March and Simon (1993:172) point out that what a person wants and likes influences what s/he sees; what s/he sees influences what s/he wants and likes. As the goals used as criteria for choice seldom represent final values, they too reflect the perceived relations of means to ends and hence are modified by changing beliefs about these relations.

Social

Weick’s sixth stated property of sensemaking is that it is not solitary. We make sense of things in organisations while in conversation, exchanging ideas with and reading communications from others, and sensemaking is influenced by the actual, implied, or imagined presence of others. This is in line with theories of social identity, which is largely concerned with the psychological underpinnings of

intergroup relations and social conflict (Ashforth & Mael, 1989; Haslam, 2001; Hogg & Terry, 2000) and self-categorisation, which focuses more broadly on the role of social categorisation processes in group formation and action (Turner, 1985). In both these theories it is concluded that how people make sense of the world, define themselves, and act in relation to each other is always a function of an interaction between their psychology and the socially organised environment in which they exist. Social identity should provide workers with a common perspective on reality and align and render more homogenous their otherwise unique experiences (Haslam, 2001: 280).

Grounded in identity construction

Sensemaking is grounded in identity construction (reviewed here as the seventh property of sensemaking, but viewed by Weick as perhaps the most important). For example, returning to Porac *et al.*'s (1989) study of the Scottish knitwear industry, the authors found beliefs about identity of the firm to be a key part of the mental model, i.e. to make sense of their environment the 17 firms collectively had to set themselves apart as distinct from others who made sweaters and then individually they had to differentiate among themselves. At a more individualistic level, it has been pointed out that, to varying degrees, people derive part of their identity and sense of self from the organisations or workgroups to which they belong (Czarniawaska-Joerges, 1992). Turner (2001:xiii) points out that organisations are not merely 'stimulus settings' which constrain or facilitate behaviour from outside, and change what we do, but that they also shape our cognitively represented self, changing our subjective experience of who we are and the psychological meaning of the environment. However, it is clear that people are not content to have their identity determined by the social cognitive context and, on the contrary, they say and do things to try to change the parameters so that a subjectively more meaningful and self-favouring identity becomes salient (Hogg & Terry, 2000). This complex, on-going, two-way process, is succinctly summarised by Weick (1995: 20):

“Depending on who I am, my definition of what is “out there” will also change. Whenever I define self, I define “it”, but to define it is also to define self. Once I know who I am then I know what is out there. But the direction of causality flows just as often from the situation to a definition of self as it does the other way”.

To summarise, sensemaking is seen to be a process which is: (1) grounded in identity construction, (2) driven by the plausibility, rather than accuracy, of possible interpretations, (3) focused on cues in the environment, (4) based on enacting sensible environments, (5) a social and (6) on-going process, and (7) essentially retrospective but also prospective.

2.4 Studies of Sensemaking

Sensemaking and related approaches have been applied to a range of topic areas, where, and as expressed by Gioia (2001: 346):

“Understanding social cognition dynamics enables the deeper understanding of virtually every other important organizational process, action, and structure”.

A sensemaking approach has been used to help explain a diversity of topics, including socialisation (Louis, 1980), issue and agenda formation (Dutton & Dukerich, 1991; Dutton & Jackson, 1987), change management (Gioia & Chittipeddi, 1991; Poole, Gioia, & Gray, 1989), managers’ interpretations of organisational change (Isabella, 1990), and technology diffusion (Barley, 1986; Weick, 1990). Others have focused on top management team members’ perceptions of identity and image under conditions of change (Gioia & Thomas, 1996), crisis (Weick, 1988, 1993), and biases in management sensemaking (Huff & Schwenk, 1990; Schwenk, 1985). There have been a number of cognitive studies that have provided invaluable insight not only into the identification of industry competitors and the bases on which they compete but why competitive industry structures in industries and markets come to develop in the first place (see, for example, Daniels *et al.*, 1994a, 2002a; Hodgkinson & Johnson, 1994; Porac *et al.*, 1989, 1995; Reger & Huff, 1993). Taking a cognitive perspective, Odorici and Lomi (2001) note that strategic competition is essentially a product of the tendency of competitors to construct some shared interpretation of a competitive arena within which strategic thinking and action becomes meaningful. However, sensemaking has focused primarily on strategic issue processing and making sense of the competition. There is a need to move beyond this, looking at sensemaking in contexts other than strategic ones, if we are to better understand sensemaking processes within organisations more generally.

2.5 Influences on Sensemaking

Weick (1995) suggested a host of issues which he believed may impact on our ability to make sense and how we do make sense of things, for example flatter organisational structures, the increasing use of information technology, and jobs involving lower discretion. Early research (see, for example, Axelrod, 1976; Ford & Hegarty, 1984) suggested that although specific exogenous variables would be very influential, the nature of that influence would vary across different individuals. While research is still limited, other later studies have taken into account exogenous variables and their relationship with cognition (see, for example, Markóczy, 1995, 1997, 2000, Markóczy & Goldberg, 1995). The empirical findings are equivocal. For example Calori, Johnson & Sarnin (1992) suggest that national culture might affect manager's interpretive processes, while Markóczy (1995) found evidence to the contrary. However, it is suggested that, in part, the particular view that a manager may have about a situation will be determined by that manager's role within the organisation (Hodgkinson & Johnson, 1994; Reger, 1990), whether this is, perhaps, by the social interaction (Chattopadhyay, Glick, Miller, & Huber, 1999; Ibarra & Andrews, 1993), by a person's place in an organisation's hierarchy (Ireland, Hitt, Bettis & de Porras, 1987), or more directly related to functional background of the role (Waller, Huber, & Glick, 1995). More particularly, Waller *et al.* detected that functional work experiences had no effect on which changes top executives perceived in their organisation's environments but that it did have an effect on which changes they perceived in their organisation's effectiveness.

There has been some research focused at multiple layers of management (for example, Daniels *et al.*, 2002a), and additional, albeit limited, attempts to look specifically at middle management (Floyd & Wooldridge, 2000; Westley, 1990; Wooldridge & Floyd, 1990). Westley (1990) examined the role of middle managers in strategic processes in bureaucratic organisations and found evidence of extensive dissatisfaction among middle managers who often perceived themselves to be excluded from strategic processes. Wooldridge and Floyd (1990) interviewed middle managers in 20 organisations and found their involvement in strategy formation to be correlated with improved organisational performance.

However, little attention has been paid in terms of broadening the range of organisational actors who are taken into account, and the number of studies appears to be inversely related to the number of people working at any particular level. Clearly the majority of those working in almost any organisation inhabit non-managerial positions, for example, Sparrow (1994: 158) stated that top teams frequently only represent 0.1% of total organisational membership. However, there is a striking dearth of non-managerial studies of sensemaking. For exceptions see Ibarra and Andrews (1993), who include both managerial and non-managerial workers in their study of power and sensemaking, Tulin (1984), Van Maanen (1990), and Van Maanen and Kunda (1989). This lack of attention to those in non-managerial positions is largely mirrored in research outside that which takes a sensemaking perspective (for notable exceptions, see for example, Beynon, 1984; Saunders, 1981) despite, once again, a wide variety of calls for attention to the paid to this level of employee (see, for example, Burrell & Morgan, 1979; Dépret & Fiske, 1993; O'Donnell, 2000). In relation to the ethical dimensions of changing management practices, Winstanley and Woodall (2000) conclude that more research is needed to examine the quality of working life and subjective experience of employees in the context of these organisational changes. If we are to understand sensemaking processes more generally we need to pay attention and focus upon non-managerial levels.

2.6 Sensemaking Beyond Managerial Populations

Weick (1979:16) explains the concept of majority rule and how subordinates often do not see the power they have in organisations. Nevertheless, while sensemaking challenges the over emphasis on the objective, there have been criticisms that the balance is now skewed to an under emphasis and that sensemaking is bound by constraints imposed by power differentials, distributed information and context (Keesing, 1987; Magala, 1997). Weick (1995: 176) echoes this concern when he states "I have shamelessly generalized these processes across organizations of all sizes, shapes, and industries". Weick (1995: 174) questioned what would happen in situations where people find it hard to act, either for dispositional or situational reasons, and proposed that they should experience a greater number of "senseless" events because they take fewer actions that focus sensemaking. While there is no simple linear relationship between height in a hierarchy and pervasiveness of one's

enactments (Weick, 1979), it is suggested that enactment varies according to the level of the person within the organisation (Child & Fulk, 1982) in so far as people in different positions have differential access to power, which means they have different degrees of latitude to impose their enactments on other people. Additionally, this may pose a potentially detrimental effect as, for example, preserving self-esteem, in the form of a valued social position, is important for positively maintaining psychological health (Warr, 1987). Gecas and Schwalbe (1983) summarise the complex interactions between the individual and the environment. Efficacious action is an important determinant of self-esteem, i.e. human beings derive a sense of self not only from reflected appraisal of others, but also from the consequences and products of behaviour that are attributed to the self as an agent in the environment. Actors then use whatever latitude they possess to reconstruct the meaning of action such that efficacy-based esteem can be derived from it. However, it is important to take account of constraints on individual autonomy, control (and availability of resources) for producing the intended outcomes, i.e. efficacy-based self-esteem depends upon an individual's opportunities to engage in efficacious action.

The sensemaking process is seen then to be inherently dynamic. As stated by Jahoda (1982), human beings are striving, coping, planning, interpreting creatures shaping life from the inside but they are also operating within the possibilities and constraints of social arrangements that shape life from the outside. Additionally, the social environment provides cues, which individuals use to construct and interpret events. Social context provides a direct construction of meaning through guides to socially acceptable beliefs, attitudes and needs, and acceptable reasons for action. It also focuses an individual's attention on certain information, making that information more salient, and provides expectations concerning individual behaviour and the logical consequence of such behaviour. Workers are likely to use social information in developing their perceptions of how meaningful and important their job is (Salancik & Pfeffer, 1978:229).

This raises the question as to what sources people in such situations draw upon to make sense of these apparently "senseless" events? As noted, within a sensemaking approach individuals are primarily viewed as being responsive to situational cues.

i.e. the current information context guides information processing in a ‘bottom up’ or ‘data driven’ manner (Walsh, 1995). However, it would be incorrect to believe this is the only influence on sensemaking. Cognition is viewed as the product of a complex interplay involving both contextual cues and individual prior beliefs (top-down processes). While even within institutional theory, there is some plea that researchers do not get too entangled in some of these intricate debates (Oliver, 1991), it is clear that these different processes are likely to vary across tasks and situations. In his review of the managerial and organisational cognition literature, Walsh (1995) stated that top managers draw largely from past experience rather than context. From the knowledge of sensemaking gained in managerial populations, we know that there are likely to be both complex idiosyncratic and converging realities. It would clearly extend our knowledge of sensemaking if we could gain some insight into the important situational/contextual and/or individual differences variables which influence sensemaking within non-managerial populations. Research to-date has verified that knowing the ‘facts’ does not determine our sensemaking and perceptions and the cognitive problem is to find out what else influences their shape.

2.7 Sensemaking, Well-Being and Productivity

In the area of occupational stress Lazarus (1993; 1999) argues that without considering people’s interpretations then it is impossible to know why people react differently to a range of events. For example, noise is an exemplar of a physical hazard, which can result in the impairment of hearing and prolonged exposure may also result in anxiety, irritability, tension and impaired performance efficiency (Cox, 1993). However, physical stressors such as noise have also been observed as antecedents of outbreaks of mass psychogenic illness. Compounding the effects of these stressors is the fact that most of the labour performed by workers involved in mass psychogenic illness outbreaks has been assembly-line work consisting of monotonous repetitive tasks. Control, perceived or otherwise, is an important mediator of stress (Baum & Singer, 1982). Similarly, research on perceptions of control suggests in general that a sense of personal control over environmental events has major adaptive value: it is an important factor in physical and mental health, achievement and buffering against stress. However, again, the crucial point is not so much people’s effective control over outcomes but people’s beliefs in such

control (Dépret & Fiske, 1993). The way in which an individual copes with stress may ultimately prove more important than the stressor alone (Baum & Singer, 1982). Daniels, Harris & Briner (2002b) employed a cognitive approach to understanding the risks of stress and found that mental models (known variously as, for example, cognitive models, scripts, and belief structures) have an influence on subsequent indices of psychological well-being, performance and physical symptoms. These authors concluded that while clearly no organisation should ignore the issues which influence employee interpretations and, of course, their responsibility to provide healthy working environments, it is important to understand the environment from the perspectives of those working in it.

As noted by Hodgkinson (2003) taking a cognitive approach to many issues in the occupational environment has contributed in a number of highly significant ways to the enhancement of employee productivity and well-being. For example, this applies to cognitive theories of motivation, such as equity theory (Adams, 1963), expectancy theory (Vroom, 1964), and goal-setting theory (Locke, 1968).

The topic of motivation links into that of the psychological contract, which is: “ a mental model that people use to frame events such as promises, acceptance and reliance. The promises that make up contracts have no objective meaning” (Rousseau, 1995:27). Guest and Conway (1997) have revealed the benefits of a positive psychological contract to employees in terms of motivation, and also issues of commitment, sense of agency, confidence and trust, and to organisations in terms of the benefits to be accrued from motivated and committed employees. Wagner, Leana, Locke and Schweiger (1997) carried out a meta-analysis of cognitive and motivational frameworks on participation. These authors believe their findings could be interpreted as evidence that self-report measures of affective variables (like satisfaction) are less error-prone than other types of measures that might, at first, seem less biased and objective. They further concluded that personal perceptions of experiential phenomena, such as participation, exert significant influence in shaping human thought and behaviour.

2.8 Contemporary Organisational Dilemmas

As noted in the introduction to this study, one of the most urgent problems facing contemporary managers is how to engage employees in employment relationships that will enhance individual and organisational performance (Herriot, 2001). In parallel there are concerns that adverse labour market conditions, coupled with modern workplaces pursuing profit and competitive advantage, mean poor working conditions, with insufficient research attention paid to the plight of employees (see, for example, Burchell, 1992; Fryer, 1995; McGuinness, 2000). The need to balance issues of welfare with those of performance is debated in further detail in Chapter 4 (The Rise of the Call Centre Phenomenon). These issues highlight a need for continued empirical research into how top management cognitions shape the organisation's decisions and strategies. They also point to the need for further attention to be focused on management sensegiving, i.e. the process through which managers attempt to influence the sensemaking and meaning construction of others towards a preferred definition of organisational reality (Gioia & Chittipeddi, 1991; Hodgkinson & Sparrow, 2002). In the context of change, Isabella (1990: 34) concluded that even if top managers might be uncertain, they should provide as much information as possible to subordinates as this could: "increase the likelihood that they will fit reasonable pieces of the puzzle together". From a sensemaking perspective, this does not just mean paying attention to potentially inadequate communication but also to more fundamental misconceptions caused by multiple realities. Research is required to look at how management, decisions, strategies, rules and communications are perceived to impact upon such issues as individual and organisational performance and well-being - from the perspective of the employee.

While managers may set in motion what to them appears to be one strategy this may be perceived quite differently from an employee's perspective. It has been suggested that managers assume that their views of and actions towards the world are valid; they assume that other people in the organisation will see and do the same things, and it is rare for managers to check these assumptions (Weick, 1979:160). This reflects the general human resource management (HRM) literature, where Herriot, Hirsch & Reilly (1998: 39) conclude:

"so much research into HRM is unreliable: it uses only top management or HR professionals as the sources of information. They may well believe that because they have 'put the HR architecture in place', because systems exist, then they are being used, and in the way intended. They are often mistaken".

From research to-date, it has been found that we construct the meanings of things based on reasonable explanations of what might be happening rather than through scientific discovery of "the real story." In the context of creativity and sensemaking, testing the performance of a product component could be construed to mean different things to an engineer. Depending upon his or her frame of reference, the test might be regarded as a critical step in developing an important prototype and, thus, worthy of creative engagement; conversely, it might be viewed as "make work" imposed by management and, thus, less inviting of creative engagement (Drazin, Glynn & Kazanjian, 1999). There is certainly no shortage of examples in the HRM literature depicting differences of perception between employees and management (see, for example, Campion, Medsker & Higgs, 1993; Likert, 1961). If workers' actions seem irrational to managers, these actions have repeatedly been shown to be 'sensible' to workers, whose viewpoints were often unknown to management (see, for example, Bendix, 1974; Beynon, 1984; Jelinek & Litterer 1994). Zucker (1991) points out the failings of assuming that people internalise and adopt whatever is handed to them. Zucker further points out that institutional theorists sometimes assume ideologies (institutional systems) are more homogenous for larger sets of people than close inquiry shows to be the case but individuals also have agency and take actions that shape their environments (Giddens, 1979; Gioia & Pitre, 1990).

Sensemaking is said to be partially dependent on the perceptions of "communities of believers" who have their own "local rationalities" or "interpretative stances" (Weick, 1995). These local rationalities are in turn embedded in larger 'systems of meaning' - some of which are individual and some of which are shared by the group and there are likely then to be both shared and idiosyncratic understandings (Fletcher & Huff, 1990). Loosely applying Weick's theoretical framework, in the social setting of the organisation (group or industry) an individual will, via their sensemaking processes, and using only some of the 'facts', make a plausible account of what is happening. From a largely retrospective gathering of the facts, the

individual will then make sense of the future and use this as the basis for making decisions. An individual's sensemaking will thus inform their decision making in terms of whether to leave the organisation or what degree of effort and enthusiasm they will invest – in their work and/or the building of the work community - hence helping to shape the internal organisational environment.

2.9 Conclusions

On the basis of the above review of the literature, it would seem that sensemaking appears to have been construed in too narrow a fashion, with the implication that it is only sensemaking at the top of the organisational hierarchy that matter. Not only has work on sensemaking been restricted to senior levels, it has also focused primarily on strategic issue processing and making sense of the competition. There is a need to move beyond this, if we are to better understand sensemaking processes within organisations more generally, by focusing on non-managerial levels and sensemaking in contexts other than strategic ones. The challenge set by Weick (1995) and Huff (1997) to take sensemaking studies beyond managerial populations has largely not been taken up. The work reported in this thesis responds directly to this challenge.

In Chapter 3 the discussion moves on to consider key methodological issues pertaining to the capture of participant sensemaking that were taken into account in this study.

CHAPTER 3

Sensemaking and Related Perspectives – Methodological Issues

This Chapter looks at the methods employed to study sensemaking to-date, moving to issues of cognitive mapping and the more particular details of cause mapping techniques. This Chapter does not provide details of the *particular* methodologies that were employed in this study (as these were, of course, also dependent on the chosen study context) but rather identifies the wider debates to be taken into consideration in any study of sensemaking.

3.1 Methods Employed To-date

Wide-ranging methods have been employed to study sensemaking from nomothetic (deductive), for example, laboratory studies (Boland, 1993), to ideographic (inductive), for example, field observation (Krieger, 1979). Some researchers advocate the use of observational techniques to study sensemaking. For example, Krieger (1979) conducted a field observation of the way a decision was interpreted by different radio station employees, while Boje (1991) used participant observation of storytelling. Others have warned of the difficulties of drawing meaningful inferences from empirical observations, which are particularly susceptible to researcher biases and potentially more likely to reveal the sensemaking of the researcher than that of the participant. As expressed by Starbuck (1989: 20):

“Probably most organizations develop perceptions of themselves and their environments that diverge greatly from what an outsider might regard as objective reality”

In their study of emergent interpersonal transaction processes during the management of a research project, Ring and Rands (1989:342) define sensemaking as a “process in which individuals develop cognitive maps of their environment”. In other words, the concepts and relationships between them that a participant uses to understand organisational situations are pulled together in the form of a cognitive or mental map. Individual maps are likely to look quite different from how researchers perceive the ‘objective’ elements of the environment and an observer watching a person’s activities without knowing their context, as displayed by that person’s map.

may well endow these activities with a different meaning from the one that person attaches to them. Bougon *et al.* (1977) illustrated this empirically when one of the authors (Weick) produced a cause map (one particular form of cognitive map) of the Utrecht Orchestra based on observation. Comparison of this with the cause map constructed by members of the Orchestra revealed that, with the exception of one aspect, Weick had generated results opposite to those of the participants, leading these authors to conclude: “Clearly, an investigator favors his own observations over those of participants at great risk” (p.627). It is evident that sensemaking is to be found in what people say, or say they think, as much as in what they do (Nicolini, 1999), though what actions are taken or predications made depend on beliefs about causal relations (Fiske & Taylor, 1991). Thus while it can be useful to deliberately step through different ways of looking at information (Sparrow, 1998) and time spent gaining insight via observation was likely to prove beneficial, this, by itself, would not allow the capture of sensemaking.

Reflexivity enables people to make narrative stories of the relationships that make sense to them (Herriott, 2001:129). This is in line with Weick’s observation (1995: 173) that successful sensemaking studies “deal with meanings rather than frequency counts” and certainly in this study a method is required which will not unduly restrict sensemaking. However, while acknowledging that some interview approaches secure a more comprehensive searching of views than others, Sparrow (1998:80) summarises the main problems of “straight” interviews in terms of their loss of valuable information implicit within what people are saying and the difficulties involved in interpreting the implied significance to the participant.

Weick’s (1995: 169) further conclusion is also noted, that while empirical quantitative research has added little to what we know about sensemaking, it does not necessarily imply the need for an expansion of ideographic research methods but may, in fact, require a more “vigorous turn” not only for additional empirical studies but for more (rather than less) quantitative approaches. This would imply a form of methodology not solely restricted but *also* potentially amenable to frequency counts. This is a conclusion not dissimilar to that of Huff and Fletcher (1990: 411) who, more than a decade ago, depicted the challenge of researchers of cognition to be that of devising and applying methods which capture it in some “reasonably rigorous, reliable and replicable” manner.

3.2 The Potential of Cognitive Mapping

If we can gain insight into the way a person makes links to an issue, it helps us to understand the way the person makes sense of that issue. The term most frequently used to describe elaborate depictions of the interrelationships that a person holds between things is “mapping” (Sparrow, 1998:88). For some (Gioia, 1986; Ring & Rands, 1989) sensemaking is essentially defined as a cognitive map, i.e. a mental map of the concepts (issues) and the relations between them (links) that a person uses to understand organisational (or other) situations. A cognitive map is not supposed to be a scientific model of an objective reality but rather a presentation of a part of the world as a particular person sees it. It can never be shown to be right or wrong in an objective sense (Eden, Jones & Sims, 1983). While mapping is said to often be more labour-intensive and time-consuming than other research methods (Huff & Fletcher, 1990), cognitive mapping procedures are being employed increasingly within the managerial and organisational cognition literature as a powerful means of representing actors’ beliefs. This is especially so in the context of strategic management research, where a wide range of techniques have been applied in an effort to map the mental representations of decision makers (for comprehensive reviews, see, for example, Eden & Spender, 1998; Hodgkinson & Sparrow, 2002; Huff, 1990; Walsh, 1995). Fiol and Huff (1992) suggest that mappings of all forms are considered valuable because they provide a way to structure and simplify thoughts and beliefs, to make sense of, and to communicate information about them. Langfield-Smith (1992:350) points out clearly one of the potential benefits of cognitive mapping techniques is their potential to:

“describe an individual’s idiosyncratic world view, while filtering out the myriad details which relate to specific situations or detailed instances of an individual’s experiences”.

The choice of mapping method depends largely upon whether the model of cognition is seen to be relatively simple, where, for example, simple counting and weighting of words in a text (Berelson, 1952) would be acceptable, or rather more complex, and involving a considerable amount of researcher interpretation. Huff (1990: 14) describes and summarises the continuum of choices, from simple to complex, under five main headings, maps that: (1) assess attention, association and the importance of concepts (see, for example, Bowman, 1984), (2) show dimensions

of categories and cognitive taxonomies (see, for example, Hodgkinson & Johnson, 1994), (3) reveal understanding of influence, causality and system dynamics (see, for example, Bougon *et al.* (1977)), (4) show the structure of argument (see, for example, Newell & Simon, 1972), and (5) specify schemas, frames and perceptual codes (see, for example, Fiske & Linville, 1980).

The cause map is the most common form of mapping, though its application has largely been restricted to the context of strategic management research. The present study required the ability for analysis beyond simple frequency counts, i.e. what issues are seen to be important (extracted by cues) and at what level (overall, organisation and/or individual)? For example, are issues perceived to have a similar influence (or are similarly influenced), across different individuals or groups of individuals? Further to this, what is the relative complexity of the sensemaking process across these levels? The direct links to action implicit within this approach made it particularly promising and essentially the obvious choice in this study context.

3.3 Cause Mapping

Axelrod (1976) developed a cause mapping method used in political science. The rationale here being that when a map is pictured in graph form it is then relatively easy to see how each of the concepts and causal relationships relate to each other and to see the overall structure of the whole set of portrayed assertions concerning a particular domain. Cause maps are not linear; they show not just one construct (issue) but interrelating constructs, variety of constructs and the relationship between constructs, which are the key. They cope with dynamics and encourage a holistic synthesis of an actor's view of the world (Huff, 1990; Weber & Manning, 2001) and as stated by Bougon (1983:181):

“in contrast to languages' linear statements, a cause map constitutes a self-contained “cybernetic statement” summarizing one's sense-making activities this summary of sense-making becomes the context within which one's activities make sense”.

The simplest forms of cause map, using the medium of the influence diagram (Diffenbach, 1982), are restricted to a consideration of positive (increases in one

variable/construct cause corresponding increases in one or more other variables/constructs), negative (increases in one variable/construct cause corresponding decreases in one or more other variables/constructs), and neutral (no causality implied) relationships (see Figure 3.1). More sophisticated variants of the technique enable these relationships to be differentially weighted, on the basis of the participant's belief strength, for example, or the degree of certainty/uncertainty surrounding each particular causal assertion. Each construct can assume a variety of values dependent on its relationship to other constructs (Langfield-Smith & Wirth, 1992; Weick, 1979). Though to a large extent dependent on the actual methods employed to elicit cause maps, they have been shown to assist in the depiction of substantive content (Narayanan & Fahey, 1990) and to allow some quantitative conclusions to be drawn regarding different levels of sensemaking consensus.

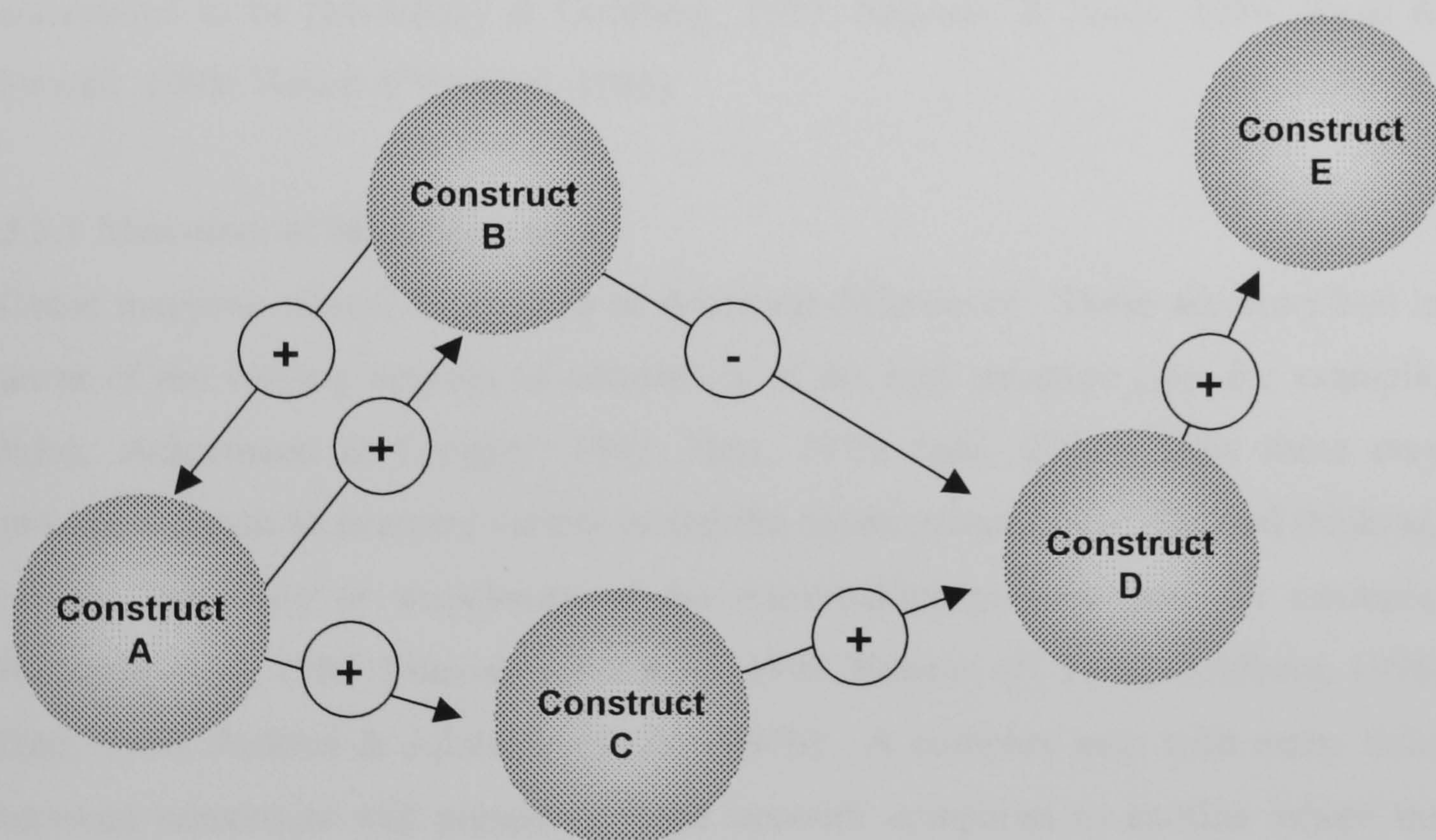


Figure 3.1 – An illustrative cause map

For any given pair of constructs, there may be a circular link a 'loop' whereby a construct ends up affecting itself. Loops can be either positive (deviation amplifying) or negative (deviation counteracting). For example, examining

$A \longrightarrow B$ and $B \longrightarrow A$, if the link A,B is negative, and the B,A link is positive, then we have a deviation counteracting loop because an increase in A lowers B , but this decrease in B , in turn, lowers A . If, on the other hand, as in Figure 3.1, both constructs are signed the same, then the loop is deviation amplifying (Axelrod, 1976; Voyer & Faulkner, 1989; Weick, 1979).

The indegrees (number of links into a construct from other constructs) reveal the extent to which a construct is directly/or indirectly influenced by another construct. The outdegrees (number of links out of a construct to other constructs) are indicators of the extent to which a construct exerts a direct or indirect (reachability) causal influence on another construct (Axelrod, 1976; Ford & Hegarty, 1984; Harary, Norman & Cartwright, 1965). Generally, the greater number of indegrees into and/outdegrees from a construct, the more important that construct (or salient) is considered to be (Markóczy & Goldberg, 1995; Salancik & Porac, 1986; Swan & Newell, 1998; Weick & Bougon, 1986).

3.3.1 Measures of Map Structure

Cause mapping allows the capture of structural differences. These are described in terms of the varying degrees of complexity of the map structure (see, for example, Eden, Ackermann & Cropper, 1992; Hart, 1976; Nair, 2001). Thus these may provide a means to examine variety in and the development of complicated thinking, i.e. the simplicity or complexity of the sensemaking process (see, for example, Bartunek *et al.*, 1983; Eden & Ackermann, 1998; Eden *et al.*, 1992; Goldberg, 1996; Hart, 1976; Jenkins & Johnson, 1997a, 1997b). A complex map with many links between constructs will present a dense network compared to another where the constructs do not have many connections. In the latter example the resulting map may look like a configuration of isolated constructs.

The implications of the different maps are not straightforward. Weick (1979) perceived a simply structured map to have essentially negative consequences, equating this simplicity with narrowness of vision and an impoverished view of the work. Using a similar rationale, Bartunek *et al.* (1983: 275) suggested that in complex situations cognitive complexity leads to more effective behaviour as well as more accurate perception:

“Complicated understanding increases the probability that individuals will perceive events (especially complex events) more accurately, synthesize diverse perceptions and experiences more completely, and generally behave more effectively”.

Hall (1976, 1984) found that executives often pick the simplest, most direct argument but, in support of Weick’s perception, concluded this to be a negative characteristic causing detrimental organisational consequences. Clarke & Mackaness (2001) did not find that senior managers had more complex and coherent cause maps compared to less senior executives. However, these authors did not link this exploratory study (involving 4 participants) to any particular outcome. In the context of 26 Chief Executive Officers, Calori, Johnson and Sarnin (1994) concluded that more complex maps will not necessarily lead to superior performance but that cognitive complexity levels should match the complexity levels of the environment. For example, the top managers of firms with an international geographic scope were seen to have more complex maps of the structure of their environment because additional complexity was required.

In his study in one metal processing plant, covering a wide range of managers drawn different managerial functions, Nair (2001: 234) concluded:

“Specifically, with increase in map density (as a measure of structural complexity), success in problem solving as measured by favourable outcomes increased up to a certain point and then declined”

“Further research is needed to establish if very elaborate or highly dense cognitive maps lead to ineffective problem solving or is dysfunctional in general” (p.237)

In his detailed summary of the managerial and organisational cognition literature, Walsh (1995) concluded that research into map structure fell way behind that of content, with a recommendation that more work should be carried out to substantiate the tentative findings to-date.

3.3.2 A Combination of Cause Map Measures

Walsh (1995) further points out that, obviously, content and structure are conceptually entwined (i.e. it is impossible to conceive of a knowledge structure that

has one and not the other), but, with few exceptions (for example the above noted exploratory study of Clarke & Mackaness, 2001), issues of content and structure have not been simultaneously considered in research efforts. A further unexploited map feature, depicting additional elaboration of beliefs, is link strength density for selected nodes (total link strength divided by the number of nodes), which gives an indication of the strength of relationships within the map (see Langfield-Smith & Wirth, 1992: 114).

3.3.3 Comparison of Cause Maps

Axelrod considered individual maps separately to trace the antecedents of some event or policy. Others also investigate the idiosyncrasies of individual (see, for example, Cossette & Audet, 1992) or small numbers of maps (see, for example, Clarke & Mackaness, 2001). Clearly there are times when small-scale studies, often exploratory in nature and operating in unfamiliar areas, are invaluable, though much of the utility of cause maps in the organisational context is their application to larger number individuals and/or groups, comparing their similarities and differences in a range of contexts or over periods of time. As noted earlier, Huff and Fletcher (1990) conclude that mapping is said to be more labour-intensive and time-consuming than other research methods and Nair (2001) suggests that it is perhaps because of the tedium of working with larger samples that researchers have continued to conduct small sample size studies.

3.4 The Status of Cause Maps

There is a wide spectrum of views as to the status of cause maps. In the context of political elites, Axelrod (1976:10) expressed the opinion that a valid map does not necessarily have to be consistent with a person's private beliefs and that the overall research strategy of his seminal volume was "to base what is being measured on what is being asserted rather than what is being thought by a person". For others maps are seen as representing an individual's beliefs concerning a particular domain at a point in time (Langfield-Smith & Wirth, 1992: 1135) or with the potential to have the same essential characteristics as thought itself (Huff, 1990: 14). However, Huff also, like other researchers (see, for example, Eden, 1992; Laukkanen, 1998; Scheper & Faber, 1994), expresses the opinion that causal mapping need not be necessarily linked with the psychological construct of cognitive maps to still be a

very useful tool for summarising and communicating information. They may represent subjective data more meaningfully than other models and so have utility for researchers interested in capturing subjective knowledge. In their study evaluating the potential of cause maps in the capture of sensemaking in the context of planned organisational change, Weber and Manning (2001) depict cause maps as portraying a comprehensive “snapshot” of sensemaking.

In this study cause maps are not seen in a profound manner as being a literal representation of what is in a person’s head. Rather, the stance taken is that cause maps will provide an invaluable device enabling an individual to think through (make sense of) a potentially complex situation. They are seen as a meaningful way of representing what a participant says they think is important, essentially by depicting the relationships between these important issues.

3.5 Elicitation of Cause Maps

Despite their widespread popularity, there is currently no agreement concerning the most appropriate way to elicit actors’ causal belief systems. Methods of data elicitation for causal mapping construction range from post hoc analysis of data, in the form of analysis of text (Barr, Stimpert & Huff, 1992; Fletcher & Huff, 1990) or individual interviews (Calori, Johnson & Sarnin, 1992, 1994; Jenkins & Johnson, 1997a) to the elicitation of maps in situ (Markóczy, 2001; Markóczy & Goldberg, 1995), sometimes prescriptively, as a basis for intervention through ‘action research’ (Cropper, Eden & Ackermann, 1990; Eden *et al.*, 1992; Eden & Ackermann, 1998). Procedures have been adapted in a various ways for different research purposes and methods are driven by a variety of issues. Fundamental epistemological beliefs, in particular the acceptable level of researcher intrusion, dominate issues of validity and reliability. What are the research questions to be addressed? What is the study context and what are the requirements of sample size? Easterby-Smith, Thorpe and Lowe (1991) point out the non-trivial pragmatic issue of access requirements that not only require consideration but are often a major determinant of research questions. Does the methodology capture the issues that are of importance to the participant and is it free from any systematic bias imposed by the researcher? Does the researcher lay emphasis on the initial stage of data collection or on the later stage of analysis?

As his basis of analysis. Axelrod used the theory of directed graphs (Harary, Norman & Cartwright, 1965) and represented each cognitive map as a valency or adjacency matrix. Bonham and Shapiro (1976) built on this analysis and used descriptive analysis to describe in detail the relationships between elements depicted in the maps of one Middle East expert constructed from transcripts emerging from a foreign policy simulation game. However, the choices become more complex when comparisons are required, particularly over larger sample numbers as in this study context. Mirroring the conclusion of Jenkins (1998) and, more recently, McDonald, Daniels & Harris (in press), an extensive review of the cause mapping literature reveals there is no 'easy' solution to resolve the dilemma between the requirements of allowing the natural language form of the study participants (thereby ensuring that the research tasks are meaningful) vs. ensuring comparability of data over participants. There are several key decisions that need to be made regarding the different aspects of the particular choice of investigation before making the optimum choice of method: collective vs. individual sensemaking, ideographic vs. nomothetic data collection, and the acceptable balance between a meaningful participant process vs. comparability of data over participants.

3.5.1 Collective vs. Individual Sensemaking

As discussed in Chapter 2, via the sensemaking processes, and to varying degrees, groups of individuals are seen to construct shared interpretations of reality (Berger & Luckmann, 1967, Weick, 1995). In other words, what starts out as individual and non-routinised is said to become, over time, an institutionalised group-level process (House, Rousseau & Thomas-Hunt, 1995). The main issue here pertains to the relation between the map of the collective and the maps of the individuals who constitute the collective. While multiple individual data collection may moderate concerns of bias, lapses of memory, protection of sensitive issues of social norms and desirable answers (Fletcher & Huff, 1990:405), it is questioned whether a collective map can be obtained by aggregating individual maps or whether other methods should (or can) be applied (Scheper & Faber, 1994). This is dependent on one's stance regarding the status of collective cognition but also concerns the non-trivial issue of the limited methods available with the potential to actually capture cognition at this level. In the composite map individuals first describe their own idiosyncratic map, then see the cause maps constructed by others, followed by a

composite (single) map that contains all the concepts and relations found in all the individuals' map. From this, via discussion, negotiation and edit, there is an attempt to build a team map that is both accurate and acceptable (Eden *et al.*, 1983). The inability to obtain map consensus is a key concern in the production of the composite map. Huff and Fletcher (1990: 405) believe production of a composite map from several individuals means it is "necessary to devise sensible decision rules for handling inevitable inconsistencies", though, as well-illustrated in Langfield-Smith's (1992) study, gaining consensus from just six group members can prove to be impossible.

An assemblage procedure pertains to the identification of common elements in diverse cause maps that are linked across maps (Hall, 1984), one form being a congregate map (Bougon, 1992). A congregate map consists of individual cognitive maps tied together by common elements, i.e. 'congregate labels' that are cryptic and have different meanings for different people. For Bougon cognitive maps are sets of interrelated labels, in which no attention is given to defining non-properties and, as pointed out by Scheper & Faber (1994: 178), the approach leaves unresolved the problems of specificity and overlap.

Weick and Roberts (2001) depict the notion of the collective mind as a well-developed, thoroughly social organisational mind, which is capable of reliable performance. However, while these authors use particular practical examples of how this might or might not be successfully achieved, there is no indication of how this can be measured at any level other than by looking at the individual contribution. In other words, there is no indication that, despite these debates regarding collectivity, Weick has moved from his earlier explicit statement that the level of analysis appropriate for a cause map is the individual (Weick & Bougon, 1986).

Laukkanen (1998) operationalised collective cognition by first mapping individual cognitive maps, and then using the agreement between these individual maps to formulate the collective, while others (see, for example, Bougon *et al.*, 1977; Ford & Hegarty, 1984; Voyer & Faulkner, 1989), demonstrate methods for aggregating individual cause maps in order to depict collective sensemaking. While an

aggregated map cannot be said to be representative of any individual map. it can allow for uneven representation in group-level structure (Walsh, 1995: 292). It allows the identification of mean sub-group response in terms of, for example, the perception of how much a construct influences, or is influenced by, other constructs, the overall detrimental or beneficial effect, and whether there are any clear differences between the sub-groups.

However, clearly causal mapping methodologies permit study of the overall structure of a communication (sensemaking) and are not solely a way to aggregate its separate elements. When comparing cause maps, four types of differences can be identified: (1) the existence or non-existence of constructs (one person believes that a particular construct is important to their domain and another does not), (2) the existence or non-existence of relationships between those constructs (one person believes a construct has an influence upon or is influenced by another construct and the other person does not), (3) the relationship can have different polarity (one person thinks that the relationship between the constructs is negative, the other person believes them to be positive), and (4) polarity strength (the individuals hold the same belief about polarity but one person believes the relationship is stronger than the other person) (Langfield-Smith & Wirth, 1992). When more structured elicitation techniques are used to formulate maps there is the possibility of being able to analyse the similarities and/or differences between the individual maps of the participants using well-known statistical techniques (Daniels, Markóczy & de Chernatony, 1994b).

3.5.2 Ideographic vs. Nomothetic Data Collection

The fundamental issue here pertains to researcher imposition of their ideas vs. capture of the participants' own sensemaking. Mishler (1986:118) asked that care be taken to consider the problems any study may cause for respondents in "their efforts to construct coherent and reasonable words of meaning and to make sense of their experiences". The likely unfamiliarity of cause maps to the vast majority of study participants, whereby the resulting frames would be more likely to reflect understanding or non-understanding of the procedure and technique of drawing up a cause map rather than a true reflection of their sensemaking, render the possibilities of participants drawing up their own cause maps an essentially unfeasible option.

Despite explicitly building in practice time, Ford and Hegarty (1984) found this to be an unresolved problem for both the managerial and student participants in their study. Similarly, as interviewers, McDonald *et al.* (in press) found it was necessary to facilitate the cognitive mapping process, i.e. not just for practical issues of mapping production but because some information and/or associations may be so deeply ingrained that they may take the form of taken-for-granted assumptions.

Axelrod's (1976) preferred stance was that cognitive maps are derived from whatever materials are left behind in the normal course of the decision making process as, while potentially problematic in terms of issues of sincerity, documentary evidence is non-intrusive and not likely to influence thought process. Nevertheless, Axelrod acknowledges the limitations of documentary evidence, in particular the limited range of forthcoming information, as in the context of this study where there is clearly unlikely to be any company documentation from which it is possible to ascertain the sensemaking processes of the non-managerial population. Thus Axelrod suggests other forms of elicitation, for example interviews that have the "advantage of allowing the researcher to interact actively with the source of his data" (p.8). Similarly Huff and Fletcher (1990) balance the advantages gained by using documentary evidence against the subtleties available to the researcher who interacts directly with the subject. Interactive methods may, under conditions ensuring confidentiality, have the capacity to reveal complex relationships (Huff, 1990) and interviewing techniques have been found to be useful in helping gain a better understanding of sensemaking (Weick, 1995). Interactive methods are associated with people imposing more order on recollected events (Schwenk, 1985) or seeing links once asked questions (Huff & Fletcher, 1990), which in the context of different epistemologies is considered to be more or less acceptable. For example, in the extremely labour intensive Self-Q (questioning) Technique (Bougon, 1983; Bougon, Baird, Komocar & Ross, 1990), the participants both devise and answer the questions, the aim being not to mention any concept, "lest they become "planted" in the interviewee's mind" (Bougon, 1983:182).

Eden and Ackermann (1998) give the warning that when research participants are given the freedom to add any constructs to the map: "the process of comparison becomes fraught with difficulties" (p.195). However, they are critical of techniques

whereby research participants are asked to select a subset from a pool of constructs to be included in their cause map on the grounds that this limits the extent to which the resulting maps can be personalised, and that valuable information may be lost if the focus of the interview or other form of data collection restricts the richness and detail. The issue here appears not be whether to restrict or not but rather what degree of restriction is considered to be acceptable. Advocates of selection from a construct pool (Hodgkinson, 1997b, 2002; Hodgkinson & Sparrow, 2002; Markóczy, 1997, 2001; Markóczy & Goldberg, 1995) emphasise analysis and conclude these techniques are particularly helpful for comparative measures, the idea being that systematic elicitation of beliefs lays the ground for systematic comparison and analysis. A potential criticism of nomothetic methods is that, by constraining choice, they might potentially lead to greater convergence of response than with free response methods, by virtue of both the standardised stimuli and attributes employed in the elicitation process (Daniels & Johnson, 2002). However, these researchers also acknowledge that ideographic methods *may* artefactually increase the divergence amongst cognitive maps through demand characteristics, which emphasise surface-level triviality in the maps during interviews though it is *not* inevitable that they do.

In all these methods, Jenkins (1998:241) suggests that there needs to be some level of trade-off between fully capturing data which is meaningful to participants and ensuring data is elicited in such a manner to ensure sufficient commonality so that comparisons are meaningful.

3.6 Conclusions

Cause mapping presented a potentially invaluable benefit in this study, to capture individual sensemaking in a form amenable to comparisons in order to detect idiosyncratic and shared sensemaking content and structure. If this study was to achieve any generalising of the experiences of the non-managerial participants, then the use of a detailed case study approach was essentially problematic. However, if larger scale studies were to be used, there was a fundamental need to capture a more complex interplay of issues than is generally possible from the typical survey methods employed. At this stage it appeared that if cause maps could be captured on this wider scale (i.e. potentially capitalise further on their utility) this might prove

to be particularly illuminating, though, of course, whether this was applicable also depended upon the study context and how far our knowledge of that context was advanced.

As pointed out by several authors (Huff, 1990, 1997; Lant & Shapira, 2001; Weick, 1995), by considering the complex, unstructured nature of problems in organisations, we are able to see things that we would not if we just focused on individual cognitive processes in the absence of a context within which it is embedded. The call centre context, in which the workforce is primarily inhabited by those in non-managerial positions, and where key concerns have been expressed regarding a variety of working practices, represented an ideal context in which to take up this important (theoretical, empirical and methodological) challenge, as will be demonstrated in the following chapter.

CHAPTER 4

The Rise of the Call Centre Phenomenon

Call centre operations have attracted attention from government bodies, trade unions, practitioners and academics. The industry/sector has generated specific associations (for example, Call Centre Association, Call Centre Management Association, and The Outsourcing Institute), and given rise to numerous conferences, events, and specialist practitioner journals (see, for example, *Call Centre Focus*, *Call Center Magazine*, *Communications News*, *Fast Company*, *IT Week*, *Network World*, *Telephony*). The sector has a high (largely adverse) media profile and employs a large (and growing) number of the global workforce. As concluded by Houlihan (2002: 67): “Call centres have become part of everyday experience and hold a grip on public imagination”. The purpose of this chapter is to set this industry into (a) the wider international and global context, and (b) work organisation context, in order to detail why this high-profile sector was seen as an ideal setting in which to further our knowledge of sensemaking beyond management populations.

4.1 International and Global Context

The most significant development in the world economy during the past few decades has been the increasing internationalisation and globalisation of economic activities, enabled by such factors as reduced trade barriers, increasingly portable technologies and declining transportation costs, and more integrated financial markets. The major general trend has been for employment in services to grow far more rapidly than in manufacturing. The service industries account for the largest share of gross domestic product in all but the lowest-income countries, and are increasingly the major source of employment in all the developed, and many developing, market economies (Dicken, 1998). Despite diverse cultural and political systems, there is a tendency towards greater informational content in the occupational structure of advanced societies (Castells & Aoyama, 1994). Technological developments in products and processes are widely regarded as being a major factor in changing the employment scene in terms of both numbers and types of jobs available. Information technology facilitates globalisation because it allows ready access to

employees all over the world at nominal cost (Hitt, 2000). There have been substantial changes in the demand for particular types of labour associated with technological change in processes and products, including the growth of direct telephone and computer provisions of banking, insurance and other services. Much of the growth in service work has been in the more explicitly 'interactive' categories such as telesales. This is typically characterised by the management of operatives in one central point whereby calls can be taken for an organisation irrespective of geographical location, i.e. the call centre (Anton, 2000; Breathnach, 2000; Bristow, Munday & Gripaios, 2000).

4.1.1 Call Centre Profile

The call centre industry has a high media profile and publicity has, in the main, been adverse (see, for example, Arkin, 1997; Wylie, 1997). The call centre organisation reflects a mass production approach to customer service (Batt, 1999) and concerns regarding the intense labour regime have been expressed from many sources, including government bodies, unions, and academics. Jobs are characterised as low status, tightly monitored and controlled, and stressful. Hutchinson *et al.* (1998) believe the telephone call centre might be regarded as the very epitome of the lean organisation. Rather than a network of offices and branches, large groups of employees are working on the front line, in immediate contact with and personally exposed to the pressures from customers in the external marketplace, while simultaneously representing the company to the customer. Key concerns include job monotony, lack of career development, setting and frequent refocusing of unrealistic targets, electronic performance appraisal, high levels of surveillance and working environment issues (such as air quality, temperature and lighting) (Health & Safety Executive, 2000a, 2000b; HELA, 2001).

One description of the new office is that of an "office factory" (Rousseau & Wade-Benzoni, 1995). Call centres have been described as "the new sweatshops" (Brown, 1998; Fernie & Metcalf, 1998), or "an assembly line in the head" (Taylor & Bain, 1999) and call centre workers depicted as "human answering machines" (Wylie, 1997). However, contrary to this, Hatchett (2000: 40) states that "not all call centres are terrible places to work". Frenkel, Korczynski, Shire and Tam (1999: 71) believe that call centre workers do not fit the stereotypical image of the "technologically

incarcerated, regimented front-line employee” and Frenkel, Tam, Korczynski & Shire (1998) go further to reveal a ‘high tech’ call centre image where jobs provide challenge and interest. Nevertheless, the more typical conclusion reached is that call centre working practices are particularly controlled and, for some, stressful (see, for example, Houlihan, 2002; Kinnie, Hutchinson & Purcell, 2000). Taylor and Bain (1999) found that even in the most quality driven call centres it was difficult to escape the conclusion that the labour process was intrinsically demanding, repetitive and frequently stressful. The first strike (November 1999) in the call centre sector, by approximately 4,000 members of the Communication Workers Union (CWU) at British Telecommunications (BT) call centres, was a protest at working conditions. The major issues related to strict targets, an oppressive management style and persistent under-resourcing (Lamb, 1999). In a recent study, covering four call centres located in a range of functional areas, Bain *et al.* (2002) conclude: “the continuing application of Tayloristic methods appears likely”. Similarly, Taylor, Mulvey, Hyman and Bain (2002: 136), while agreeing that call centre workers no longer fit the earlier stereotypical front line agent image, state:

Our final conclusions are that routinization, repetitiveness and a general absence of employee control are the dominant, although not universal, features of [call centre] work organization”.

The sector has attracted considerable academic interest. In part, this is because its intensive use of performance data gives an often-lacking insight into the service sector *per se* (Hutchinson, Purcell & Kinnie, 2000). Others have looked at this industry as just one of several in order to examine a variety of specific issues, for example, lean working methods (Hutchinson *et al.*, 1998), compensation systems (Fernie & Metcalf, 1998), or worker participation (Batt & Appelbaum, 1995). For others there is an interest in one particular issue in this sector, for example, implications for urban development (Bristow *et al.*, 2000), trade unions and workers’ rights (Taylor & Bain, 2001a), or the experiences of staff working under a regime of business process re-engineering (Knights & McCabe, 1998). Yet others have examined the sector more generally to examine the work provided and the experiences of those working under this particular form of work organisation (see, for example, Bain *et al.*, 2002; Batt, 1999, 2000; Gates, 1999; Holman & Wood, 2002; Richardson & Marshall, 1999; Taylor & Bain, 1999; Wallace, Eagleson &

Waldersee, 2000) or worker well being (Holman, 2002; Taylor, Baldry, Bain & Ellis, 2003).

4.1.2 Call Centre Definition

Despite this attention, there continues to be confusion regarding a 'call centre' definition. Some organisations use the term call centre merely because they have a telephone and a computer. Others, keen to differentiate the nature of their operations in the face of critical media attention, have substituted the title for 'customer service centre' or 'customer satisfaction centre' (Reilly & Pickard, 2000). Additional technologies, for example e-mail, the Internet and corporate Web sites, have led to the use of terms such as 'contact' or 'access' centre. In this study, the definition used is that of HELA (2001) who have carried out the most comprehensive Government study to-date:

A call centre is defined as:

“A work environment in which the main business is conducted via the telephone whilst simultaneously using display screen equipment. This includes parts of companies dedicated to this activity such as internal helplines as well as whole companies” (p.5)

A front line agent/call handler (customer services advisor/agent/associate/representative) is defined as:

“An individual whose job requires them to spend a significant proportion of their working time responding to calls on the telephone while simultaneously using display screen equipment”.

The publication concludes that:

“Although the fundamental elements of a front line agent's job are the same as a typical computer-based office job, the close combination of these elements results in a unique job often of an intensive nature”.

To briefly summarise, call centre agents typically receive or initiate telephone calls through a headset comprising an earpiece and small microphone, while simultaneously entering information directly onto their personal computers or

terminals and responding to the customer. Call centres services are broadly split into ‘inbound’ (the majority) and ‘outbound’ (for example, direct sales and surveys) calls. Automatic call distribution (ACD) equipment feeds incoming calls to available agents (as per the ‘strategy’ of that particular organisation). If all agents are engaged on calls, those waiting are stacked and distributed in sequence, as lines become free. Communication differs from requests for straightforward facts and figures, to more complex advice and complaints. Combining automatic number identification (ANI), or dialled number identification service (DNIS), with the ability to retrieve calling customer’s record from corporate database provides the agent with a ‘screen pop’ that identifies the caller and fills the screen with the essential customer information (Anton, 2000).

Choices and uses of technologies are influenced by issues such as the drive for profit, capital accumulation and investment and increased market share and over the last 25 years business has become more aware of the potential of information and communication technologies to enhance the efficiency of their operations. The fundamental rationale for the call centre front office function is the perception that they provide cost savings via: rationalisation of property costs, capital cost reductions, economies of scale, reduction of management and supervisory costs (by the use of sophisticated office technologies to assist in monitoring), flexible working practices (to meet peak demand without paying overtime costs), and routinisation of tasks increasing productivity per worker (Anton, 2000).

4.1.3 Call Centre Growth

In the 1980s firms in the United States began to explore the call centre potential and, since the beginning of the 1990s, a similar trend has emerged in the United Kingdom (UK). The pattern of call centre growth can perhaps be best illustrated in the context of the UK where the best known examples are to be found in the financial services: Direct Line and First Direct initiated what is now commonplace. The institutionalisation of social constructions into the ‘way things are done’ (as noted in Chapter 2) is illustrated by Taylor & Bain (1997: 33) who quote one finance sector manager who, commenting upon the intensified competitive environment, 365 days a year operations in his industry, stated, “once First Direct had done it, the rest of us had to follow”.

The UK is said to have the most developed call centre sector in the European Union: with some 33 percent of all call centre workers in Europe (Breathnach, 2000). An estimate from the Call Centre Association (CCA) puts European call centre market growth at more than 30 percent per annum, with teleservices outsourcing (i.e. whereby call centre activities are outsourced to a third party) growing by up to 80 percent per annum (Havard & Reed, 2000). However, while in the context of the UK there have been attempts to compile a definitive database of number, location and characteristic features (Bristow, Munday & Gripiaios, 2000), and others have worked on the compilation of data to enable valid international comparisons (Huws, Jagger & O'Regan, 1999), it remains difficult to establish precisely the level of employment in call centres or level of growth. The main source of call centre statistics continues to be market research surveys (for example, Datamonitor and Mital Research). These surveys tend to vary in their definitions and are patchy in coverage, and many figures are provided within industries whereas official statistics are largely produced at the industry level. In 2000 there were estimated to be 225,000 to over 420,000 UK call centre employees, i.e. over one percent of the country's workforce, a figure equating to the combined UK workforce involved in coal mining, steel and vehicle production (Health & Safety Executive, 2000a). The Call Centre Association (CCA), the industry's independent professional body, has provided figures (see Table 4.1) drawn from market research sources. The CCA equate current figures to almost 2 percent of the UK working population.

Differences in these figures relate to the noted variations in call centre definition and in predictions for the future. Datamonitor (2003) estimates that the number of agents working for off-shore call centres will grow at an annual compound rate of 14 percent reaching 60,000 by 2007, with Africa, Eastern Europe, and South America all growing in popularity but with India still likely to prove the most popular supplier of outsourcing services for UK companies. Contrary to this, Mital Research (2002) believe that India has failed to fill its expectations as an offshore front office location and that the competition from Dubai and, particularly, South Africa will mean a significant number of UK relocations – accounting for the reduction in estimated numbers in Table 4.1.

Table 4.1 - United Kingdom call centre industry growth statistics

	Number of Call Centres (including projected growth)		Number of agent positions (including projected growth)	
	Datamonitor	Mitial	Datamonitor	Mitial
1996	-	-	123,200	-
1997	3560	-	162,600	-
1998	4130	-	198,400	270,000
1999	4630	5538	226,200	-
2000	5050	7605	245,600	374,895
2001	5210	7100	257,900	-
2002	6000	6900	500,000	315,015
2003	-	6000	-	-
2004	-	5100	-	-
2005	8000	-	640,000	-

While there is little emerging from the academic literature regarding the public sector (for exceptions see Baldry, Bain & Taylor, 1998), there is considerable evidence that call centre working is expanding rapidly in this sector. The National Audit Office (2002) reports a rise from 13 departmental call centres in 1989 to 133 in 2002, employing over 15,000 staff with 45 centres outsourced to the private sector. The Report details that departments, ranging from Floodline, the Environment Agency's flood warning and advice service, to the Child Benefit Enquiry Line and United Kingdom Passport Officer, spent just over £350 million answering 95 million calls in 2001-02.

Government strategy set in 1999 (Modernising Government, 1999) to offer all services online by 2008, was speeded up in 2000 (Government Cabinet Meeting, 2000) to offer these by 2005. A central part of this commitment is to ensure that central and local public services are available 24 hours a day, 7 days a week where there is a demand. For example, as part of the strategy, NHS Direct is now available at any time for healthcare advice. This strategy is therefore extending call centre working practices to professional workers, a situation mirrored in the private sector where, for example, human resource professionals in such organisations as IBM,

BT, Shell International and the Royal Bank of Scotland, are now working under call centre conditions (Reilly & Pickard, 2000).

As expressed by Huws *et al.*, 1999:41:

“If this becomes widespread, it could lead to occupational groups as diverse as social workers, nurses and librarians, public health inspectors and council tax collectors spending increasing amounts of their time working under call centre conditions”.

As a result of the imprecision in obtaining basic facts such as numbers employed, many figures set out to be call centre ‘facts’ are in essence unreliable and are to be interpreted with caution. However, despite the imprecision, it is clear that the call centre sector currently employs large numbers of workers and, while some more traditional call centre operations may relocate, at least in the short and medium term, overall figures are expected to expand.

4.2 Work Organisation Context

The competitive pressures resulting from increasingly global systems and the rapid deployment of new information and communication technologies have also made a considerable impact upon work organisation. During the 1980s and 1990s considerable emphasis was placed upon the development of more ‘organic’ and ‘flexible’ organisational forms, structures and processes to overcome the perceived rigidity and inefficiency of previous organisational arrangements. This has led to flatter organisations, as seen in the typical call centre, with large numbers of employees at the base of the organisation and few management positions (Belt, 2002). Teamworking is also seen by many organisations to be an effective strategy for organising work and improving productivity (Macy & Izumi, 1993), and this is, once again, typified in the call centre environment: work is organised around ‘teams’ whereby typically, eight to ten agents will be overseen by a team leader (Belt, 2002; CIPD, 2001a).

4.2.1 Personnel Management to Human Resource Management

The vocabulary for managing the employment relationship has also undergone a change, with a move from personnel management to human resource management

(HRM) (see, for example, Legge, 1995; Sisson & Storey, 2000) or strategic human resource management (SHRM) (see, for example, Fombrun, Tichy & Devanna, 1984; Mabey, Salaman & Storey, 1998). There are numerous debates, mostly beyond the scope of this study, as to whether this move in vocabulary is accompanied by a difference in terms of substance, but for some the HRM model represents a distinct approach to the organisation of work and to the management of employees (see, for example, Beer *et al.*, 1984). For others this is a theoretical sophistication in the area formerly known as 'personnel management' (see, for example, Boxall, 1992) and others perceive this as a manipulative form of management control (see, for example, Townley, 1994). Some conclude that the strategic HRM literature assumes a naïve, apolitical, over-rational view of organisational /management decision-making (see, for example, Mabey *et al.*, 1998). Yet others (as observed in Chapter 2) conclude that HRM research is unreliable is that it uses only top management or HR professionals as the source of the information (for exceptions see, Clark, Mabey & Skinner, 1998; Guest, 1999; Legge, 1998).

Nevertheless, central to the very idea of HRM are the ideas of flexibility and responsiveness. The management function is recognised as a central business concern, with policy formulation located at the strategic level, and performance and delivery devolved to line management. Call centre team leaders (line managers) are responsible for operational achievement of call targets. Typically, they are also responsible for most of the day-to-day personnel issues and the perception of team leader support has been seen to make a significant difference to the emotional well-being and turnover of front line agents (Deery *et al.*, 2002). However, the general HRM arguments as to whether line management practice may distort, and possibly even undermine, the contribution which HR policies are supposed to make towards organisational success (McGovern *et al.*, 1997), or are sufficiently well trained to manage human resources (Lowe, 1992, 1993), applies in the call centre context (Crome, 1998). There are also concerns about role ambiguity, i.e. if a line manager is encouraged to focus exclusively on the task at hand, their willingness and ability to address longer-term people-centred issues may be greatly undermined. For example, Hutchinson *et al.* (1998) cite examples where call centre line management tended to press on with increasingly intensive work regime, regretting the resulting

problems of absenteeism, sickness and staff turnover, but apparently unwilling or unable to do anything to solve them. The authors believe that, arguably, this results from line management absorption in a culture that defines improvement exclusively in terms of operational measures.

A distinction has been drawn between the 'soft' and 'hard' versions of HRM, whereby the former entails a range of specific employee-centred strategies, including job autonomy and training, while the latter emphasises the quantitative, calculative and business-strategic aspects of managing the human resource in a 'rational' manner as with any other economic factor. If used, the 'soft' approach is most likely to be directed at managerial, professional and technical staff, while lower level white collar, most heavily populated by call centre staff, and blue-collar workers, might have to endure the 'hard' approach (Legge, 1995). Dominance of the latter has led some to conclude that most HRM is 'hard' and simply a reassertion of management control under a new label (see, for example, Herriot *et al.*, 1998; Sisson & Storey, 2000; Storey, 1992a, 1992b).

4.2.2 Human Resource Management Outcomes

Batt & Moynihan (2002) conclude that at the very time that many manufacturing organisations are moving away from scientific management and the production-line approach to workforce management, service organisations, and especially call centres, seem to be embracing this model, and Tayloristic working practices coupled with unprecedented levels of surveillance and control seem to be the more generally accepted image. There are clear examples where managers have sacrificed the well-being of staff by pushing service/efficiency tension to the frontline and by demonstrating a willingness to accept high levels of stress, emotional burnout and turnover (see, for example, Gates, 1999; Wallace *et al.*, 2000). Of further concern, the 4 large (Australian) call centres participating in the study carried out by Wallace *et al.* (2000) had participated in an earlier international benchmarking exercise and were all assessed to be in the top 10 percent of the sample of 227 call centres compared in terms of efficiency, customer satisfaction and employee satisfaction. In their comparative study of women's employment in call centres in Ireland, the Netherlands and the UK, Belt, Richardson & Webster (2000) concluded that managers were aware that the demanding yet also highly standardised nature of the

job was a key cause of a reduction in motivation and high labour turnover. However, these authors further concluded that this situation had gained widespread acceptance amongst managers who demonstrated little indication that they had any plans at all to alter the work process.

In the general work context it is seen that where cost competition is intense interventions aimed at treating employees as costs to be minimised and as commodities to be maximally utilised will prevail, effectively negating policies and practices regarding innovation and quality (Guest *et al.*, 2000). Labour costs are estimated to be around 60 percent of total call centre expenditure (Batt, 2000; Bristow *et al.*, 2000). Consequently, it is argued, reducing labour costs continues to be a call centre management priority. Low barriers to entry allow new entrants into the market and promote competition within the private sector and in turn, and in a manner similar to public sector Government initiatives, these fuel additional customer expectations and demands. Call centre managers face a series of tensions stemming from conflicts between achieving efficiency and providing a quality service to the customer (Bain *et al.*, 2002; Houlihan, 2002). These tensions are passed on to the front line agent who is required to increase the speed by which calls are processed but also encouraged to give customers a high quality service. As expressed by Taylor & Bain (1999: 115):

“In the drive to maximise profits and minimise costs, call centre employers are under constant competitive pressure to extract more value from their employees while call centre management may increasingly acknowledge the range of problems which confronts them, this recognition does not bring ready made solutions. They face two interconnected and irresolvable dilemmas. Should they prioritise quantitative output or the quality of service? There is a perpetual and dynamic tension between these two objectives. Furthermore, they face the central contradiction of control and commitment in the management of labour. Far from giving management ‘total’ control, intense surveillance can be counterproductive, costly in terms of workforce motivation and commitment. However, abandonment of surveillance and monitoring can never be an option as these are integral to the operation of the call centre”

Mabey *et al.* (1998:507) voice the view that the good intentions of those who espouse the soft, welfare-humanist conception of strategic HRM are likely to be overwhelmed by the rigors of financial requirements. Armstrong (1989) contrasted

the strategic aspirations surrounding HRM with the cold facts of its subjugation to management accountancy. A decade later, in the call centre context, Gates (1999) concluded that the fundamental problem pertained to operations directors who have a financial, rather than a human resources, background and see their staff as a cost rather than an investment. However, not attending to the causes of employee well-being can also incur costs, for example it can decrease the quality of customer service and increase errors (Schlesinger & Heskett, 1991). Lower levels of well-being may increase call centre absence and turnover rates (Batt & Moynihan, 2002; Deery *et al.*, 2002), though Holman (2002) found differences in self-report measures of well-being in three call centres in the financial industry.

There is evidence, mostly from the manufacturing sector, that the ‘softer’ approaches to HRM, including extensive employee involvement in managerial decisions and training, correlates with greater levels of productivity and quality (see, for example, Arthur, 1994; Batt, 2002; Huselid, 1995; MacDuffie, 1995). Contrary to this, Guest and Hoque (1994) found organisations with a deliberate strategy of low uptake of high performance HRM practices reported performance as good as any other category, though employee relations outcomes were poorer – the conclusion being the firms got good results but were not attractive places in which to work. Rosenthal, Hill and Peccei’s (1997) service industry study found more evidence for “modern techniques of quality and HRM” than “sham empowerment, work intensification and increased surveillance” (p.481). However, as argued by Guest (1997) despite the growing body of evidence of an association between high commitment or high performance HRM practices and various measures of organisational performance, it is not clear *where* the association exists. Similarly, Hutchinson, Purcell and Kinnie (2000) point out that, while there is some evidence of the positive links between HRM and performance beginning to emerge in the manufacturing industry, we know little about how the processes of managing employees elicit a positive response (i.e. if they do) or the direction of causality.

For Guest (1997) the test of HRM is its applicability in the field and its capacity to test the key propositions of strategic integration, high quality and high commitment by looking at outcomes in terms of, for example, low labour turnover and company allegiance. In the call centre context, it can be seen that, while overall estimates

differ widely, high levels of turnover or ‘churn’ is a particularly problematic issue for many managers. An Incomes Data Services (2000) survey of 250 call centres, covering 78,000 staff, found an average turnover of 20 percent per annum. However, this covered a wide spectrum as figures ranged from 1 – 80 percent. Notably, *employers* identified the intensity of the call centre environment as the principal cause of staff turnover. Call Centre Association figures reveal staff turnover for the year 2001 was 18 percent at the median. Half of call centre turnover rates lie between 10 and 31 percent (the interquartile range). One in ten employers reported a churn rate of 49 percent or more. Problems with staff retention were related to particular key sectors (including finance and banking, outsourcing, public and voluntary sectors and leisure and marketing), call centre size (the average turnover rate in large companies was 22 percent and in small companies 14 percent), and to regional variation. Call centres in Yorkshire (the location of participating organisations in the current study), Northern Ireland and the Midlands were all more likely than average to report a problem.

4.3 A Sensemaking Context

The call centre supply chain means that employees are on the front line, in immediate contact with, and representing the company to, customers. When the only contact a customer has with an organisation is via the telephone the quality of that interaction becomes critical, as it is often the only criterion by which the product, or perhaps the whole organisation, is judged. Yet the generally accepted opinion that call centre employees work under unprecedented levels of surveillance would imply that these people are not trusted to carry out their role with any degree of autonomy or discretion. Furthermore, not all calls can be answered to the letter of ‘the script’ and where employees must exercise judgement to meet customer needs, it is clearly inappropriate to adopt methods of simple control to manage employees (Leidner, 1996; Macdonald & Sirianni, 1996). Customers care how services are delivered; the way in which employees display their feelings towards customers can have an important effect on the perceived quality of the interaction (Ashforth & Humphrey, 1993). Thus the attitudes of the employee are critical to the quality of the interaction, and tightly scripted dialogue and routinised responses can impair the service that is provided to the customer. As pointed out by Deery & Kinnie (2002) the involvement of the customer as a third party brings a greater degree of

complexity and uncertainty to the labour process. Although management may wish to standardise the behaviour of customers and limit their options, it is not always possible to achieve predictability and compliance in the service exchange.

As noted in Chapter 2, the benefits of a psychological contract have been revealed to both the employee and the organisation (for example, commitment and motivation). However, Herriot (2001) points that in the contemporary employment relationship (i.e. generally) there is an increasing concentration on transactional deals. When such a contract is made citizenship is then less likely, with employers fearing workers will not do what they are supposed to do (Kalleberg & Reve, 1992), leading to the felt need for further surveillance and control. The problem then for managers is how to ensure the quality of personal treatment their customers receive from employers. It is suggested that when management asks workers to be *really* committed and emotionally engaged, it is likely to be impossible if work lacks the necessary characteristics of autonomy and trust that would lead to making those investments (Warhurst & Thompson, 1998).

Using a sensemaking perspective Weick (1979: 150) suggests reasons for the limited remit of managerial responses:

“On the basis of avoided tests, people conclude that constraints exist in the environment and that limits exist in their repertoire of responses. Inaction is justified by the implantation, in fantasy, of constraints and barriers that make action “impossible”. These constraints, barriers, prohibitions then become prominent “things” in the environment. They also become self-imposed restrictions on the options that managers consider and exercise when confronted with problems”.

As detailed in Chapter 2, a review of the managerial and organisational literature has revealed that work on sensemaking has largely been restricted to senior management, where it has focused primarily on strategic issue processing and making sense of the competition. The call centre environment provided an opportunity to move beyond this to those who on a day-to-day basis are required to make sense of management strategy, rules and regulations. Early work carried out by Taylor and Bain (1997) recognised the importance of the employee voice:

“As an important corrective to managerial perceptions, interviews were recorded with 21 agents/operators from twelve different call centres, providing indispensable information on the subjective experiences of work” (p.104).

Nevertheless, some call centre studies rely solely on management representation (see, for example, Holman & Wood, 2002; Richardson & Marshall, 1999), despite the fact that, arguably: “The pressure comes down the line. It is at the bottom that the pressure is greatest” (Baldry *et al.*, 1998: 172).

As proposed by Weick, employees working in such an allegedly controlled environment are likely to experience a greater number of “senseless” events because they can take fewer actions that focus sensemaking. As noted, Dépret and Fiske (1993) conclude that a major motivator of people’s efforts to understand their social worlds is dependent on the concept of power. There are several interpretations to the concept of power. For example, Fiol (2001) points out that power in organisations can be viewed as a fluid social construction subject to multiple interpretations, while Salancik & Pfeffer (1978) remind us that discretion may be socially constructed rather than simply designed into work. In other words, low-discretion sensemaking in the eyes of the outsider could be high-discretion sensemaking to the front line agent or team leader. Nevertheless, in the occupational environment, power and discretion are, to some extent, likely to be tied into the formal levels of power and discretion associated with the job role or formal position within a larger context. While call centres do not employ a uniform level of control (Houlihan, 2002; Kinnie, Hutchinson & Purcell, 2000), they are (as noted earlier) generally associated with unprecedented levels of surveillance and control.

4.4 Sensemaking and Consensuality

Consensuality does not imply perfect agreement but suggests that after a time individuals have achieved a certain similarity in the way they process and evaluate information (Gioia & Sims, 1986). As noted in Chapter 2, individual sensemaking does not take place in isolation but is shaped by a variety of factors including interactions with others who are engaged in similar endeavours. When members of a group are exposed to similar information, through processes of collective sensemaking, groups of individuals are said to construct shared interpretations of

reality (Berger & Luckmann, 1967; Weick, 1995). As noted by Weick, a communal sense of what makes sense can result in a shift from the self-referential “I” to the more inclusive “we”.

Sparrow (1998: 38) suggested several possibilities:

“It may be that the patterns of thinking that particular individuals are engaged in have some degree of commonality across specific situations. It may be possible to glean some insight into patterns at various levels of aggregation. There may well be ‘marketing department-speak’, ‘IBM-speak’, ‘British argument’, and ‘Western forms of thought’. How far any of these patterns are part of the internalized thinking of any individual or manifested in the actions of particular groups of interactants will vary”.

It has also been noted that organisations can acquire rules and procedures through mimicry importing their schema from the larger social system (DiMaggio & Powell, 1983, 1991; Scott, 2001; Scott & Christensen, 1995) or through related processes of enactment (Porac *et al.*, 1989, 1995; Weick, 1969; 1979, 1995). Some theorists assert the primacy of macro forces. For example, and as noted in Chapter 2, industry wide institutional forces, or forces operating at the inter-organisational level point towards more homogenised beliefs, extending beyond organisational boundaries (Spender, 1989; Porac *et al.*, 1989, 1995). Chatman & Jehn’s (1994) results offered some empirical support that organisational culture is, in part, a product of the particular industry within which an organisation operates. Phillips (1994) identified distinct assumption sets within two industries concerning conceptualisations of membership, competition, the origins of ‘truth’, the purpose of work and the nature of work relationship. Her findings also suggested that industry-based cognitive constructs could be productively broadened to include a wider set of industry participants. Others assert the primacy of intra-organisational processes. For example, Hodgkinson & Johnson (1994) revealed that perceptions differ significantly between organisations inhabiting the same industrial sector/competitive environment (because of variations in, for example, organisational structure and processes). From a theoretical perspective, several scholars (Jelinek & Litterer, 1994; Ocasio, 2001; Rousseau & Fried, 2001) support the dominance of the organisation context. As expressed by Jelinek & Litterer (1994:30):

“From an organizational perspective (then) members will share the same context in large part because the organization has a major impact on what data they have to select from, as well as on the cues and stimuli that will organize and interpret data selected and the set of schema available for interpretation. Data channels, uncertainty absorption, filtering, data editing, and organizational processes and structures that affect the emotional climate of the organization are central to creating a shared context”.

Institutional theory would also argue that competitive or task environments may encourage divergence of management cognition between organisations, management functions and among senior managers. In other words, and as identified, in the context of the managerial population, task influences would point to functional differences in belief systems (Daniels *et al.*, 1994a; de Chernatony, Daniels & Johnson, 1993; Hodgkinson & Johnson, 1994). The most recent empirical work suggests that both task and institutional forces interact in a complex interplay (Daniels *et al.*, 2002a; Sutcliffe & Huber, 1998)

Following the above rationale, a variety of situational factors will potentially shape the selections those in non-managerial positions make in characterising their jobs and how they make sense of the call centre environment. Theoretical and empirical work indicated that social groups share the same perceptions about reality, be this at the level of industry, organisation, or function. As noted, it would clearly extend our knowledge of sensemaking if we could gain some insight into the important contextual variables which influence sensemaking within non-managerial populations. The call centre environment was seen as an ideal context to enable us to gain some insight into institutional characteristics, i.e. the potential convergence of beliefs, at the non-managerial level, as the environment presents a complex mixture of macro- and micro-forces.

In terms of macro-forces, call centres are seen to be an ‘industry’ or ‘sector’ and, for the most part, the call centre is spoken of as a homogenous entity. As noted, the sector has its own professional bodies and a range of practitioner journals are aimed specifically at the ‘industry’. Moreover, given the relatively simple context which is depicted of the call centre environment, and that front line jobs are seen to be unique (HELA, 2001), and are generally characterised as low status, tightly monitored and

controlled and stressful (Bain *et al.*, 2002; Taylor *et al.*, 2002), the first hypothesis was proposed:

Hypothesis 1

There will be evidence of institutional effects across the sample as a whole in respect of category saliencies (i.e. to the extent that institutional influences have led to what might be termed an ‘industry recipe’ for the call centre industry (crossing private and public sector contexts) we expect to find high levels of consensus across the sample as a whole).

Contrary to this, various issues point to institutional forces at the micro level. Call centres are found within a range of public and private sectors, and organisations covering a wide range of functions (for example, finance, utilities and leisure), and the call centre definition (whether used explicitly or implicitly) includes parts of companies dedicated to call centre activities as well as whole companies. Therefore:

Hypothesis 2

There will be significant differences between organisations in category salience in terms of construct choice (reflecting differential sensemaking as a function of contextual variables at work within the organisations investigated).

4.5 Conclusions

Many issues have been raised in the call centre context. From our knowledge of sensemaking, it is seen that from a mass of information people extract only partial knowledge and it is on the basis of this that they make sense of the whole. To enable the investigation of a potentially very complex situation, a diverse range of literatures was synthesised into a guiding framework. Key variables, expected to feature to varying extents in actors’ mental representations of their domain and to influence employee performance and well-being in this work environment, were highlighted. Of course, which issues would or would not feature (i.e. be extracted as cues) and how (i.e. in terms of relationships, influence and perceived outcomes) was very much an empirical question that the study set out to answer. In Chapter 5, the exact nature and details of the guiding framework will be explained.

CHAPTER 5

A Guiding Framework for the Study of Call Centre Environments from a Sensemaking Perspective

The purpose of this Chapter is to review a broad body of relevant literature from the organisational sciences that has variously addressed issues that would be expected to form the substance of sensemaking in the workplace among front line agents and team leaders/supervisors. This literature is presented in the form of an overarching framework and its subject matter (from specific call centre and adjacent literatures) formed the basis of the material that was mapped by the participants in this study (as will be explained in Chapter 7 which depicts the particular study methods).

5.1 Supporting Rationale for the Use of a Guiding Framework

The broad, multidisciplinary approach taken in the study is in line with the views of several researchers who suggest that the work environment is often viewed too narrowly, it is inappropriate to attempt to assess the affect of single variables, and that there is a need to take account of a wider range of work characteristics and outcomes (see, for example, Baldry, Bain & Taylor, 1997; Bramwell & Cooper, 1995; Jones & Fletcher, 1996; McGuinness, 2000; Parker & Wall, 1998; Parker, Wall & Cordery, 2001; Rousseau & Fried, 2001; Sparks, Faragher & Cooper, 2001; Taylor *et al.*, 2003). For example, from Mendelson, Catano & Kelloway's (2000) study into the role of stress and social support in Sick Building Syndrome, it is evident that *perceptions* of inadequate working environments (in this instance poor air quality) were predicted by a wide range of other unsatisfactory working conditions: higher levels of role conflict, role overload, and organisational stress and lower levels of organisational support. In the general workplace context, as expressed by Jelinek and Litterer (1994:16):

“human beings have several realities, such as the realities of problems experienced on the job, the personal reality of a chair being too low, and the reality of the business general conditions facing the firm, to name some obvious realities. We become conscious of each in turn as our attention is shifted”.

While calling for researchers to systematically consider antecedents of work characteristics, expand the traditional range of work characteristics to take into account aspects salient to the modern context, extend the range of potential outcome variables, analyse the mechanisms or processes that might explain why work characteristics lead to particular outcomes, and consider various contingencies that might moderate the effects of work, Parker *et al.* (2001) conclude that each researcher should be given discretion to choose their own set of issues, depending on context and guided by theory. Note was also taken of Parker *et al.*'s (2001) urge to researchers to, where possible, refine their lists to be more specific. As pointed out by Huff (1997: 951): "if we develop a tradition of placing cognition in a broader context, it will be possible to tell a more complex story" and, as seen in Chapter 4, initial investigations had already revealed a multitude of potentially salient issues for those working in this sector. However, it was recognised that this complex approach could lead to an unmanageable situation and the guiding framework (depicted in Figure 5.1) was devised primarily to give an acceptable balance between some degree of control over the data collection process without the imposition of undue constraints upon participant choice, a vital prerequisite if high quality data was to be amassed.

It was, of course, recognised that those with a strong inductivist philosophy may argue that the framework is already flawed in that the wrong constructs may have been highlighted. There are general counterarguments which can be put forward, for example, it is impossible to empty the mind and approach the study with a blank sheet (Miles & Huberman, 1994), or that even for those with a strong inductivist philosophy, if they have any idea about the relationship between any variables, they are already beginning to theorise and to make choices, albeit that they may be more implicit, and these will serve to bind and focus their study (Flick, 1998). However, and more specifically, call centres, and their associated terminologies, have become part of everyday experience (Houlihan, 2002). Indeed, the choice of context in which to carry out this study of sensemaking came from an awareness of the concerns of others (media, practitioners, government bodies, unions and academics) regarding working practices in this sector and there has already been a considerable amount of material generated which now requires further deliberation.

5.2 Content of the Guiding Framework

The framework was developed on the basis of theory and context, from the managerial and organisational cognition literature (as introduced in Chapter 2), call centre research to-date (as introduced in Chapter 4), and several adjacent literatures from the field of industrial, work and organisational psychology. For example, there is a large body of literature on the negative psychological consequences of unemployment (see, for example, Fineman, 1983; Fryer, 1995; Fryer & Payne, 1986; Haworth, 1997; Hayes & Nutman, 1981; Jahoda 1982) from which we can see the potential benefits to be gained from employment. People want to work and they need the categories of experience employment provides but they only accrue these benefits from well-designed work. Some believe that it is as bad to make the transition into a job with which one is dissatisfied as into unemployment (Feather, 1992; Winefield, Tiggemann, Winefield & Goldney, 1993).

In summary, the broad framework exploited what features had been shown to be prominent in both practitioner and academic literature to-date, while making full use of adjacent literatures, to help wheedle out complexity and to aid the communication of results (Miles & Huberman, 1994). The framework fell into eleven broad categories: 1) Economic and Political Drivers; 2) Physical Environment and Equipment; 3) Organisational Structure and Design; 4) Tasks and Technology; 5) Communication Processes; 6) Employment Conditions; 7) Job Design and Work Characteristics; 8) Management and Employee Relationships; 9) Work Performance and Satisfaction; 10) Health and Well-being; and 11) Identity (individual and social) (see Figure 5.1). Each category had the potential to be viewed as influencing and/or being influenced by any or all of the other categories via the sensemaking (and related) processes and within the network of causal relations perceived by the individual participants. It was also possible that there would be cross-referral between the eleven categorical themes. By way of an example, the organisation of working into teams is a feature of organisational structure and design, but identification with a particular team is seen to be an identity issue (potentially linking into issues of social identity and self-categorization).

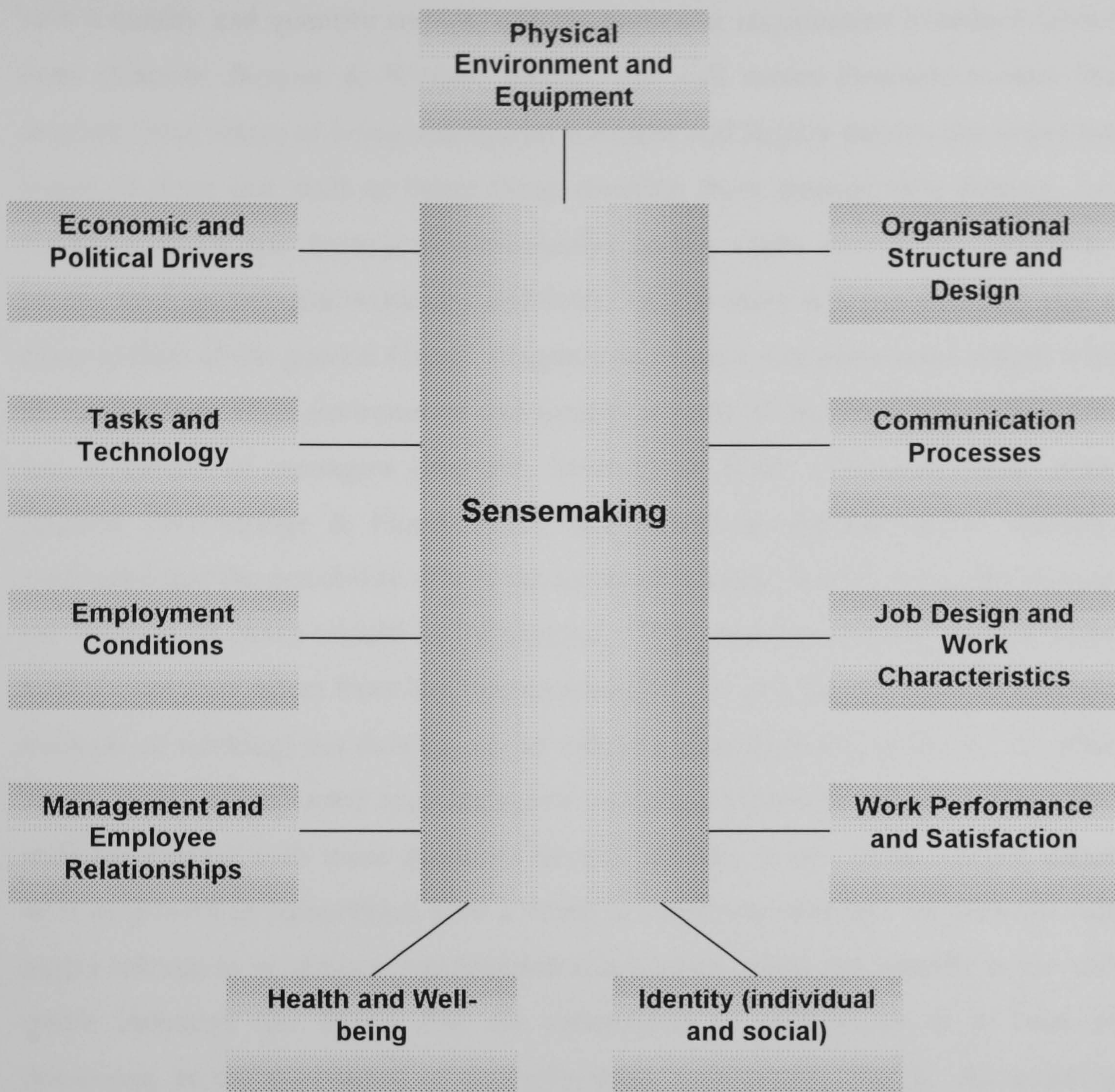


Figure 5.1 – The Guiding Framework

5.2.1 Economic and Political Drivers (CCAT.01)

In Chapter 4 the forces driving call centre growth were detailed, in particular the growth in market competition in the private sector and government initiatives in the public sector. Using a variety of concepts from the managerial and organisational cognition literature, a number of processes of sensemaking and social construction were identified that could potentially lead to the development of common approaches to all centre design, management practices and methods of working, namely competitive enactment (Porac *et al.*, 1989; Weick, 1979, 1995), leading in turn to institutional isomorphism (DiMaggio & Powell, 1983; Scott, 2001; Scott & Christensen, 1995). Some of the issues facing management were also explored: increasing customer demands, the dilemma caused by the perceived need to follow

both a quality and quantity service, and the particular requirement to reduce labour costs (Garrett, Jacques & Wynne, 2002). The call centre literature to-date has detailed these issues as being managerial concerns and largely depicts the important issues of front line staff as being those resulting from management strategy, i.e. repetitive tasks and excessive surveillance, and/or other essentially 'parochial' issues, such as physical working conditions. While there is some evidence that a cross section of the general United Kingdom workforce was more preoccupied with the basic wage, work environment and security aspects of the employment deal than was a sample of managers (Herriott, Manning & Kidd, 1997), as noted, other research (Wooldridge & Floyd, 1990), not specific to the call centre industry, concluded that the possibility of a broad scope of strategic involvement well beyond the managerial ranks should be recognised. The pressures shaping management strategy not only affect front line employees indirectly (via impact upon targets and methods of working) but directly, i.e. by virtue of their front line position. In other words, while management may recognise increasing customer demands, front line staff are dealing with these pressures directly (Baldry *et al.*, 1998). Other issues such as growth in competition pose a threat to employee security, via potential call centre relocation or closure, and research (once again, albeit not specific to the call centre industry) has shown that the anticipation of redundancy is at least as distressing as the experience of unemployment itself (Fryer, 1995). As noted in Chapter 3, Government initiatives mean many public sector workers are working, or see the prospect of working, under very different conditions and with an emphasis on different skills and attributes. It is, therefore, feasible that these wider contextual issues viewed as being important to management will not only be indirectly but also directly salient for the non-managerial population.

5.2.2 Physical Environment and Equipment (CCAT.02)

In the occupational health literature there is much evidence to suggest that poor physical working conditions can affect both workers' experience of stress and their psychological and physical health (see, for example, Cox, 1993; Levi, 1981). The view has been put forward that the physical environment may be a significant factor in the discontent of call centre employees (Brown, 1998; Wylie, 1997), and therefore likely to be salient issues for participants in this study, though Gates (1999) reports a wide range of physical environments: 'Dickensian' to extremely

sophisticated, commonly open plan, modern offices. However, in line with the sensemaking literature, Baldry *et al.* (1997:520) point out that, while the architects may talk of the modern office building as a potential source of pride and employee motivation: “when we look at how the office is actually *experienced* by its occupants, the reality seems very different”. Similarly, Donald (1994) states that central to people's evaluations are the affective rather than the instrumental functions of the office environment, while Cox and Ferguson (1994) conclude that *one* (authors emphasis) of the most important pathways when determining the role of environment and occupational health is individual perception and cognition. As noted by HELA (2001:27) sometimes the physical environment was, in fact, found to be excellent but:

“people still complain. These complaints often arise because people feel they have no control over the working environment. For example they may not be able to open a window to let in some fresh air, because the windows do not open or other people will find it too draughty”.

Nevertheless, some of the key concerns that have been expressed in the call centre context include working environment issues such as air quality, temperature and lighting. Particular concerns have been reported regarding hearing impairments, together with sore throats and voice loss, visual display unit (VDU) related risks, such as eyestrain, and repetitive strain injury and other musculoskeletal disorders, such as backpain, resulting from poor or awkward postures (see, for example, BIFU, 1997; Clark, 2000; Health & Safety Executive, 2000a, 2000b; HELA, 2001). The provision of satisfactory working accommodation therefore extends to appropriately designed equipment, ranging from ergonomically acceptable work station and seating, through to software which is fit for the role (Eason, 2002; Hamborg & Greif, 1996). The latter is often viewed as an impediment to customer service (Frenkel, Tam, Korczynski & Shire, 1998) and, as detailed in the numerous call centre specific and/or technology magazines (see for example, *Call Centre Focus*, *Call Center Magazine*, *Communications News*, *Fast Company*, *IT Week*, *Network World*, *Telephony*), a frequently cited frustration for front line staff.

5.2.3 Organisational Structure and Design (CCAT.03)

In the sensemaking literature (Weick, 1995) and in the occupational health and psychology literature (Jones & Fletcher, 1996), it has been concluded that researchers have paid insufficient attention to changes in organisational structure. It is argued that contextual and organisational changes will inevitably affect how people perceive demands, supports and constraints, as will alterations to other aspects of organisational design, i.e. strategy, culture and reward systems (Parker *et al.*, 2001). The contemporary organisation is likely to be 'flatter' and the delayering process has often been accompanied by a move to the organisation of work into teams, as in the typical call centre (Belt, 2002). The likely salient issues are therefore best described in relation to the theory of team working, where it is generally recognised that a number of conditions must be satisfied before a group of people can be called a team: members need to have shared goals in relation to their work, members should be able to interact with each other in order to achieve those shared objectives, members should have well defined and interdependent roles and an organisational identity as a team with a defined organisational function (Haslam, 2001; Lembke & Wilson, 1998; Smith *et al.*, 1994; Unsworth & West, 2000; West, Borrill & Unsworth, 1998).

Despite work being organised into teams, the work of the call centre agent is typically seen as being largely individualised, with minimal co-worker interaction, repetitive, scripted, and machine (expert systems) paced (Batt, 1999). In contrast, and more generally, Tjosvold (1998) found cooperative goals leading to productive work, stronger relationships and reduced costs, while competition negatively correlated with dynamics and outcomes. In the call centre environment targets have been cited as 'unrealistic' (Bain *et al.*, 2002; Health & Safety Executive, 2000b; Lamb, 1999) and highlighted as a major source of stress, with competition to meet them based at various levels; individually, intra- and inter-team and intra- and inter-organisation. Front line agents have been found to believe targets were too strongly influenced by team leader subjective judgements, which not only further increased rivalry between members of the same team and but also between different teams (HELA, 2001). Guzzo and Dickson define team effectiveness in broad terms: team produced outputs; the consequences a team has for its members; and the enhancement of a team's capability to perform effectively in the future. Using this

definition to analyse empirical call centre studies, Hutchinson *et al.* (1998) conclude that while team working is effective in terms of output, i.e. customer satisfaction appears to be high and productivity significantly improved, overall call centre teamworking reduces the quality of working life for its members. Other empirical research has led to the conclusion that, for the majority, team working, suggestive of collective effort, increased job satisfaction and a degree of autonomy and discretion for members in the conception and execution of tasks, has not led to job enrichment but to “Team Taylorism” (Baldry *et al.*, 1998: 175). Bain *et al.* (2002) conclude that the continuing application of Tayloristic methods appear likely. This category of issues has already been seen to be of prominence in the call centre literature, and was expected to also be of importance to the participants in this study.

5.2.4 Tasks and Technology (CCAT.04)

The role of the front line agent was briefly referred to in Chapter 4 (pp.43-44) but, and extending this initial description, it can be seen that for the ‘typical’ agent, a variety of skills are potentially required. These include, for example, keyboard skills, customer-related social skills (friendly, positive, tactful, patient, empathetic), a flexible attitude, high energy, speed at handling and processing calls, quality of call handling, ability to acquire product knowledge in a short time and the ability to work in a team. Despite the variety of skills that appear to be necessary, in their survey of 42 call centres, covering a range of sectors, Holman and Wood (2002) found that only 23 percent of senior managers thought that front line agents had a great deal of job variety, though front line employees may not mirror this managerial perspective. In addition, call centres are expanding into other service areas where adherence to a script may be seen to be unfeasible. For example, Holman and Wood (2002) report that management strategies involve bundling services together so that customers do not have to go to separate providers or different parts of the business. The scale of change affecting organisations and their workforces is considerable and the exposure to continual changes is now viewed as being a fact of all our working lives (Worrall & Cooper, 1998). As noted in Chapter 4, while the long-term call centre future is unclear, in the short and medium term many people have already had to, and will continue to need the ability to, adapt to new technologies, new methods of working, and taking on unfamiliar tasks, as the occupational territory changes. Thus, it was viewed as likely that issues of advancing technologies and the need to

adapt, and the complexity of the role would be salient issues for some front line workers.

A particular pertinent set of tasks in this context pertains to selling and promotional activities. This task has been found to be problematic outside the specific call centre industry. For example, Leidner's (1996) research (in the fast food context) found suggestive selling tended to irritate customers and while most customers simply declined others were less gracious. Within the call centre industry, Hutchinson *et al.* (2000) found call centre agents disliked selling, as it often entailed a more aggressive, marketing-orientated attitude towards clients. This issue is likely to be salient for many front line workers, as it involves many call centres well beyond financial services, as they move into a target centred sales driven operation (Bain *et al.*, 2002; HELA, 2001).

5.2.5 Communication Processes (CCAT.05)

Communication is seen to be integral to the sensemaking process as meanings are shaped through advocacy, persuasion, and other power and influence processes (Weick, 1995). This relates to a wide range of explicit and implicit issues, for example the actual form of the communication mechanisms (written circulars, e-mail or team meetings), and to managers passing on as much information as possible to impart a clear message regarding organisational strategy and purpose (Isabella, 1990). As detailed by Sutcliffe (2001: 219) communication also relates to the rather more implicit organisational messages:

“Stakeholders and constituencies engage in sensemaking processes as they try to figure out the meaning of the organization's communication and in the process revise their understanding of the organization and their relationship to it [sensemaking]”.

Arguably, one of the main issues in the call centre context pertains to excessive levels of monitoring and surveillance, i.e., one-way communication processes (Sutcliffe, 2001). This is alleged to be unprecedented in the call centre environment (Baldry *et al.*, 1998; Ford, 1998), which would imply that, although on the front line and directly representing their organisation to the public, staff are, in fact, not 'trusted' to carry out their roles with any degree of autonomy or discretion.

Mangham & Overington (1987: 125) succinctly express the nature of the implicit organisational communication processes:

"Consciously or unconsciously, we interpret the settings within which we find ourselves in a variety of ways. In part and on occasion, we are prone to ascribe motivation and intention to those who promote certain physical arrangements. We acknowledge that what we perceive to be their intentions affects our feelings and our emotions, that settings have meanings. Communication occurs through multiple channels. We often pay more attention to what is implicit or literally unsaid than to the more obvious signals that surround our everyday encounters".

This communication extends beyond the internal organisational environment. Some practitioners (most particularly in terms of recruitment campaigns, including local authorities keen to attract investment) and academics (Frenkel *et al.*, 1998) portray the 'high tech' call centre image. However, call centre publicity has, in the main, been adverse. Indeed, and as noted, call centre workers have acquired a reputation as white-collar production lines or "sweatshops" (Arkin, 1997; Wylie, 1997). From a practitioner perspective, Garrett *et al.* (2002) also believe the message being communicated regarding the call centre industry is that it is essentially a sweatshop, established in areas of high unemployment, employing people with low skills, offering little in the way of training and advancement, and suffering from high employee turnover. As the more general work of Dutton and Dukerich (1991) has shown, positive and negative self-concepts are formed and modified in part by the way employees believe others view the organisation for which they work. However this process is not seen to be straightforward, as potentially stigmatic features of the work can be transformed into socially meaningful illusions that enhance the personal dignity of the performer (Jermier, Gaines & McIntosh, 1989; Jermier, Knights & Nord, 1994). Some of those interviewed in the study carried out by Belt *et al.* (2000) investigating women's work in the call centre environment, spoke of the bad image attached to the job. Indeed, one part-time agent admitted to lying to people on occasion when asked about her job, the supporting rationale being that if you work in call centre people assume you "aren't very bright" (p.376). In summary, it is clear that issues associated with communication were expected to feature prominently in the cause maps of a number of the research participants.

5.2.6 Employment Conditions (CCAT.06)

Several specific issues have emerged from the call centre literature, which fall under the wide remit of ‘employment conditions’. Inadequate staffing levels and intensive electronic performance monitoring are said to be two of the main contributors to the first call centre strike at British Telecommunications (Lamb, 1999). In terms of inadequate resourcing, and once again depicting a practitioner perspective, Garrett *et al.* (2002: 17) state: “There are many horror stories around call centre traffic far exceeding resourcing, particularly with start up operations”, while Holman and Wood (2002) found that almost all call centres monitor employees electronically. This latter issue is also one key concern of the Health & Safety Executive (2000b) and HELA (2001). While this links into excessive monitoring and surveillance *per se*, the intensity of productivity related measures, as revealed by variety of statistics, frequently on public display¹ is said to cause particular concern. Frenkel *et al.* (1998) have given an overall positive impression of the call centre environment, but conclude that while employees view monitoring techniques such as taping of calls, which can then form the basis of discussion, as “on-going forms of reinforcement behaviour and support” (p.965), there was more ambivalence regarding the surveillance and productivity related aspects of performance measures.

Call centre sector training is generally viewed as being minimal (see, for example, Anton, 2000; Crome, 1998; Mital Research, 2002), though others perceive an increase in the provision of training, particularly in the use of ‘soft’ skills (Belt *et al.*, 2000). The lack of training and career development has been seen by the industry as one reason for its poor image and various schemes have recently been launched. For example, e-Skills NTO, the government sanctioned national training body for promoting skills development in the high-tech sector, run an initiative “call2change” which is focused on promoting skills in the call centre industry. One such promotion is the Modern Apprenticeship, an on-the-job training programme, largely aimed at younger people, and designed to give call centre personnel better skills. Despite such schemes, Mital Research (2002) believe poor training is becoming unacceptable to both employee and the increasingly discerning customer.

¹ ‘Visible management systems’ similar to those used in the manufacturing context, see, for example, Fucini & Fucini, 1990; Garrahan & Stewart, 1992.

Others (Callaghan & Thompson, 2002) have noted the contradiction between extensive and sophisticated selection and training and the routine nature of call centre work, finding that employees were aware of these tensions, which not infrequently led to increased labour turnover.

Mital Research (2002) found pay levels varied with both geographical location and call type: average inbound agent salaries being slightly less than outward bound agent salaries, while Holman and Wood (2002) found pay rates varied according to sector. High levels were found in specialist sectors such as healthcare and pharmaceuticals, the lowest being in insurance and publishing. Relating to the note of caution raised in Chapter 3 regarding call centre 'facts', it would appear that *overall* pay scales tend to be higher than similar jobs in local industry, particularly in geographical areas where there are a number of call centres. Clearly people will have different motivations but pay, i.e. an extrinsic aspect of front line work, will potentially be a salient issue which is likely to feature prominently in a number of the participant's causal maps. Arguably the main negative aspect regarding pay levels pertains to the flat structure of the pay scales in many call centre organisations, consequently resulting in little potential for progression. Call centres are usually run as specialised offices, distinct, and sometimes geographically separated, from other areas of the business, they tend to house few other job roles or functions, allowing little opportunity for lateral career movement (Belt, 2002). Consequently, call centre front line agents are unlikely to progress beyond the level of team leader or supervisor. As identified almost a quarter of a century ago, a lack of expected career development (Cooper, 1979) may be a major source of stress. Not surprisingly, therefore, the limited career prospects of front line call centre staff is one reason given for their high rate of attrition (Health & Safety Executive, 2000; Mital, 2002). In partial mitigation, some research has concluded that women are well represented in managerial roles in call centres compared to other industries (Belt *et al.*, 2000). Other work (Hutchinson *et al.*, 1998) found taking on new responsibilities causes some stress for team leaders as these additional functions were not combined with sufficient training to enable them to be performed effectively.

While these issues were viewed as likely to be salient for study participants, and the situation with regard to employment seen to be generally negative, as revealed by past research in call centres and extrapolating from work carried out in other contexts, the situation is potentially somewhat complex. While training is seen to be minimal, some have reported positive moves. While promotion prospects are seen to be limited, women are also reported to be well-represented in this sector. In consequence we would expect to find evidence of considerable variation in the way in which working conditions are represented in the cause maps of participants, with some individuals construing their worlds more favourably than others.

5.2.7 Job Design and Work Characteristics (CCAT.07)

Some of the more recent call centre literature (see, for example, Holman, 2002; Houlihan, 2002; Taylor *et al.*, 2002) is beginning to reject the idea that all call centres are uniform, and there is the recognition that some call centres are trying to introduce greater autonomy and more variety to alleviate the deleterious effects of Tayloristic job designs (Houlihan, 2002). However, these authors are also aware that the aims of employee well-being, cost minimisation and operational efficiency appear incompatible in call centres (Holman, 2002), and that despite these distinctions in call centre types, larger numbers of operatives report an experience of work that is driven by quantitative imperatives (Taylor *et al.*, 2002). Work processes redesigned largely for economic gain, to keep up with global competitive pressures and to take advantage of the possibilities of technology, are not the objectives or traditional concerns of job redesign models (Hackman & Oldham, 1980). In the general workplace, Mohrman, Mohrman Jr. & Tensaki, (1997) found very little design activity to be guided by workforce preferences.

Arguably, in the call centre context, the most important issue is that of very limited employee autonomy and discretion in the work process. While the links between job control and outcomes are complex, work situations are experienced as especially stressful when workers have low decision latitude (Baker, 1985) and jobs making high-demands of the individual yet only allowing low discretion to carry them out are suggested to be the worst combination in terms of health (Karasek, 1979; Theorell, 1996). The choice of a fragmented and repetitive work regime leaves workers with no meaningful control over work organisation. This has a potentially

detrimental impact on resilience, which is enhanced by experiences allowing for judgement and discretion and by the ability to make and recover from mistakes (Sutcliffe, Sitkin & Browning, 1997). Scripts are used in some call centres as mandatory legal requirements and/or for security reasons, for example in terms of advice regarding mortgages and loans. In others, for example, NHS Direct, skilled professionals are working in a situation whereby they are strictly adhering to scripted protocols. Belt *et al.* (2000:373) found agents viewed computerised scripts, designed to control the content, pace and structure of the telephone conversation, as extremely stressful and tiring. However, the control extends beyond what is said to how it is said, and emotional labour (Fineman, 1996; Hochschild, 1983) is cited as being problematic in the call centre sector (Gates, 1999; Taylor, 1998). The front line call centre agent is no longer subject simply to requirements of the internal manager but is now directly and personally exposed to the pressures exerted by customers in the external marketplace. As pointed out by Macdonald and Sirianni (1996:4):

“The assembly-line worker could openly hate his job, despise his supervisor, and even dislike his co-workers, and while this might be an unpleasant state of affairs, if he completed his assigned tasks efficiently, his attitude was his own problem. For the service worker, inhabiting the job means, at the very least, pretending to like it, and, at most, actually bringing his whole self into the job, liking it, and genuinely caring about the people with whom he interacts”.

Additionally, when customers' and management's preferences differ, workers are put in the difficult position of having to please one party at the expense of the other (Leidner, 1996). Front line workers may experience work-related stress if they do not feel that the target time for a call allows them to answer all a caller's questions as fully as they would like and, consequently, may suffer from issues of role conflict (Batt, 1999; HELA, 2001). Workload in terms of quantity and/or quality (be this over- or under- load) is yet another potential intrinsic stressor. In the call centre context it is suggested that this pertains primarily to quantitative overload (HELA, 2001), which, in the general workplace, is seen to be a major cause of stress (Bryan, 1996) and qualitative underload, associated with routine, boring and under-stimulating work and underemployment (see, for example, Clegg & Wall, 1990;

Dooley, Prause & Ham-Rowbottom, 2000; Feldman, Leana & Turnley, 1997; HELA, 2001; Johnson & Johnson, 1996).

Taking these factors into account, it was viewed as probable that issues pertaining to job design and work characteristics would be salient for front line workers. However, it was also thought likely that how these issues would manifest in participants cause maps may quite different. This would depend on such contextual factors as the degree of autonomy permitted in each call centre, and (taking into account the literature detailed in Chapter 2 regarding people's beliefs in their control) upon on an individual's perception of control over environmental events.

5.2.8 Management and Employee Relationships (CCAT.08)

Behavioural scientists have suggested that maintaining good relationships among the members of a work group is a central factor in individual well-being and Cobb (1976) concluded that social support could actually protect persons from a wide range of pathological conditions. As noted, while team leaders are responsible for most of the day-to-day personnel issues, there are various issues of concern, for example, the general argument as to whether supervisors are sufficiently well trained to manage human resources (Lowe, 1992, 1993), applies in the call centre context (Crome, 1998). There are also concerns about role ambiguity, i.e. if a line manager is encouraged to focus exclusively on the task at hand, their willingness and ability to address longer-term people-centred issues may be greatly undermined. The role of the team leader role is potentially complex. As pointed out by Lowe (1992: 150) a persistent theme in the general HRM literature is the divorce between the responsibilities assigned to and lack of authority associated with the team leader/supervisor role. However, the important effect of supervisory style on employee attitudes and behaviour (Deery, Iverson & Walsh, 2002; Frenkel *et al.*, 1998, Frenkel, Korczynski, Shire & May, 1999) and on worker well-being (HELA, 2001; Holman, 2002) has been revealed in the call centre literature and in the general work context (Warr, 1999; Winnubst & Schabracq, 1996). Similarly the positive benefits of peer support have been revealed both generally (Corsun & Enz, 1999) and within the specific call centre literature (HELA, 2001).

Fiske and Neuberg (1990) conclude that researchers should analyse social situations in terms of ‘motivating agents’, i.e. those viewed as controlling the outcomes that are of relevance for a particular perceiver, which suggests that supervisory support alone may not be sufficient, i.e. the employee will always:

“sense the presence of ‘The Company’ behind the supervisor and top management must show its sincere interest in him as an individual by establishing its own direct contacts with the employees”.

(Bendix, 1974: 321)

To an extent, it is argued that the level of trust and trustworthiness in organisations affects their structures and responses (Creed & Miles, 1996). The move towards flatter structures and wider spans of control, theoretically at least, calls for greater employee autonomy. However, and contrary to current management orthodoxy, there is a belief that in the general workplace organisational cultures are moving towards greater managerial control (Herriot, 2001; Rousseau & Wade-Benzoni, 1995). Oppressive call centre management was one key cited reason for the British Telecommunications strike in November 1999 (Lamb, 1999). Significantly, an addition to the initial nine features of Warr’s (1987, 1994) mental health model is the issue of supportive, considerate and effective leadership and management supervision (Warr, 1999). Truncated dismissals illustrate how tough times produce tough bosses, i.e. rather than allowing a few extra minutes for a layoff notification meeting, a manager might exhibit distancing by minimising contact time (Folger & Skarlicki, 1998). However, it has also been shown that a manager's sensitivity to layoff victims can benefit an organisation (Brockner, 1994). A negative management style can exacerbate stress levels *for* management if their behaviour results in the deterioration of an employee’s work performance and/or attitude toward them, although as pointed out by Sparks *et al.* (2001:501):

“Unfortunately, there are relatively few studies addressing the impact of negative management styles, with most research focusing on effective management behaviour”.

Management may use rhetoric to make satisfactory sense of actions, which were essentially opportunistic, or to justify themselves to their employees or to the outside

world (Herriot, Hirsh & Reilly, 1998). However, Coopey (1995) concludes that employee conceptions of the degree of coincidence of their interests and that of the organisation are based primarily on how they are treated rather than management rhetoric or slogans.

Taking both theoretical and empirical evidence into account, it seemed likely that working relationships would be salient to the front line worker. In terms of relationships with management, the perception of manager's understanding of the front line role was also a potentially salient issue. Especially in large organisations, there is evidence to suggest that top managers last talked regularly to customers, or dealt with technologies, twenty years ago (Starbuck, 1989). Barley's (1986) study of the adoption of CAT scan technology by medical staff showed that the radiologists knew less about the technology than did the technicians they supervised – leading to a stream of largely uninformed directives and puzzling counter-commands. Linking into earlier issues of communication processes, it has been concluded that information which should come up the line of authority from those who are in daily touch with operational problems, tends to be neglected for the very reason that it comes from a subordinate, resulting in a minimum level of understanding:

“When all allowances have been made for the ambiguity of ideas and the ambivalence of feelings, there remains a vague residue of understanding between workers and managers as members of the same community”.

(Bendix, 1974: 249)

This is an issue raised by HELA (2001) who point out that the collective knowledge and experience of front line workers can be a valuable resource, especially if managers have little or no experience of handling calls themselves. It was envisaged that judgements of the level of understanding of managers for front line roles would have marked implications in terms of perceptions of outcomes. In particular, those individuals (or organisations) who believe management has little understanding and/or who gives little support would be more likely to report detrimental personal and organisational outcomes.

5.2.9 Work Performance and Satisfaction (CCAT.09)

As noted in Chapter 4, research examining the links between HRM practices and outcomes is largely based on blue-collar workers in manufacturing plants (Arthur, 1994; Huselid, 1995; MacDuffie, 1995). Moreover, the limited work that has addressed HRM practices and outcomes among service workers is underdeveloped, both conceptually and methodologically, in that it has not explained the relationship between HR practices and performance (cf. Batt, 2002; Guest, 1997). HRM researchers (Delbridge & Lowe, 1997: 870) have concluded that one area that has particularly suffered from the “silence of employee voices” is the area of work performance and that, in overlooking the employee perspective, the current body of literature is missing the opportunity to reveal and how different dimensions of the HR system affect different types of employee behaviour. Given a framework that did not inappropriately restrict choice, it was expected that study participants would detail the issues impacting upon their personal job performance and satisfaction, and also their perceptions of the impact these construct have upon overall call centre performance.

Holman and Wood (2002) found that 77 percent of the 142 call centres in their survey collected customer satisfaction data and 55 percent had customer satisfaction targets as part of a formal strategic plan. Few had a formal customer complaints system with the approach to customer complaints being reactive rather than proactive. Wharton’s (1993) questionnaire study into two organisations suggested that front line service jobs requiring interactions with the public are experienced as emotionally exhausting for certain workers but not others, and are, in fact, a source of satisfaction for some. However, this is also associated with the level of job autonomy: emotional labour leads to increased emotional exhaustion among workers with low job autonomy. Similarly, although the requirement to pay constant attention to one's work may cause feelings of worry and anxiety, for example, about making a mistake, Holman (2002) found that actively attending to and meeting customers' needs and dealing with their problems may also prove satisfying. Drawing on qualitative research undertaken in six organisations, Frenkel *et al.* (1998) found that only in relation to job security and co-worker relations could front line workers be considered to be satisfied, while Baldry *et al.* (1998) revealed overall dissatisfaction. The links between context, performance and satisfaction are

clearly complex. However, it was expected that both personal job satisfaction and customer satisfaction would be important issues for many front line workers. One suggested measure of satisfaction, namely worker turnover/attrition levels, has been seen to be a particularly important issue for call centre managers. As a result of its potential direct impact upon targets and workload and further implications in terms of, for example, team working and social support systems, it was thought that this issue might be important for front line workers.

5.2.10 Health and Well-Being (CCAT.10)

In terms of physical health, a particular set of problems of concern to physical ergonomists are work-related upper limb disorders: pain in the wrists, arms, shoulders, neck and back caused by sitting in fixed positions at a workstation and perhaps engaging in repetitive actions such as keying (Hagberg, 1996). As noted, the call centre front line agent is particularly vulnerable to health problems of this kind, with repetitive strain injury and other musculoskeletal disorders, such as backpain, resulting from poor or awkward postures, being of particular concern, along with hearing impairments, sore throats and voice loss, and eyestrain.

Stress is also seen as a major contributor to occupational ill-health in call centres (see, for example, Deery *et al.*, 2002; Gates, 1999; Knights & McCabe, 1998; Sczesny & Stahlberg, 2000; Taylor *et al.*, 2003; Wallace *et al.*, 2000). For example, Deery *et al.*'s (2002) survey data of call centre staff in Australia found emotional exhaustion was associated with high workloads and also the pressure from management to maximise customer throughput at the expense of customer service. Of the key environmental influences identified in Warr's (1987, 1994, 1999) mental health model, the opportunity for personal control is assumed to be the principal foundation of mental health, as it contributes to psychological well-being in its own right and enables the individual to influence the remaining principal environmental influences. Work situations are experienced as especially stressful when workers have low decision latitude (Baker, 1985). Jobs making high demands of the individual yet only allowing low discretion to carry them out are suggested to be the worst combination in terms of health (Karasek, 1979; Theorell, 1996). While jobs will differ in the freedom they provide for workers to schedule their tasks and to determine the ways in which work should be undertaken, the typical front line job is,

as noted, reputed to be very controlled and Holman (2002) revealed that a high level of monitoring has a negative association with call centre employee well-being.

From our knowledge of call centre working conditions, it appeared that several additional elements of Warr's model were also likely to be key: opportunity for skill use, the need for variety; external vs. internal goal generation, opportunity for personal contact, and valued social position. In other words, many factors evidenced to be likely occupational stressors are allegedly prevalent for front line call centre workers. Consequently, it was thought likely that issues of health and well-being, both personal and organisational, would be salient for both front line agents and team leaders, though in their survey of 142 call centres Holman and Wood (2002) reported a wide range of sickness rates, ranging from 2 days and under in the top 10 percent of call centres to between 12 and 18 days in the bottom 10 percent of call centres. Examining measures of well-being in 3 call centres in one organisation, Holman (2002) found significant differences and tentatively concluded that well-being in certain forms of call centre work compares favourably to that in other forms of work (namely shopfloor manufacturing and clerical work) while, and contrary to this, Taylor *et al.* (2003) compared the roles of call handlers (front line agents) with non-customer facing administrative workers and concluded that the front line job was uniquely stressful.

Issues of perception or sensemaking are raised by Holman's study, where self-reported measures of employees' evaluations of HR practices, namely the fairness of the payment system, the usefulness of performance appraisal and the adequacy of training, tended to be associated negatively with depression and positively with extrinsic job satisfaction. Holman also found variations in the reasons why these practices are associated with well-being. For example, if an individual believed their level of pay to be unfair, i.e. that they did not receive compensation that reflected their level of effort, then they felt less enthusiastic about their current activities. Holman further indicated that job tenure and age needed to be addressed when considering this issue. Moreover, Deery *et al.* (2002) concluded that the longer employees worked in call centres the more burnt out they became.

5.2.11 Identity (individual and social) (CCAT.11)

Under conditions of change top management team members' perceptions of identity and image, especially desired future image, are key to the sensemaking process. Rather than using threats and opportunities, team members distinguished their interpretations mainly according to strategic or political categorisations (Gioia & Thomas, 1996). Similarly, the literature concerning psychological and social aspects of unemployment (see, for example, Fryer, 1995; Hayes & Nutman, 1981; Jahoda, 1982) has examined the sense of identity which people derive from their work, from which it is clear that workplace involvement is potentially a primary source for the development of personal identity (Czarniawaska-Joerges, 1992). For many people their professional and/or organisational identity may be more pervasive and important than ascribed identities based on gender, age, race or nationality (Hogg & Terry, 2000). Scholars have argued that individuals attach considerable importance to their organisation's identity (Ashforth & Mael, 1989) and that a person can acquire a more positive (or negative) social identity through associations with organisations that have positive (or negative) identities (Dutton & Dukerich, 1991; Dutton, Dukerich & Harquail, 1994). Porac *et al.* (1989) found beliefs about the identity of the firm to be a key part of the 'mental model' (p.399), in that to make sense of the environment firms had to collectively set themselves apart as distinct from others but then individually had to differentiate themselves (see also Peteraf & Shanley, 1997). Individual social categorisation can therefore be potentially attributed to association with the industry, organisation and/or by affiliation with various social groups (Turner, 1985).

As noted, call centre workers have acquired a reputation as white-collar production lines. Preserving self-esteem, in the form of a valued social position, is important for psychological health (Warr, 1987, 1994, 1999) and subsequently people tend to defend themselves from anything that has negative implications for their personal identity. For some the potentially stigmatic features of the work can be transformed into socially meaningful illusions that enhance the personal dignity of the performer (Mangham, 1986) and it is clear that people are not content to have their identity determined by the social cognitive context (Hogg & Terry, 2000). However, it is also clear that context can have a profound impact on the meaning of any self-categorisation (Haslam, 2001). Thus, even in those occupations classified as 'dirty

work', positive self-esteems may be forged via social support. Certain factors, which seem to be core to the call centre industry, actively inhibit group formation, in particular high turnover and interpersonal competition for rewards (Ashforth & Kreiner, 1999). While employer's guidelines still currently focus on physical rather than psychological issues (McGuinness, 2000), from what has emerged in the call centre literature to date (in particular, issues pertaining to excessive surveillance and control) and the adjacent literatures, it would appear that call centre conditions are likely to have negative consequences for peoples' self-esteem (see, for example, Jermier, Gaines & McIntosh, 1989; Jermier, Knights & Nord, 1994; Koper *et al.*, 1991, Mangham, 1986; Tice, 1992; Warr, 1987, 1994). Similarly, it is proposed that call centre conditions are not consistent with enhancement of trust or feelings of being trusted (see, for example, Boon & Holmes, 1991; Brockner & Siegel, 1996; Creed & Miles, 1996; Herriot *et al.*, 1998; Kelly & Kelly, 1991; Lewicki & Bunker, 1996; Mishra, 1996; Wicks, Berman & Jones, 1999), creating potential problems of forging commitment to and identification with the organisation. Research has suggested that perceptions of trust act independently of, and are as important as, job design factors in affecting various outcome variables, including absence, satisfaction and performance (Cunningham & MacGregor, 2000). Once again, it was deemed likely that issues under this broad category would be highly salient, at least for some call centre front line workers.

5.3 Conclusions

Based on theory and, where possible, explicit empirical call centre research, it was expected that to varying extents each of the above categories were likely to be salient for call centre front line workers. However, relating this to Weick's sensemaking properties, what are focused upon and extracted by cues was the focal question. The capture of cause maps based on this material would enable the study to address the questions posed to this point regarding which constructs would be seen to be of most salience to study participants and whether these would reveal an institutional effect either at the level of the industry or that of the organisation. As seen, two basic hypotheses had been suggested: 1) there will be evidence of institutional effects across the sample (i.e. to the extent that influences at the level of the industry have led to what might be termed an 'industry recipe' for the call centre industry), and 2) there will be significant differences between organisations in

category salience in terms of construct choice (reflecting differential sensemaking as a function of contextual variables at work within the organisations investigated).

Each construct included in the study framework was seen as potentially influencing and being influenced by every other construct. However, it has been concluded (Axelrod, 1976; Ford & Hegarty, 1984) that cause maps have (as the ultimate dependent variable) some form of utility. It was thought that cause map data might also enable us to better understand the associations between various practices and issues and the links to outcomes, for example organisational and individual performance and health and well-being as *perceived* by these non-managerial workers, ultimately enhancing our understanding of the processes required to improve the working conditions of such operatives. If patterns of sensemaking were observed, this may then have potentially positive practical implications for call centre management. As expressed by Gioia (1986: 342):

“From the point of view of the practicing manager, understanding, organisational cognition can do either of two potentially beneficial things: it can allow a more effective (and perhaps more humanistic) mode of prediction and control in the future, or it might pave the way for a reduced need for prediction and control. The latter condition will prevail if, for instance, a concern with organisational cognition reveals ways to facilitate a higher degree of self-management or ways to apply holographic approaches to the design of organisations.

However, as noted in Chapter 2, individuals can go through the same experience and ‘know’ different things as a result (Antonovsky, 1987; Gabriel, 1999; Gabriel *et al.*, 2000; Nicholson & West, 1988). Moreover, the role of the individual is acknowledged from an interpretive approach (for example, Lincoln & Guba, 2000) including more specifically that of sensemaking. Weick (1995: 88) suggests that, as turbulence increases, sensemaking will be defined more idiosyncratically, i.e. *unless* there are strong, homogenous organisational cultures or binding industry recipes (Spender, 1989). As a logical extension of the arguments that led to Hypothesis 1, (i.e. that call centres are seen to be an ‘industry’ or ‘sector’, and thus we would expect to find high levels of consensus across the sample as a whole), the following hypothesis was proposed:

Hypothesis 3

Contextual influences (either at the macro- or micro- level, and as revealed in H1 and H2) will be the dominant influence upon the sensemaking processes, i.e. even when controlling for key covariates.

Nevertheless, this did not negate the potential role of the individual in the sensemaking process. From the perspective of institution theory, once again, the individual is acknowledged and the role of agency is questioned (for example, Scott, 1991; Zucker, 1991). Individuals also have agency and take actions that shape their environment (Giddens, 1994; Gioia & Pitre, 1990). In the management and organisational cognition literature, the moderating effect of demographics on executive beliefs are seen to be complex. For example, in their exploration of the role of firm and industry as determinants of perceptual commonality among executives, Sutcliffe and Huber (1998) concluded that there was evidence of significant commonality in environmental perceptions amongst top managers both within organisations and within industries, but that commonalities of perception exist within top management teams over and above those within industries. Others have revealed that a variable may be seen to influence beliefs about some issues but not others (Chattopadhyay, Glick, Miller & Huber, 1999), and there are calls for more research into the antecedents of managerial cognition (Hodgkinson, 1997a, 2001; Hodgkinson & Sparrow, 2002; Walsh, 1995).

Some evidence of the influence of individual factors has been revealed in the earlier literature review where, for example, Wharton (1993) found service jobs requiring interactions with the public were experienced as emotionally exhausting for certain workers but a source of satisfaction for others. Holman (2002) and Deery *et al.* (2002) indicated that the issue of job tenure needed to be considered when examining call centre well-being. Thus, and contrary to the proposal put forward in Hypothesis 3, it was considered that there may be strong individual differences, which, as will be argued in the next Chapter, may impact upon the contextual effects as determinants of the structure and contents of actors' cognitive maps, the substance and embodiment of sensemaking.

CHAPTER 6

Individual Differences Variables

There has been little attention paid to individual differences variables in the call centre literature (for exceptions see, Deery *et al.*, 2002; Holman, 2002; Frenkel *et al.*, 1998). However, there are a myriad of candidate individual differences with the potential to influence the sensemaking process among front line workers. These include demographic factors, how central work is to a person, key personality variables, and individual characteristics and differences in the processing of information. Clearly a limit is required within the confines of one study but, informed by theory and empirical evidence, several variables stand out as having the potential to be especially salient in this study context: job role, level of education, length of service in the employing call centre, age and experience, gender, centrality of work identities, and locus of control. The rationale as to why each is seen to be important in this study context in terms of construct salience and/or cause map structural complexity and/or their potential implications for perceptions of outcomes are explained in the course of this Chapter.

6.1 Job Role

The information available to organisational members will be affected by many factors, one being the organisational location of the interpreter (Jelinek & Litterer, 1994). Empirical evidence has revealed that, in part, the particular view a manager may have about a situation will be determined by that manager's role within the organisation (Daniels *et al.*, 1994a; 2002a; Ireland *et al.*, 1987), whether this is, perhaps, because of social interaction (Chattopadhyay, Glick, Miller & Huber, 1999; Rentsch, 1990) or more directly related to function of the role (Hodgkinson & Johnson, 1994). Worrall and Cooper (1998) restricted their study to managers and found differences in perceptions of the business and human impacts of organisational change varied very significantly with the respondent's location in the management hierarchy with: "the inflictors of change having hugely different impressions than the recipients of change" (p.29). By definition managers will know more about the formal policy of the organisation and its "proper" execution than employees. Yet their knowledge is limited or circumscribed by the fact that their

high rank within the organisation automatically removes them (albeit to varying degrees) from day-to-day experience and its operational problems. In consequence, both the view of the manager and of the employee are more or less limited, i.e. the manager sees people, issues and events from only one perspective, while the “masses” see them from another (Bendix, 1974).

The call centre context allows investigation into, and comparison of, two front line job roles: the front line agent and the team leader. Those occupying the team leader role, viewed by some as the most important and most pressurised in the call centre environment (Hutchinson *et al.*, 1998), are essentially, in Worrall and Cooper’s (1998) terms, the “inflictors” of call centre rules and regulations on the front line agents or “recipients”. However, the situation is potentially complex. In the general HRM literature a persistent theme is the distinction between the responsibilities assigned to, and lack of authority associated with, the team leader/supervisor role (Lowe, 1992, 1993). Additionally, in the more specific call centre literature, the ambiguous nature of the team leader role is seen to be problematic: at times the team leader is carrying out a HR role and at others actually standing in for, and carrying out the same duties as, the front line agent. This may mean that, to differing degrees, team leaders and front line agents achieve similar insights as a result of performing a similar set of tasks. This complexity is compounded by the fact that, unlike the typical manager, team leaders are not divorced from front line activities. Contrary to this, and by definition, team leaders are dealing with day-to-day front line operational issues and therefore a certain similarity in sensemaking between team leaders and front line agents may be gained as a result of this social interaction (Chattopadhyay *et al.*, 1999; Ibarra & Andrews, 1993). Thus:

Hypothesis 4

Job role will influence category salience (with some categories being more salient than others depending upon job role). In particular, team leaders will pay more attention to wider issues driving the organisation, while front line agents will pay more attention to parochial issues.

However, this may not be confirmed because of the similarities in tasks, operational issues and social interaction.

As noted in Chapter 3, research in the management population has been equivocal in terms of map structure. Walsh (1995: 300) questioned whether accountability might prompt people to think in a complex manner, and the team leader role will generally involve a greater level of accountability than that of the typical front line agent. It is expected that this accountability, together with the relatively more complex structure of the team leader role, and their likely greater access to a wider range of information, will lead to more complex sensemaking. In other words, team leaders are likely to see the 'bigger' call centre picture and links between the issues than are front line agents, which will be manifest in the increased complexity of their cause maps. Therefore:

Hypothesis 5

Job role will make a statistically significant difference to structural complexity: team leaders will have more complex cause maps.

6.2 Level of Education

In their survey of 142 call centres, Holman and Wood (2002) found front line agents to be typically educated to GCSE O' level standard and the majority of team leaders to O' or A' level standard. However, others suggest large and increasing numbers of call centre employees are qualified to, at least, degree standard (Anon., 2001; Watson, Bunzel, Lockyer & Scholarios, 2000) and there are specific instances of professionally skilled workers, for example nurses and HR professionals, working on the front line.

Empirical evidence from the management population suggests that level of education is likely to engender different mental models. For example, Knight *et al.* (1999) found educational level (and employment tenure diversity) directly influenced strategic consensus levels. Markóczy (1995) found education type affected the beliefs of managers in one organisation, and Lindell *et al.*'s (1998) longitudinal study of the sensitivity of cognitions to situational change revealed one strategist's beliefs and values remained stable, seeming to reflect his education and

his personality. In an attempt to synthesise various fragmented literatures regarding managerial backgrounds and organisational outcomes, Hambrick and Mason (1984) revealed one consistent finding to be that level of education is positively related to receptivity to innovation. This being the case, it would be expected that the level of education of the front line worker would be related to construct saliencies, for example while advances in technology would be welcomed, repetitive tasks would not. Thus:

Hypothesis 6

Level of education will influence category salience. In particular, tasks and technology will be more salient relative to the increasing level of education.

The complexity of map structure may provide a means to examine the variety in and development of more complicated thinking (see, for example, Bartunek, Gordon & Weathersby, 1983; Eden & Ackermann, 1998; Eden *et al.*, 1992; Hart, 1976). Therefore:

Hypothesis 7

There will be statistically significant differences in complexity levels among front line call centre workers with different levels of education. Specifically, the more educated the worker, the greater the overall complexity of their cause map.

6.3 Length of Service in the Employing Call Centre

According to Weick (1995), periods of change are times ripe for sensemaking. The organisational newcomer has to make sense of the current situation based on 'scripts' they have accumulated and carried over from the past. Therefore, the individual is coping with change, contrast (of past and present environments) and surprise (via positive and negative disconfirmed expectations) (Louis, 1980). When entering an organisation, individuals are given sensemaking clues enabling them to acquire the pool of knowledge and orientation that is required to be a member of the group/department/organisation. This includes the practical aspects of the role, via deliberate teaching in the form of formal training, and the transmission of what the organisation is about (via, for example, coaching and mentoring), and more informal membership conversion in terms of familiarity with beliefs regarding, for example,

culture and myths. Workers are likely to use social information in developing their perceptions of the meaningfulness, importance and variety of the job. This is said to occur via direct statements of co-workers, structuring of attentional processes (for example, to the routine nature of job or its social importance to organisational products), and by the provision of constructed meanings of events (for example, the reasons for supervisors' actions and whether these are seen in a positive or negative light) (Salancik & Pfeffer, 1978).

Organisational socialisation leads organisational members to share the same context and schema (Schein, 1988, 1991), and can create: "a shared perception of daily practices" (Hofstede, Neuijen, Ohayv & Sanders, 1990: 311). In the management population, researchers have suggested that as executives grow familiar with the domain of activity, they become sensitive to certain stimuli (Starbuck & Milliken, 1988; Sutcliffe, 1994) and the individual's length of tenure in a company has been shown to result in particular knowledge structures (Walker, 1985). As noted, the overall conclusion derived from Chattopadhyay *et al.* (1999) was that the effects of functional conditioning on executive beliefs, whether in the form of past experiences or current rewards and responsibilities, were minimal, whereas the impact of social influence was moderate, but larger, by comparison. Similarly, Ibarra and Andrews (1993) found support for the assertion that informal interaction networks, in channelling social influences, have a significant impact on job-related perceptions, over and above the effects of traditionally emphasised sources of influence such as formal position and departmental affiliation. It would, therefore, seem reasonable to suggest that there will be differences in what are considered to be the most important call centre issues in respect of length of time spent in the call centre, i.e. before people become acculturated in respect of that which 'is important round here'. On the basis of call centre work to-date (Deery *et al.*, 2002), it is expected that longer call centre service will be associated with more concern with, and relatively worse perceived outcomes in terms of, issues of health and well-being, and negative perceptions of job satisfaction (Holman, 2002) relative to their colleagues with shorter length of service. Thus:

Hypothesis 8

Length of time in the employing call centre will influence category salience. In particular, those with longer experience will find issues of identity and of health and well-being to be more salient.

However, issues of identity may be difficult to detect. Strong cultures are said to become apparent when group membership is stable and in situations where members have a long history of shared experiences (Langfield-Smith, 1992), i.e. contrary to the call centre context with its alleged high levels of staff turnover. Additionally, the time it takes to be viewed as an elder in an organisation may, in an age of reorganisation, mergers, acquisitions, have shrunk to weeks or days (Weick, 1995: 125) and thus a similar acquisition of similarity in beliefs may be evident in a short time span. Moreover, as argued by Sitkin (2001), the more institutionalised a set of cognitive or behavioural assumptions are, the *less* they will be an explicit part of the considerations of individual members.

In terms of cause map complexity, it may be that as employees gain more knowledge via their time spent in the call centre they will also glean additional insight into the interconnections of various issues, which will be reflected in their cause map by a more complex structure. Thus:

Hypothesis 9

Length of service in the employing call centre will show a statistically significant positive correlation with cause map complexity (as employees gain more knowledge of their environment and the interconnections of various issues).

Contrary to this, as front line work is allegedly very routine, repetitive and controlled, it may be that this development of complexity will not be evident. Furthermore, a lengthy period of time spent in just one organisation may lead to relatively limited perception (Hambrick & Mason, 1984). Therefore, the cause maps of those participants with longer service may, in fact, be relatively less complex, with length in the employing call centre being negatively correlated with cause map complexity.

6.4 Years of Work Experience External to the Call Centre Industry and Age

Work in cognitive psychology suggests that the categorisation of ideas operates hierarchically, with new ideas related to established frames (Fletcher & Huff, 1990) implying that both age and experience will have an influence on sensemaking processes. As noted earlier, research into the effects of various demographic variables on individual managerial sensemaking has revealed complex results, but age (Markóczy, 1995, 1997) and years of work experience (Wagner, 1987) have been seen to affect beliefs. For the most part, occupational research considers 'young' workers to be those aged between 15 and 24. They are a heterogeneous group, including students working part-time, evenings, weekends, and/or in the summer while attending school, and those working full time in the paid labour force (Loughlin & Barling, 2001). However, age is largely interlinked with experience, including broad social trends and events, and Loughlin and Barling point out the major influences on young workers are their parents' employment and economic circumstances, and their own work experiences. During the 1980s and 1990s many of these young workers saw the consequences of organisational 'downsizing' and dismissals and therefore do not trust the current job market to last. Some point out that some of these workers have an attitude of 'working to live' versus one of 'living to work' (see, for example, Maccoby, 1995). Once again, this links age with a further individual difference, i.e. the issue of work centrality.

In an attempt to disentangle these issues, it is taken into account that many call centres have evolved from established organisations, and strategic moves may have very different implications for different individuals. Some long serving organisational members will now be working under very different conditions, with emphasis on different skills and attributes, and with issues such as loyalty and length of service carrying little importance. For example, in banking services, those with long established experiences in branch networks found difficulty in making the transition to the call centre environment and its different working practices (Herriot *et al.*, 1998). In other organisations, the move to call centre working was accompanied by a deliberate attempt to employ new staff. For example, 98 percent of the NatWest (banking services) telephone centre staff are new employees coming from a wide variety of backgrounds (for example, florist, policewoman, secretary and engineer). The recruitment rationale here being the need for "lifestyle

experience which builds empathy with customer needs” (Hutchinson *et al.*, 2000: 69). Therefore, the length of non-call centre experience may be a particularly pertinent issue, i.e. those who have considerable background work experience outwith the call centre environment may find particular features are salient in so far as they are different from those they have encountered previously. Therefore:

Hypothesis 10

Length of non-call centre work experience will influence category salience. In particular those with longer experience beyond the call centre environment will reveal organisational structure and design (culture and reward strategies) to be of more salience.

In terms of age, the older worker may make sense of the call centre environment in a rather different manner to that of the younger worker, in several respects. The rapid pace of change, in particular that pertaining to new technologies, as a rule, causes more difficulties for the older worker and the wisdom of individual older employees is often not useful in the speed-orientated, competitive world of technical efficiency (Schabracq & Winnubst, 1996). The standardisation of work makes it possible to change the distribution of power towards greater control, and for those in charge to diminish the decision latitude of individual workers. While monotonous, short-cycle, machine paced tasks may result in serious qualitative underload and quantitative overload, Schabracq and Winnubst (1996) suggest the harmful impacts on older employees are likely to be larger and that sustaining such a job is only possible when an individual lowers their standards and adjusts both goals and self-esteem in a corresponding manner. Thus, particular issues may be pertinent for the older worker and may also lead to more importance being placed upon issues of health and well-being. Holman (2002) found the age of the employee had a significant effect, with older workers tending to be more depressed though more satisfied with the intrinsic aspects of their work. Thus:

Hypothesis 11

Age will influence category salience, with more importance being placed upon issues of health and well-being, tasks and technology, and job design and work characteristics.

Worse (perceived) outcomes in respect of issues pertaining to health and well-being will be depicted with greater age.

6.5 Gender

Increasing numbers of men are entering call centre employment. Early estimates revealed 70-80 percent of call centre workers to be women (Richardson & Marshall, 1999). Later research showed a Scottish (where a considerable amount of research has been carried out to-date) average of 63 percent females (Taylor & Bain, 2001b), and others have supported this trend (European Industrial Relations Review, 2000).

There is a complicated mix of evidence as to why gender may make a difference to sensemaking. For example, London and Wohlers (1991) identified that being of the same gender had a bearing on perception and on the level of agreement in views. Reviewing the limited and conflicting evidence, Warr (1999) states that it is not possible to reach an overall conclusion about the influence possible gender differences may have in the impact of specific job features. This is arguably more complex in the call centre environment. While a stressor for women is limited promotion to higher organisational ranks (Dunahoo, Geller & Hobfoll, 1996), in the call centre industry women are well represented in managerial roles (relative to other industries) and most team leaders/supervisors are female (Belt *et al.*, 2000). Macdonald and Sirianni (1996) argue that women are expected to be more empathetic than men and to tolerate more offensive behaviour from customers. Similarly, it has been suggested that women might be more likely to suffer negative effects of emotional labour than men because they are less protected from poor treatment of their feelings on the job (Hochschild, 1983). However, control has been cited largely as being problematic in the call centre sector and Miller (1980) found that control was more of a concern for men than women. For men, job satisfaction was associated with positional authority, having decision making power, and not having close supervisors. Thus:

Hypothesis 12

Gender will influence category salience; in particular men will find issues of control to be of more importance (particularly job design and work characteristics).

However, the complicated mix of explicit theoretically informed issues that might influence what is viewed as being important may be masked at the level of the category (and investigations required at the level of the individual construct).

Also, and contrary to the above, Kessler and McRae (1981) report that gender differences in response to certain potential stressors are diminishing, a finding that they attribute to increasing similarity among female and male work roles (in the general work context). Similarly, Deery *et al.*, 2002 were unable to detect any statistically significant differences between male and female call centre workers in the context of emotional exhaustion.

6.6 Centrality of Work Identities

Committed and uncommitted people examine things differently, often focus on different objects of judgement, and, having inspected them differently, they then go on to see different things (Weick, 1995: 159). Consequently strong reactions to job conditions are only likely to occur for workers for whom the job is a central concern. As pointed out by Leidner (1996:32), since good service is often equated with “personal service”, standardisation may necessarily undercut quality in human interactions and it has been shown that it is those employees most committed to service orientation who will experience the greatest frustration when management puts efficiency ahead of service.

Contrary to this, and drawing on social identity theory (Ashforth & Humphrey, 1993), it is argued that some effects of emotional labour on the service agent are moderated by identification with the role in question: the greater the identification, the weaker the negative effects on well-being and the stronger the positive effects. Holman (2002) found that the relationships between job demand and well-being tended to be non-significant or not in the direction predicted. Thus, although attention demand had the predicted positive association with anxiety, it also had an unexpected positive association with intrinsic job satisfaction. Holman concluded this suggests that, in a call centre, although the requirement to pay constant attention to one's work may cause feelings of worry and anxiety, for example about making a mistake, actively attending to and meeting customers' needs and dealing with their problems may also prove satisfying. Therefore:

Hypothesis 13

The degree of work centrality will influence category choice. In particular those with low work centrality will depict the category of health and well-being as being more salient and those with high work centrality will depict the category of performance and satisfaction as being of most importance.

Hypothesis 14

Those who view work to be more central will have relatively more complex maps.

Hypothesis 15

Those who state that work is most central will have richer cause maps in terms of the strength of relationships depicted within their maps.

There are contrary indications as to the implications upon the perception of the work environment: those for whom work is most central will report the most negative outcomes (reflecting, for example, issues other than good customer service seeming to take precedence), or, alternatively, those for whom work is most central will report the most positive outcomes (reflecting identification with the role).

6.7 Locus of Control

Control related issues are a recurrent theme in the call centre literature and also in the field of stress research and stress management (Cox, 1993) and the issue of control or, more particularly, one's belief in being in control, is seen to be an important issue. For example, Kobasa's (1979) hardy types report feeling in control of their work, while Type A individuals expend a lot of energy trying to get things under control, but often feeling that they have not succeeded (Friedman & Rosenman, 1974). The locus of control construct reflects the beliefs of individuals about who controls the key events in their lives. Individuals tending towards high internality believe that events result primarily from their own behaviour and actions, while those tending towards externality believe that powerful others, fate, or chance primarily determine events (Rotter, 1966). Locus of control is related to well-being and likely to act as a buffer between stress and ill-health: externals being less able to cope effectively with stress (Semmer, 1996). It has additionally been shown to

relate to a number of organisationally relevant variables. Internals tend to be more satisfied with their jobs than externals, see their supervisors as higher on consideration and initiating structure, report less role stress, perceive more autonomy and control and enjoy longer job tenure (Spector, 1982). Hodgkinson (1993) concludes that at the group level excessive externality may lead to a climate of cynicism, one that is psychologically damaging to the organisation as a whole or to large sections of it. Thus:

Hypothesis 16

Locus of control will influence category salience. In particular health and well-being will be of particular salience to those tending towards high externality, and the category of performance and satisfaction of particular salience to those with a tendency to high internality.

Following reviews of the literature, in the context of top executives, Finkelstein and Hambrick (1996) and Hodgkinson and Sparrow (2002) concluded that locus of control beliefs may influence individual mental models (again used synonymously with the term cause map) in several ways. For example, the amount of effort individuals actually put into scanning their environments varies, with internals devoting greater effort to this activity. This would imply:

Hypothesis 17

Those individuals who tend towards internality will have more complex cause maps.

Hypothesis 18

The more internal individuals have richer cause maps in terms of the strength of relationships depicted within their maps.

Those individuals with the most internal scores will report the most positive outcomes (because of the belief that they are the ones controlling the situation).

6.8 Conclusions

A wide range of potentially salient issues for the call centre front line worker (front line agent and team leader) were identified in Chapter 5 and hypotheses formulated as to the potential convergence of beliefs at the non-managerial level.

In this Chapter, on the basis of existing theory and study context, several key individual differences variables were identified which it was hypothesised would influence the sensemaking processes of those working on the front line in a variety of manners in terms of construct salience, cause map structures, and strengths of beliefs of relationships within those structures. It was also proposed that several of these individual differences variables present a series of implications as to how they might influence perceptions of performance and satisfaction, and health and well-being. A detailed description of the elicitation procedure devised in order to test the study hypotheses and to investigate the possibilities in terms of implications is presented in Chapter 7.

CHAPTER 7

Research Methods: Instrumentation, Design and Procedures

This chapter first reviews some of the key issues that were taken into consideration in the design of the research methods. The chapter then details the particular cause mapping methods employed in the study. Additional data was obtained by participant questionnaire and this chapter also includes details of construct validation and the measurement characteristics of all scales employed. The chapter also describes the research design used in the study, together with issues of access, consent and interview administration. This is followed by details of the overall study sample characteristics and the individual organisational profiles. The chapter concludes by drawing together the full study hypotheses in the sequence they will be tested in the subsequent chapters.

7.1 Key Decisions

As explained in Chapter 3, in this study cause maps are not seen as being a literal representation of what is in a person's head. Rather, the stance taken is that cause maps will provide an invaluable device enabling an individual to think through (make sense of) a potentially complex situation. Further to this, they are seen as a meaningful way of representing what a participant says, or say they think, is important and of how these important issues influence, or are influenced by, other important issues. It would have been impracticable to collect maps at any level other than the individual, if individual differences variables were to be taken into consideration. As further detailed in Chapter 3, despite the various debates surrounding individual vs. collective sensemaking, no pertinent arguments were located to suggest this was inappropriate.

The main concerns in the study were first to conduct a large-scale investigation among non-managerial samples, and, secondly, to collect data in a manner in which did not unduly restrict participant sensemaking (ensuring that the research task was meaningful) yet which was also amenable to comparison.

7.1.1 An Emphasis on Participant Freedom of Choice

Where more interactive methods are used, for example interviewing procedures, there is no agreement as to the best way of transforming this material into a cause map. In some cases, individuals are involved in validating their own maps; while in others the link between data collection and map is managed solely by the researcher or interventionist (Eden, 1992). In the pilot phase of the study (a summary of which can be found in Appendix 1) maps were first drawn freehand and then using commercially available computer software, i.e. Decision Explorer (a relaunch of Graphics COPE), which Eden and colleagues have successfully developed in order to capitalise on the utility gained from reflective mapping (see for example, Eden, Ackermann & Cropper, 1992). This software has proved to be of immense benefit in areas where interactively generated maps have helped to build up a comprehensive qualitative map or model, which is then explored and analysed to help develop strategy, decision making and business problems (see, for example, Cropper, Eden & Ackermann, 1990; Eden & Ackermann, 1998). Use of this package confirmed the author claims that Decision Explorer engages participants, who cannot only view and validate their maps but also, with researcher support, carry out their original construction. It was clear that, during each individual participant procedure, the cognitive structure of the individual was likely to change to some extent through the exploration of identified issues and ideas. Expressed simply by Eden (1992: 261).

“if we take seriously Karl Weick’s aphorism that we do not know what we think until we hear what we say, then the process of articulation is a significant influence on present and future cognition. If articulation and thinking interact, then an elicitation of cognition that depends upon articulation is always out of step with cognition before, during, and after the elicitation process”.

As further pointed out by Eden, it is: “this process of reflective mapping that often gives mapping its utility” (1992: 261). However, as the aim was to build up a bank of cause maps from individuals, in different organisations, over a minimum nine month period, there was a need to ensure that as the researcher’s understanding evolved over the course of the project this was not translated into a lack of consistency in approaching participants, in other words the importance of the researcher as a potential biasing mechanism was seen to be a non-trivial issue.

Clearly the skills of the facilitator are key to helping manage the demand characteristics of the social situation, which could lead to overly simplistic or complex and ‘messy’ maps at the original stage of data input, particularly if, as suggested by Eden and Ackermann (1998: 198):

“it becomes important to see the researcher as the research instrument, rather than the data collection and analysis techniques or tools as the research instrument”.

Eden and Ackermann clearly acknowledge that comparison of maps is methodologically problematic but their epistemological stance leads to them being opposed to any form of nomothetic method to simplify or standardise the procedures. However, the perceived issues of reliability and limits on any subsequent analysis, beyond ideographic methods, were viewed to prohibit this methodology in the context of this study.

Laukkanen (1998) suggests that the researcher conducts unstructured interviews, based round a pre-established protocol, which seeks to discover the causal patterns that the respondent uses to make sense of a situation. The data reduction is then carried out post hoc by reducing the maps to a standardised natural language in order to allow for subsequent analysis, supported by CMAP2 (a non-commercial data-based orientated PC program). Similarly Calori *et al.*, 1992 standardised constructs after interviews in order to undertake comparisons. The essential problem with these techniques is that of ensuring the reliable transformation of the data into standard constructs. While restriction of concepts is criticised on the grounds of this providing potentially less salient data, the implication being that the researcher’s subjectivity rather than that of the participant provides the cut-off point, transformation of data into standard constructs clearly entails a considerable amount of researcher subjectivity, despite techniques to enhance inter-coder reliability (Huff, Narapareddy & Fletcher, 1990). As pointed out by Jenkins (1998), there is a lack of consistency in the literature overall regarding how coding issues are dealt with and reported. Laukkanen (1998) suggests the standardising process should use some validation method, including the possibility of feeding back to elicit experienced research colleagues’ views or employing a panel of context experts. While the process of independent data coding can be extremely cumbersome, multiple trained

assessors can carry it out in order to derive a cause map (see, for example, Calori *et al.*, 1992, 1994; Jenkins & Johnson, 1997a, 1997b). In line with the good practice guidelines of Huff and Fletcher (1990: 410), Laukkanen also suggests feeding back the coding lists to individual subjects for their comments to check researcher interpretations with the subjects involved. In many areas of cause mapping research, as in this study of sensemaking, it is clearly beneficial for participants to view their maps. Unfortunately, a variety of problems occur if this is not done concurrently with the data elicitation. Most particularly, these involve changes associated with mapping construction over periods of time (retrospective rationalisation of sensemaking), and the non-trivial practical issues of negotiation of additional participant access.

7.1.2 An Emphasis on Cause Map Comparison

In early studies where a priori variables were presented to participants problems were evidenced. For example, Ford and Hegarty (1984) extracted contingency variables from the research literature and found that the resulting maps were relatively simple. The authors believed this might have resulted from a lack of saliency for the respondents with the eight researcher designed constructs. However, this problem appeared to relate to limited choice rather than the use of given constructs per se. Selection from a pool of constructs (as advocated by Hodgkinson, 1997b; Markóczy, 1997, 2001; Markóczy & Goldberg, 1995) is said to allow participants additional freedom of choice, while the systematic elicitation of constructs lays the ground for systematic comparison and analysis. Here, development of the pool of constructs is done prior to the data collection so that each participant selects constructs from the same pool, obviating the need for subjective researcher judgement in making such comparisons. It is accepted that the use of any construct list will focus thinking in particular directions, even while eliminating issues, though, of course, and as pointed out by Eden and Ackermann (1998), even open-ended interviews will have some focus.

In terms of formulation of the initial 'wider pool', Jenkins and Johnson (1997b) advocate that the list of constructs should be elicited via a series of exploratory interviews, the transcripts of which are then coded off-site. This manner of list construction may have been very appropriate in their particular study context, as the

authors were looking at a very localised and specific set of issues, but it was not viewed as being appropriate in this study where constructs were required to cover a much broader domain. Hodgkinson (1997b) derived constructs through a pilot study from eight volunteer estate agents. To broaden this, a search was made of the telephone directory and various local property newspapers in order to ensure that no important categories of estate agent had been omitted. Again, while appropriate in the original study context, this would be inappropriate in the context of this study. In practical terms, call centre details, even in terms of basic names and addresses, are not available from publications of this type (Bristow *et al.*, 2000). Some researchers (Markóczy, 2001; Markóczy & Goldberg, 1995) advocate widening and complementing the domain by both looking at the relevant literature and by interviewing individuals with similar positions and in similar organisations as those to be used in the final sample. However, it was decided that a carefully constructed pool of constructs based solely on the wide ranging literature review (detailed in Chapter 5) would be the most appropriate option in the context of this study. Essentially, it was felt that, while the pilot study (see Appendix 1) would provide the opportunity to refine the construct language, after reviewing a wide range of literature, specific and adjacent to the explicit call centre environment, it would have then been inconsistent to potentially add to the list on the basis of a relatively small number of pilot participants.

In studies where construct pools have been developed, each participant is asked to identify the most relevant constructs from the pool, and the cause map constructed by pairwise comparison. This procedure requires participants to assess causality by reviewing every possible combination of the chosen constructs systematically, in turn, until all possible combinations of the constructs under consideration have been evaluated. Systematically considering all pairwise effects should significantly diminish the possibility that important effects are omitted (Hart, 1976: 163). Pairwise comparison is also seen as being particularly helpful in overcoming the potential problem of coding accidents with respect to loops, which tend to be common with cause maps, because of the problematic nature of determining the interviewee's view about what is cause and what is effect (Eden *et al.*, 1992:319).

Nevertheless, the choice of elicitation procedure is a non-trivial issue with very real consequences in terms of the nature and status of the data elicited and consequently the methods of analysis that can subsequently be employed and the associated inferences that can be drawn, and it has been shown (see, for example, Daniels, de Chernatony & Johnson, 1995; Hodgkinson, Maule & Bown, in press) that different methods place different demands on the human cognitive system. As detailed, the stance taken regarding the status of cause maps within this study is that they will provide an invaluable device enabling an individual to think through (make sense of) a potentially complex situation, i.e. rather than being linked with the psychological construct of cognitive maps in a profound manner. However, there are two kinds of memory error, which were thought to warrant consideration in the decision to use pairwise elicitation procedures (Baddeley, 1976, 1990, 1997). The first type, errors of commission, or false positives, occurs when people report something that was not present. The second type, errors of omission, or false negatives/misses, occurs when people fail to remember something that was present. In the present study context, this would involve participants failing to report a causal relation that was actually part of their 'true' mental representation of the situation. Baddeley has argued that recognition involves fewer errors of omission but more errors of commission. In assessing the likely impact of these two different kinds of error on the overall objectives of the current study, it was decided that the costs of omission errors would be higher than those resulting from errors of commission, given that the primary aim was to elaborate an actor's potentially complex understanding. Indeed, Weick (1979: 260) states:

“Whatever ways we can find to complicate observers should be adopted because the primary thrust of organizations is toward simplification, homogeneity, and crude registering of consequential events”.

In other words, when an individual is asked to describe her/his organisation the answer will be fairly simple. If the researcher presses on with the same individual to develop a cause map of the organisation, a more complicated perspective will emerge. However, again, this will still result in an oversimplification - hence the urge to “complicate”.

7.1.3 Visual Representation

The utilisation of visual representation to work with semantic information has been demonstrated as being useful to elicit causal relationships between constructs by Eden and his colleagues and it was deemed of particular relevance in this study of sensemaking that participants were given the opportunity to visualise and to validate their own cause maps. As noted, for some, good practice guidelines involve participant validation (see, for example Huff & Fletcher, 1990; Laukennan, 1998).

In their comparison of pairwise vs. hand drawn maps, Hodgkinson *et al.* (in press) reported that participants found the task of hand-drawing maps easier to complete and a more engaging activity, and more representative of how they thought about the problem, vs. the pairwise comparison approach. The authors believe this may, in part, be due to the fact that in the case of the hand-drawn procedure the participants see their final map, in contrast to the pairwise technique where no such visual feedback is provided. For others, participants are not allowed to review their previous responses, in an attempt to ensure that participants do not try to rationalise their maps (Markóczy & Goldberg, 1995). Certainly, rationalisation of sensemaking is an important issue and the role of the researcher is important in this respect to ensure that participants are comfortable with the notion that there is no incorrect manner in which their cause map will present.

As noted, despite the advantages of visualisation in this study context, some non-trivial problems, regarding changes associated with mapping construction over periods of time, occur if validation is not carried out concurrently with data elicitation (Sparrow, 1998: 47). However, despite investing a substantial amount of time on the activity, it was found it to be physically impossible to transform a pairwise drawn list into graphical form within acceptable interview time scales. It would be naïve to imagine researchers have unlimited access/time in most research contexts – an issue compounded in the time-focused call centre environment. This could not be accomplished without supporting computer software and the existing software would not allow this.

7.2 Research Design and Instrumentation

In summary, the optimum method of cause mapping elicitation in this study was seen to be the formulation of individual cause maps, the basic constructs of which

would have been chosen by pairwise comparison from a carefully developed construct pool based on the extensive literature review (albeit, of course, that the choice would then be from a researcher designed framework), which would be immediately viewed in the form of a weighted digraph for participant validation.

Existing software programs were inadequate for the purposes of this study and a professional developer was commissioned, and extensively collaborated with, in order to produce a suitable software tool, namely ‘Cognizer’ (see Clarkson & Hodgkinson, submitted). The development of this software is an adjunct project and details are largely not within the scope of this thesis. However, extensive piloting was carried out for the particular purposes of this thesis to ensure: the proposed methods were engaging, ease of this essentially rigorous procedure, optimum configuration of screen headings, and feasibility in terms of time constraints, which eventually led to the specific elicitation procedure detailed below.

Within the cognitive mapping terminology, there is inconsistency in the use of a variety of terms. Within this study the term ‘construct’ is used to define the variables or nodes incorporated within the map. The term ‘variable’ is used to define exogenous characteristics of theoretical interest, such as individual participant background or organisational features. The term ‘link’ is used to depict the relationships or arcs between constructs.

7.2.1 Procedure for Collection of Cause Maps

Construct choice

The construct list (developed as noted above) comprised 55 constructs, balanced in terms of 5 in each of the 11 broad topic areas/categories depicted on the study framework detailed in Chapter 5 (see Table 7.1). While the construct list had a wide remit, it also took into account the conclusions of Markóczy and Goldberg (1995), and intensive pilot study experience, that overly lengthy lists are likely to make the selection process too difficult. The constructs were refined and translated into an appropriate language form in the pilot phase of the study. It was noted that Decision Explorer tends to use short statements with two contrasting parts, i.e. bipolar concepts with a positive (emergent) and a negative (contrasting) pole, to indicate an

idea and its converse. In some cases, the second pole is the direct opposite of the first pole. For example, the concept of ‘incomes policy’ could have a contrasting pole ‘not incomes policy’, in which case the second pole may not be displayed but rather will be implicit. In other cases, a negative pole can help clarify understanding in so far as two people can depict quite different negative poles pertaining to the same word(s) offered as the initial concept. However, construct lists are seen to vary considerably in their form – dependent on the research context. Note was taken of Parker *et al.*’s (2001) urge to researchers (in any given context, not just in relation to cause mapping) to not only choose their own lists of issues, depending on context and guided by theory, but to also, where possible, refine their lists to be more specific. The meanings attributed to each construct would essentially then be ascertained by identification of the relationships to other constructs within the cause map.

Table 7.1 - The full list of constructs employed in the elicitation procedure

Category/Code	Individual Constructs
Economic and Political Drivers (CCAT.01)	Growth in market competition Government initiatives Increasing customer demands The need for both a quality and quantity service The need to reduce labour costs
Physical Environment and Equipment (CCAT.02)	Open office layout Air quality, temperature and lighting levels Noise levels Work station and seating design Computer software design
Organisational Structure and Design (culture and reward systems) (CCAT.03)	Flat organisational structures (few levels between agents and managers) The organisation of work into teams Team competition Targets Opportunities for interaction with fellow employees
Tasks and Technology (CCAT.04)	Advances in technology The need to adapt to new technology and ways of working Sales and promotions Repetitive and unvaried tasks Complex and varied tasks
Communication Processes (CCAT.05)	The representation of call centres as ‘sweatshops’ The ‘high tech’ call centre image Internal communication mechanisms A clear understanding of organisational strategy/purpose Excessive monitoring and surveillance

Employment Conditions (CCAT.06)	Inadequate staffing levels Pay levels Training levels Prospects for promotion Intensive electronic performance monitoring
Job Design and Work Characteristics (CCAT.07)	The use of scripts (what to say and how to respond to the public) Role conflict (what/who takes priority?) Limited autonomy (lack of scope to do the job as one would like) Work quantity overload (too much to do) Work quality underload (too easy)
Management and Employee Relationships (CCAT.08)	Managers level of understanding of working on the front line Oppressive (overly controlling) management Level of support from management Level of support from team leaders and supervisors Employees attitudes
Work Performance and Satisfaction (CCAT.09)	How well I am able to carry out my job How well the call centre performs Turnover levels My job satisfaction Customer satisfaction
Health and Well-being (CCAT.10)	My stress levels My physical health Absence levels Call centre health and well-being Call centre stress levels
Identity (Individual and Social) (CCAT.11)	My self-esteem My levels of trust The good name and reputation of the call centre The level to which I identify with basic call centre values and ethics Identification with my team (similar values, beliefs and work ethics)

In order to minimise the effects of extraneous order-of-presentation factors, constructs were randomised across participants, i.e. the construct list was revealed to each participant in a different order on screen. As the pilot had revealed participants had no hesitation in choosing constructs, and to aid comparability, a lower limit of 10 was set (in similar manner to Markóczy and Goldberg, 1995). As also noted by Markóczy and Goldberg (1995), the maximum number of constructs does not need to be constrained in principle, as long as each individual has the same opportunity to select important items to her/him. However, Markóczy and Goldberg did restrict construct choice for practical reasons, and the pilot of this list confirmed this was

essential. Once presented with a large number of chosen constructs participants were then faced with a very lengthy task. This did not appear to assist participants. For example, as suggested by one pilot participant after the procedure: “giving me that much rope was not helpful” (PILOT-PT12). Further empirical testing revealed that 10 – 12 constructs could be comfortably dealt with and depicted visually. Continued testing revealed that participants welcomed the idea that they could have “just one more” that is a final upper limit of 13 constructs, so this was offered to all participants. Therefore participants were presented with 55 randomised constructs, and given the following instruction:

“I would like you to look through the list to identify those items you feel are important. Then I would like you to refine your list: selecting the 10 – 12 items that you feel are of most importance to you and your employing call centre. If you find it difficult to restrict your construct choice, it will be possible to choose a further issue, to a maximum of 13. If you find it difficult to restrict beyond 13, I would like to take note of those you are finding it difficult to eliminate, so as not to disregard issues that you feel are important. However, ultimately we need to restrict to an absolute maximum of 13 to make the interview procedure practically viable, beyond this number we will simply not have sufficient time to complete the interview”.

Participants were instructed to work their way through the construct list, choosing their most important issues by use of a simple click box design. The screen revealed how many constructs had been selected and participants could edit their choice by simply returning to the appropriate click box (see Figure 7.1).

First look through the list of items identifying those you feel are important. Then refine your list to select the 10 (to 12) which you feel are of most importance to you and your call centre.

- The good name and reputation of the call centre
- Inadequate staffing levels
- Sales and promotions
- The level to which I identify with basic call centre values and ethics
- Increasing customer demands
- Level of support from management
- Intensive electronic performance monitoring
- My job satisfaction
- The need for both a quality and quantity service
- Oppressive management (overly controlling)
- Computer software design
- Open office layout
- A clear understanding of organisational strategy and purpose
- Internal communication mechanisms
- Pay levels
- Mental health

You have selected from 55

Figure 7.1 – Cognizer screen illustrating the selection of constructs (ORG02-PT28)

The number of constructs selected by each individual gave some initial (albeit limited) insight into the saliency of the 55-item construct list, where, at final choice, 16 percent constructed their cause map based on 10 constructs, with 84 percent choosing more than 10.

Elicitation of Cause Map (Pairwise Comparison)

Each chosen construct was, in turn, displayed on an individual screen. The cause map was elicited by asking the participant to consider whether the particular construct exerted any (causal) influence on the next construct. If the answer was ‘no’ participants were instructed to simply move on to the next pair of selected constructs. When the answer was ‘yes’, i.e. those cases where participants did perceive that the construct in question exerted influence on the next construct, participants were requested to further consider whether it did so positively (increase) or negatively (decrease) and whether it did so slightly, moderately, or strongly. Participants indicated their choice by clicking on the appropriate box. The screen

featured a progress bar and participants simply clicked on the 'next' construct until they had completed the task (see Figure 7.2).

Does Increasing customer demands affect any of the below? If it does not affect an item then simply ignore and move on to the next. If it does have an effect please indicate which description best describes the effect.						
My job satisfaction	<input type="checkbox"/> Increase Strong	<input type="checkbox"/> Increase Moderate	<input type="checkbox"/> Increase Slight	<input type="checkbox"/> Decrease Slight	<input type="checkbox"/> Decrease Moderate	<input type="checkbox"/> Decrease Strong
Call centre health and well-being	<input type="checkbox"/> Increase Strong	<input type="checkbox"/> Increase Moderate	<input type="checkbox"/> Increase Slight	<input checked="" type="checkbox"/> Decrease Slight	<input type="checkbox"/> Decrease Moderate	<input type="checkbox"/> Decrease Strong
Air quality, temperature and lighting levels	<input type="checkbox"/> Increase Strong	<input type="checkbox"/> Increase Moderate	<input type="checkbox"/> Increase Slight	<input type="checkbox"/> Decrease Slight	<input type="checkbox"/> Decrease Moderate	<input type="checkbox"/> Decrease Strong
Customer satisfaction	<input type="checkbox"/> Increase Strong	<input type="checkbox"/> Increase Moderate	<input type="checkbox"/> Increase Slight	<input type="checkbox"/> Decrease Slight	<input type="checkbox"/> Decrease Moderate	<input type="checkbox"/> Decrease Strong
Prospects for promotion	<input type="checkbox"/> Increase Strong	<input type="checkbox"/> Increase Moderate	<input type="checkbox"/> Increase Slight	<input type="checkbox"/> Decrease Slight	<input type="checkbox"/> Decrease Moderate	<input type="checkbox"/> Decrease Strong
Employees attitudes	<input type="checkbox"/> Increase Strong	<input type="checkbox"/> Increase Moderate	<input type="checkbox"/> Increase Slight	<input checked="" type="checkbox"/> Decrease Slight	<input type="checkbox"/> Decrease Moderate	<input type="checkbox"/> Decrease Strong
Absence levels	<input type="checkbox"/> Increase Strong	<input type="checkbox"/> Increase Moderate	<input checked="" type="checkbox"/> Increase Slight	<input type="checkbox"/> Decrease Slight	<input type="checkbox"/> Decrease Moderate	<input type="checkbox"/> Decrease Strong
Training levels	<input type="checkbox"/> Increase Strong	<input type="checkbox"/> Increase Moderate	<input type="checkbox"/> Increase Slight	<input type="checkbox"/> Decrease Slight	<input type="checkbox"/> Decrease Moderate	<input type="checkbox"/> Decrease Strong
The good name and reputation of the call centre	<input type="checkbox"/> Increase Strong	<input type="checkbox"/> Increase Moderate	<input type="checkbox"/> Increase Slight	<input type="checkbox"/> Decrease Slight	<input checked="" type="checkbox"/> Decrease Moderate	<input type="checkbox"/> Decrease Strong

<< Previous Next >> Done

Figure 7.2 - Cognizer screen illustrating the pairwise evaluation of causal relations (ORG02-PT28)

Visual Representation of Cause Maps ('View Cause Map')

The elicited cause map was next immediately viewed in the form of a weighted digraph¹ (see Figure 7.3). This was then edited (adding or clearing links and changing the magnitude of effect) until the participant was satisfied with her/his cause map. Magnitude of effect is defined as 1 = increase slight; 2 = increase moderate; 3 = increase strong; -1 = decrease slight; -2 = decrease moderate; -3 = decrease strong.

¹ The construct labels were of a standard size, to ensure that attention was not drawn to a particular 'box' because of its larger size. However, labels could be viewed in full simply by clicking on the relevant construct label.

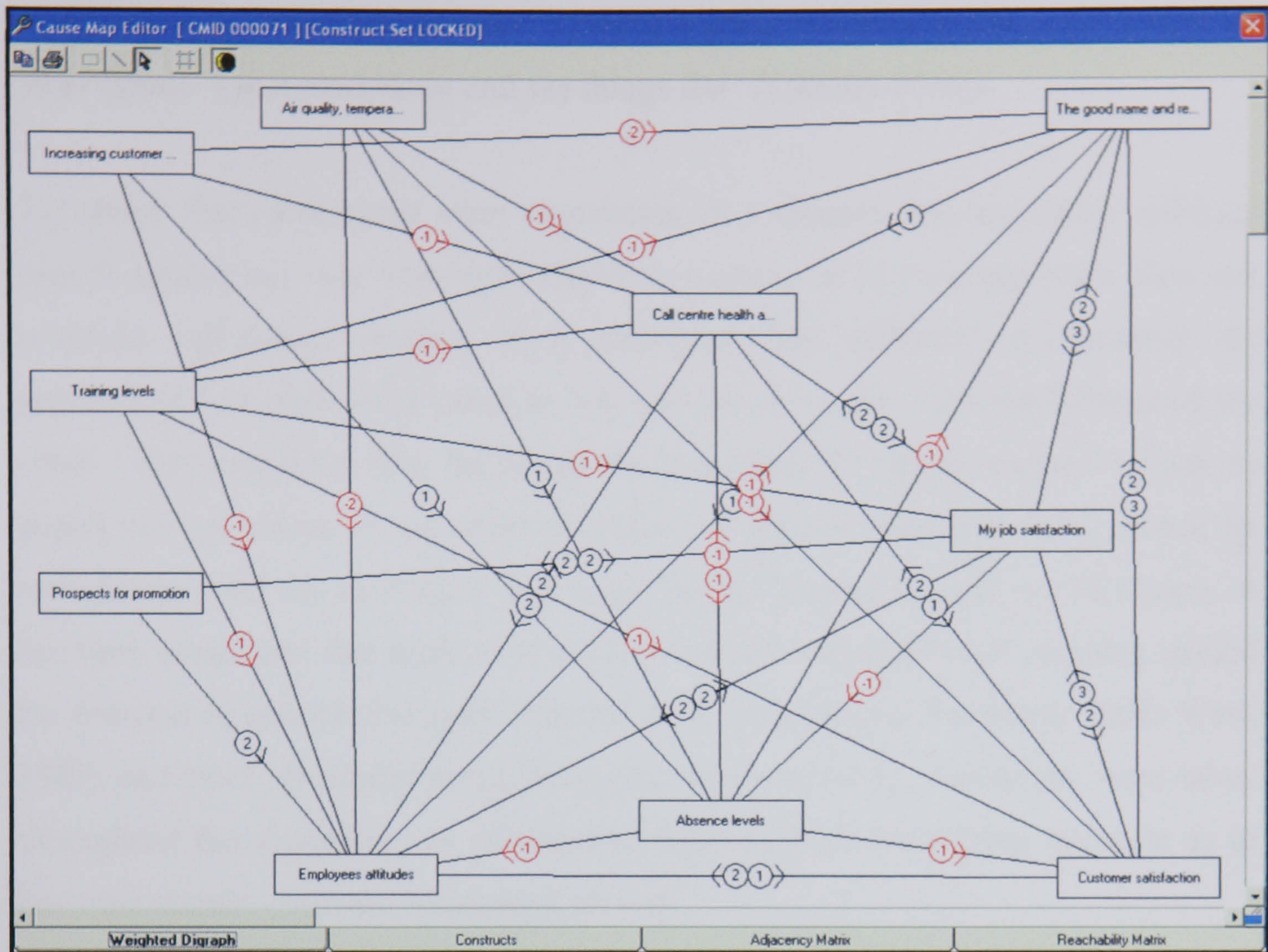


Figure 7.3 - Cognizer screen illustrating an influence diagram/weighted digraph (ORG02-PT28)

In cause mapping, an unbalanced map (one exhibiting contradictory forces), does not imply any inconsistency in the belief system of the individual whose map it is but simply reflects the fact that influence relations can be complex. Indeed, as noted by Huff (1990: 31), more realistic maps should show points of uncertainty and exhibit contradictory forces, and: “perhaps communication sets that are less public than the ones studied to date would reveal more complex relationships and less balance”. As noted, Markóczy and Goldberg (1995) did not allow participants to view their maps, as they did not want participants to try to rationalise their choice. In this study confidentiality was assured and sustained effort was taken to ensure participants did not in any way feel that their maps might be ‘incorrect’ or ‘odd’. In the event, there was no evidence that participants felt they had to edit their maps so as to provide balanced or ‘rational’ maps, despite, at times, being aware that their map did appear contradictory. For example, one participant remarked: “Yes - this is what the situation is - and yet it seems contradictory to some extent” (ORG02-PT22). Neither did participants feel the need to elaborate on simple maps. As

expressed by a further participant: “There is a good range [of constructs] - I have no other issues. I just plod along and see things flat” (ORG02-PT06).

To ensure that participants were responding in a manner that accurately reflected their sensemaking, they were encouraged to explain, on an on-going basis, how one construct influenced another. If a participant had difficulty in choosing the appropriate box, they were asked to talk through how one construct influenced the other. The researcher then facilitated the procedure by simply explaining how to depict this on screen or, on other occasions, confirmed what had been chosen by articulating what the participant had ‘said’ via the choice depicted on the screen. It has been concluded that qualitative analysis can provide additional meaning behind the patterns of quantitative data collected (see, for example, Patterson, 2001; Warr, 1987) and brief shorthand notes, including some verbatim statements, were taken throughout the procedure, as participants depicted their underlying rationale as to how one chosen construct influenced another.

After the cause mapping exercise, participants were encouraged to discuss how salient the procedure/the constructs were for them (of course, recognising that this was after the event), and final results/conclusions drawn in this context. To clarify researcher understanding of some of the explanations given in the procedure, additional points were also followed up at this point.

7.2.2 Questionnaire

Using questionnaire format (Appendix 2) factual information was collected regarding each participant’s: job role, length of service, gender, age, previous call centre employment (including main employment type and length of service), and previous non-call centre employment (including main employment type and length of service). All time periods were collected in exact years, months or weeks as appropriate (Oppenheim, 1992), and all converted into years and/or part years. Highest qualification was also collected in categorical format but in this instance as an ordinal variable (ordered from none through to postgraduate qualifications).

While not viewed to be key variables, supplementary information was also collected in several areas that, depending upon initial outcomes, may have provided additional

insight. The status of the appointment (permanent, fixed-term agency) may have given some indication of linkages to, for example, employee turnover or issues of training and/or promotion. Other information collected pertained to whether the post was full or part-time, the main reason for working in the call centre (categorical format), and home circumstances (categorical format). As, for example, if gender was revealed to make a significant difference to sensemaking, then it would possibly be worth investigating whether this was linked to intrinsic or common extrinsic issues associated with gender (see for example, Rubery, Horrell & Burchell, 1994). Each participant's basic career aspirations were collected (in categorical format). As pointed out by Leidner (1996), while the literature on work tends to assume that workers prefer jobs that engage and challenge them, some workers appreciate a routine which allows them to disengage from the work, whereas for others the flat structure may thwart their career aspirations (linking into main reason for working in the call centre). Other details collected related to shift working, which is seen to be a potential stressor (Daus, Sanders & Campbell, 1998; Evans, Johansson & Carrere, 1994), the nature of calls (inward vs. outward bound), and whether a person's job role involved selling and/or promotional activities.

Work Centrality

Work Centrality was assessed on a six-item measure. The initial Cronbach alpha coefficient was 0.59. Two items were subsequently deleted giving a Cronbach alpha coefficient of 0.63. This is above the 0.6 threshold regarded by Nunnally (1978) as the margin of acceptability for a four-item scale. Nevertheless, as the ideal would be 0.7 or above, it was felt appropriate to also report the mean inter-item correlation. Briggs and Cheek (1986) recommend an optimal range for the inter-item correlation of 0.2 to 0.4. In the present study the mean inter-item correlation was 0.3. Nunnally (1978) shows the estimate of reliability can only be said to be reasonably close to its true value in samples of around 200 (or preferably above). One hundred and ninety-eight participants completed this scale and, with low scores representing high work centrality, their mean score of 18.43 and a standard deviation of 3.88 indicated a skew toward low work centrality.

Work Locus of Control

Rotter's (1966) original scale has been criticised for both a lack of domain specificity and a tendency to correlate with measures of social desirability response (Hodgkinson, 1992, 1993; Spector, 1982, 1988). Thus, a large and growing number of domain-specific measures have been developed, for example, Chung & Ding's (2002) Sales Locus of Control, Hodgkinson's (1992) Strategic Locus of Control Scale, and Spector's (1988) Work Locus of Control Scale (WLCS). Spector's WLCS was viewed as being the most appropriate in this study context, being directly concerned with actors' control expectancies in workplace settings. This 16-item measure has good internal consistency. Spector reported Cronbach alpha coefficients for four of six study samples as 0.85, one at 0.80 and one at 0.75. In the current study the Cronbach alpha coefficient was 0.82. One hundred and ninety-seven participants completed this scale and, in line with Spector's study, the scores were skewed toward internality, with a mean of 41.1 and standard deviation of 10.1.

7.2.3 Observation

At the onset of the study it was noted that it can be useful to deliberately step through different ways of looking at information (Sparrow, 1998) and it was thought likely that time spent gaining insight via observation was likely to prove beneficial (though in itself this would be insufficient to allow the capture of sensemaking). In addition to that spent carrying out the official interviews, time was allocated in each call centre with the intention of gaining a degree of insight into the front line agent and team leader roles and the nature of working in each organisation. Prior to the official interview schedule, this involved simply observing and listening in on calls. Once the interview schedules were complete, it was possible to ask questions, without the fear of contaminating the interview process. It was also possible to shadow staff at both off-peak and peak workload times to gain some additional insight into the pressures of the frontline. Most of the detail given in the organisational profiles is restricted to facts, though, to preserve anonymity, some are general. It is intended that any non-factual information depicted is representative of the general situation. However, while endeavouring to portray as objective a picture as possible, any non-factual information will essentially be subjective and therefore, to some extent, will depict the sensemaking of the researcher (see, for example, Bougon *et al.*, 1977; Starbuck, 1989).

7.2.4 Objective Measures

A fundamental argument supporting the use of a sensemaking perspective is that without considering people's subjective experiences it is impossible to know why people react differently to a range of events (Lazarus, 1999). In other words, it is on the basis of this sensemaking that individuals act and therefore shape, or influence, their world (in this study context via, for example, their subsequent performance, or decisions to stay or leave the organisation). Following from this, cause maps are seen to determine not only what people perceive in situations but also what they will *do* (Weick & Bougon, 1986: 132). In a similar vein to the management literature whereby how correct a decision is seen to be is dependent upon the point of view being used to evaluate it, in this study the valid measurement of health, well-being, performance and satisfaction was viewed as the individual's subjective assessment, even though this may not have coincided with objective conditions (Levi, 1994:80). Nicholson and West (1988:20) summarised this perspective, pointing out that:

“For a variety of perceptual phenomena it is sensible to follow the dictum that what is perceived as real is real in its consequences. If we are concerned with individual action and reaction, then how the world is seen by the actor at the centre of the stage has causal primacy”.

However, Nicholson and West (1988: 20) additionally concluded that:

“there are times when it is important to distinguish between false attributions and the real circumstances which give rise to them”

Similarly, Weick (1995: 35) expressed the pragmatic viewpoint that:

“People who study sensemaking oscillate ontologically because it helps them understand the actions of people in everyday life who could care less about ontology”.

Other authors (Hodgkinson & Sparrow, 2002; Walsh, 1995) conclude that, even in the area of strategic management, few studies have linked sensemaking to any form of organisational action/outcome. In agreement with this, and when possible, objective facts and figures were accumulated (a process of shadowing that which had been collected subjectively) for example in terms of perceptions of turnover and absence levels, pay levels and days of training. However, the self-report measures

as depicted in the individual cause maps were the only measures taken of performance, satisfaction and health and well-being. It was recognised at study onset that the measurement of job performance is not easy and that, although effectiveness in single tasks may be examined through specific activities, an overall measure of job performance in terms of quality and quantity is rarely available. Job performance is usually studied in terms of several different dimensions, often rated by a person's supervisor (Warr, 2002).

Nevertheless, one rationale behind the interest the call centre environment holds for researchers is that its intensive use of performance data gives an insight often lacking into the service sector (Hutchinson *et al.*, 2000) and consideration was given to the possibility of obtaining objective performance measurements, for example, collection of the number of calls per hour were potentially seen as being hard and objective measures of performance. In the event, it was found that, despite the vast numbers of statistics often collected on each participant, there was little consistency, not only inter- but intra-organisation. In line with Warr's (2002) observation, it was found that (in general) team leaders were responsible for rating the performance of front line agents. However, there were clearly a wide variety of interpretations as to the official and 'objective' facts and figures, and a considerable amount of subjectivity was involved in the activity of performance rating. Team leaders were aware that no single criterion revealed the 'true' picture regarding any individual agent's performance. While answering calls promptly to all customers might sometimes be seen as being the criterion on which performance was judged, as opposed to providing an excellent service to some and leaving other customers to wait, different circumstances would lead to emphasis being placed on different aspects of performance. In each organisation this proved to be the case. For example, in Distribution (ORG01) team leaders gave examples of agents meeting their targets for calls but at the detriment of sales. Moreover, different team leaders put different emphasis on different aspects, for example quantity vs. sales, or quality vs. quantity. Thus, asking a team leader for an overall rating of any individual, brought in a further layer of subjectivity and interpretation (sensemaking) that could be seen to be potentially very misleading. When an individual participant's sensemaking of their personal performance was at odds with the team leader, who then could be said to have given the 'correct' interpretation?

7.3 Sample Design

The main concern in the study was to conduct a large-scale investigation among non-managerial samples. A varied sampling frame was required to take into account the fact that the call centre industry overall covers a wide range of private and public sectors and competitive or task environments. To test for the possibility of an organisational effect, it was assessed that a substantial number of participants would be required from each organisation, which clearly meant that it was not possible to also carry out a systematic cross-industry study. Given the relatively simple context of the call centre environment (taking into account both inward and outward bound calls, and that some roles will be relatively more complex than others), tests of functional differences were not feasible other than, as detailed in Chapter 6, those related to the two roles of front line agent and team leader.

Representation was sought from the financial sector because of its long centre history and its provision of the initial impetus for the UK call centre industry. Additional private sector representation was sought from a non-financial institution, and this was supplied by an organisation dealing with distribution and supplies. Further private sector representation was sought from an outsourcing organisation, particularly because, as seen in Chapter 4, this is seen to be a particularly fast growing segment of the call centre market. Public sector representation was seen to be important as, while there has been little call centre research carried out in this sector to-date, if government initiatives are to be realised, the likelihood is that many more public sector organisations will be working under call centre conditions. The first was a large call centre dealing with an aspect of emergency services and the second a small call centre dealing with mainstream public services. The latter also provided pocket size (less than 20 seats) call centre representation (Mital Research, 2002).

These five private and public sector organisations participated in the study, on an anonymous basis, over the period January to September 2002. They were all situated in the Yorkshire Region of the United Kingdom. This geographical area had a potentially rich source of data, with a location quotient (LQ) value (calculated as the county share of the total number of recorded UK call centres divided by the county share of business establishments) in excess of 1.0, i.e. a call centre share

greater than the relative size in terms of business establishments would suggest (Bristow *et al.*, 2000). Restricting the study to this area helped overcome the problems which might have occurred if systematic regional differences had been introduced into the sample and, in practical terms, made it possible for the researcher to offer complete flexibility in terms of interview schedule in an allegedly very time pressurised environment.

7.4 Sampling Procedures

The Code of Ethics adopted in the study was that laid down by the British Psychological Society (British Psychological Society, 1993). It was made explicit in each organisation that there would be no alignment to any parties involved and the researcher's role was made clear at the outset of any approach to potential participants. Maximum access was obtained through key sponsors within each of the organisations. This ensured good representation, afforded by, for example, the opportunity to follow different shift patterns, and to formally interview 200 participants for up to 1.5 hrs (ascertained at the pilot stage of the study to be a feasible time period in which to elicit individual cause maps plus capture of questionnaire data) giving a sufficiently large number of participants to permit the necessary comparisons required to test out the suggested hypotheses. Once official approval had been gained for organisational participation, each key representative notified employees of the organisation's anonymous participation in the study, introduced the researcher, and encouraged employees to take part in the study, though the actual decision to participate was voluntary.

Representation from a cross section of employees was sought in each organisation, in terms of role (though by definition there would be substantially less team leader input), gender, and length of the employment period in the call centre. Only two organisations participated in the study at any one period of time, which allowed maximum flexibility in terms of interview schedules, and enabled further cross representation in terms of teams and employee shift patterns.

Each potential participant was given an information sheet which briefly summarised the purposes of the study, what contribution to the study would involve for any individual, what the main outputs for the study were expected to be, how anonymity

would be preserved, and mechanisms for contacting the researcher regarding any queries regarding participation in the study (Appendix 3). Recruitment was highly successful: only nine of those approached declined to take part. Volunteers were then scheduled into planned series of interviews, as dictated by each organisation's workflow demands. Prior to the official onset of any interview, potential participants were told what the interview entailed, shown a copy of the questionnaire (Appendix 2), and encouraged to ask questions. No participant declined to take part at this juncture and each signed an informed consent form (Appendix 4).

7.5 Overall Study Sample Characteristics

Two hundred employees (178 front line agents, 22 team leaders) formally participated in the study. Cause maps were obtained for all and, with the exception of three participants for whom some minor elements of questionnaire data was omitted, full background data was obtained. Table 7.2 depicts this break down across the five participating organisations. In the interests of anonymity, in the small public sector organisation (Public Services - ORG03) where, of 15 staff members (representing more than 80 percent of the total staff complement), only two were not front line agents, these two were classified as team leaders. While the role of one encompassed managerial responsibilities, the two worked interchangeably in many areas, and both involved a high proportion of involvement in day-to-day operational issues, for example, recruitment, training and appraisal (in a manner similar to team leaders in the other participating organisations).

As the main study focus was to look at 'non-managerial' front line workers, the much smaller cohort of team leaders, with their operational front line role, were in most instances, combined with the participants holding front line agent positions for purposes of analysis.

Table 7.2 - Overall study sample depicted by organisation, sector and role frequencies and percentages

Organisation	Front line agents	Team leaders & supervisors	Frequency	Percent of total sample
Distribution (ORG01)	42	8	50	25
Finance (ORG04)	49	5	54	27
Outsourcing (ORG05)	26	2	28	14
Private Sector Total			132	66
Emergency Services (ORG02)	48	5	53	26.5
Public Services (ORG03)	13	2	15	7.5
Public Sector Total			68	34
Overall Sample	178	22	200	100

The sample consisted of 121 females and 79 males and their ages ranged from 18 – 64 years (mean 35.82, SD 10.52). Almost half of participants (48 percent) were educated to the level of GCSE O' level or equivalent. Only 11 (5.5 percent) had no formal qualifications, and 31 (15.5 percent) were educated to degree or postgraduate level.

Length of service in the employing call centre ranged from 0.02 - 23.25 years (mean 5.17, SD 5.25 and, looking at the two job roles independently, front line agents mean 4.83, SD 5.14; team leaders mean 7.91, SD 5.44). Ninety-four percent of participants had permanent contracts: 11 of the 12 holding fixed term/agency contracts were employed in Outsourcing (ORG05). Less than a quarter (23.5 percent) of participants worked part-time hours. While many set shift patterns were worked in terms of late starts, evenings, weekend work, and in Finance (ORG04) overnight shifts, the only organisation practicing a rotating shift pattern was Emergency Services (ORG02).

Perhaps surprisingly in view of the high number of call centres in the geographical area and alleged high turnover in the call centre industry generally, 80 percent of participants had had no previous call centre experience. Of the 20 percent who had

worked in other call centres, the length of employment ranged from 0 – 14 years (mean = 0.63, SD = 1.89). Almost half (44 percent) of participants' main work experience was in a different type of organisation to their employing call centre, where they had been employed in a different type of occupation, and only 25.5 percent of participants had previously worked in a similar kind of role in any form of organisation. The length of non-call centre work experience ranged from 0 – 40 years (mean = 10.48, SD = 8.10).

Only 23 (11.5 percent) participants said their reason for call centre working was lack of choice. Slightly more than a third (33.5 percent) of the study participants stated that their move to call centre working was a career decision, the same number said it was essentially a matter of convenience, and 39 (19.5 percent) were most attracted by the pay levels. Just less than a quarter (24.5 per cent) had no aspirations to move anywhere other than their employing call centre, carrying out the same role, while a similar number (23 percent) wanted something completely different. Of the 16 participants (8 percent) whose only future work aspiration was to retire, 15 were employed in Emergency Services.

7.6 Organisational Profiles

As noted, time spent in the five organisation performing a variety of observational activities (shadowing front line workers, speaking to various other organisational members and attending invited meetings) gave additional insight into work on the call centre frontline, and elements of this have been utilised in this section to help convey a flavour of each individual organisational context.

7.6.1 Distribution (ORG01)

This organisation had evolved from a family based firm into a large (>1,000) international company. The call centre employed approximately 100 frontline workers and while the official label of 'call centre' had been acquired in the past five years, typical call centre working practices (HELA, 2001) had been in place for 20. Of the 50 employees (42 agents, 8 team leaders) officially interviewed (representing approximately 50 per cent of the workforce) 37 were female. The call centre overall had a larger proportion of female workers and, with the exception of one, all team leaders were female. The participants had a mean age of 34 (SD = 8.9) and mean

length of service of 5.6 years (SD = 4.7). The majority (62 percent) of participants had been educated to GCSE O' level standard.

The company was planning international expansion, but this was coupled with recent local redundancies. While no call centre employees had been made redundant, several interviewees mentioned the indirect implications in terms of, for example, the negative impact upon any prospects for promotion.

The call centre building was modern, open-plan, and custom-built. The manager had a personal office and there was a physical division between those working on inward bound calls (approximately 80 percent) and outward-bound calls. Each employee had a personal desk and computer. Work was organised into teams of various sizes (10-20), though this was essentially for administrative purposes, whereby a team leader dealt with the day-to-day operational issues pertaining to their team, and communicated messages from management. Staff essentially worked normal office hours, with some slight variations in shift patterns to accommodate 12-hour days and a limited weekend service. From an observer perspective, the nature of the calls (essentially dealing with customer orders) appeared to be relatively simple, though there were apparent problems (mentioned by several employees) regarding the crossover to new computer software, which was seen to be hampering transactions.

Initial training entailed 6–7 weeks of formal instruction. Gauged by comparison to Mitial Research (2002) figures for Yorkshire and Humberside, pay levels were average. Official annual staff turnover figures were aggregated for the overall organisation, but were estimated to be 9 percent for the call centre. Absence levels were also assessed to be 9 percent.

In terms of overall targets, these were largely dictated by the service level agreement whereby calls would be answered within a certain number of rings and/or seconds. On an individual basis, the performance of those based on outward-bound calls was *essentially* assessed on selling skills, and ability to built up a portfolio of accounts. Those working on inward-bound calls had their performance assessed by a variety of mechanisms: quantity of calls (a particular percentage error free), quality of calls

(less than an approved level of errors per week), and ‘campaigns’, i.e. various sales and promotional activities. The visible management display system appeared to be generally welcomed. Apparently, without it employees had no way of knowing how many calls were waiting and what might be a good time to carry out any pending administrative duties related to a call, or to take a brief break. However, the bell, which alerted employees to calls waiting, was generally seen to be an irritant. The climate tended to be particularly fraught on a typical afternoon (as concluded both by participant comments and direct observation) and, as a consequence, employees were not allowed an afternoon break – provoking considerable adverse comment

7.6.2 Emergency Services (ORG02)

This 24-hour inward bound service call centre operated in the context of a large (>5,000) public sector organisation and employed approximately 100 frontline workers. The call centre had been officially in existence following organisational restructuring some two years earlier, though job roles clearly in line with HELA’s (2001) call centre agent definition had operated for many years. When asked about their length of service in the ‘call centre’ employees, without exception, included time spent prior to the official reorganisation.

Of the 53 employees (48 agents, 5 teams leaders) officially interviewed (slightly more than 50 percent of the workforce), 23 were female. The call centre overall had a larger proportion of male workers, with the exception of one, all team leaders were male. The participants had a mean age of 43.5 (SD = 8.7) and mean length of service of 14.9 years (SD = 12.6). The majority (54.7 percent) had been educated to GCSE O’ level standard.

This emergency service was seen to be receiving an ever-increasing number of calls (as perceived by frontline workers and as supported by official statistics). Some were seen to be a reflection of a real increase in demand and others arising from changes in the way people choose to contact emergency services, for example mobile phones allowing people to make calls from any location. Also, when a number of callers witnessed the same event, multiple calls would then be received about a single incident. In any event, the effect on the frontline was a heavier workload.

Employees worked in one large open-plan office, in a building that had served many purposes other than its current usage. Call centre managers had a separate office but appeared to spend a large proportion of their time working within the main call centre office. The use of a hot-desk system was in operation, i.e. workstations were not assigned to particular individuals but rather a person sat at whichever desk was vacant. The physical environment caused considerable comment, particularly in terms of lighting and noise levels. From an observer perspective, the office seemed comfortable though, at times, quite dark. There were clear reporting procedures for issues pertaining to environmental and general health and safety issues and this system received quite heavy usage (as ascertained from the organisation's Human Resources Manager). In addition, a variety of working parties had been set up in response to several of these issues. Employees also had regular breaks away from their workstations. The coffee room walls were papered with press cuttings giving examples of call centre 'bad' working practices. Many employees seemed amused. Others were not, as represented in the statement of one participant: "My observations are that our call centre is undervalued and the job completely undervalued but there again this is exactly what I forecast before we officially became a "call centre". I feel it's all to do with the use of language, the term "call centre" has a bad press and so the story begins there" (ORG02-PT37).

Work was organised into teams of approximately 15 members. The team label was essentially used for administrative purposes, with two leaders taking primary responsibility for any one team and co-ordinating their rotating shift pattern. Frontline agents and team leaders spoke of the difficulties involved in co-ordinating team meetings in an organisation carrying out this kind of emergency function. Certainly there appeared to be no spare employee capacity to cover this sort of event. Having sat in on a number of calls, including an overnight shift, the type and nature of calls were, from an observer perspective, extremely varied and, as cautioned prior to shadowing, these ranged from disturbing and/or confusing to, on occasions, amusing.

Initial training entailed 16 weeks of formal instruction. Pay levels were above average. Annual staff turnover figures were approaching 30 percent. However, almost half of these were planned retirements. The organisation provided a very

detailed list of (anonymous) absence records (though it was not possible to compare like-with-like with other participating organisations). The organisation's Human Resources Manager pointed out the nature of some of these illnesses, particularly long-term illness (for example, a variety of heart conditions, cancer and arthritis), could, arguably, have been associated with the fact that the average employee was aged in their mid-forties and that many were working towards their retirement.

Government initiatives and priorities drove the call centre targets. These were strictly set in terms of service levels which encompassed the percentage of calls required to be answered in a certain number of seconds and in terms of the quality of their delivery. The difficulties of judging individual performance by a quantitative measure was particularly in evidence in this environment and several frontline workers were very critical of colleagues who, from their perspective, were hitting targets at the expense of a good quality public service.

7.6.3 Public Services (ORG03)

This small (<20 seat) call centre formed part of a larger public sector council service. In a similar fashion to Distribution and Emergency services, while the call centre has only officially been in operation for a short period of time, call centre practices had been in operation for considerably longer. Of the 15 employees (13 agents, 2 team leaders) officially interviewed (representing >80 per cent of the workforce) 12 were female. The call centre overall had a larger proportion of female workers and both senior members of staff were female. The participants had a mean age of 39.9 (SD = 10.2) and mean length of service of 13.6 years (SD = 9.5). The range of education was varied: 3 participants had no qualifications, 5 (the majority) had been educated to GCSE O' level standard, 3 to GCSE A' level standard, and 4 participants were educated to degree level.

Staff worked in one small, open plan office situated in an old building that had previously been used for a variety of activities. Each employee had access to a personal desk and computer. All staff worked 9 – 5 hours on inward-bound calls. From the perspective of an observer, calls appeared to be essentially simple and the atmosphere in the call centre generally appeared to be calm and relaxed, though.

apparently, there were quite marked seasonal variations, which were not picked up by this study.

Training was relatively informal, with the senior staff members carrying out training as and when the call centre was least busy. No official period of induction training was required. While, in such a small office, everyone knew why anyone was absent, or who had left, it was not possible to obtain official figures regarding absence and turnover. The main issue reported in relation to turnover was not that it was particularly high but rather that when someone resigned it was not automatic that the post would be replaced. Apparently, the official procedures regarding any replacement post took several months to reach completion, meaning that, in practice, there was rarely a full staff complement. Similarly, because of the small workforce, one person's absence was felt in terms of the increased workload upon others.

Pay was average but there were on-going problems with pay negotiations and most employees reported that they were 'out of synch' with the pay scales in operation in the wider organisation. Service levels agreements for the call centre included strict quantitative targets in terms of answering times and in terms of quality of service. During the formal interviews, the general impression gained was that quality of service was seen as being of importance but there was little concern to meet quantitative targets. After completion of the scheduled interviews, further queries were made as to employees' response to the office visible management display system. Most employees did not fully understand what the figures signified and several had not realised that the display was there.

7.6.4 Finance (ORG04)

This large (>1,000 seat) 24-hour service call centre, set in the context of a large (several thousand) financial organisation, had been in operation for more than twenty years. In terms of the economic context, and as a result of UK deregulation, and a generally lowering of the barriers to entry, this organisation, in line with the general financial sector, had been subject to increasing competition.

(Of the 54 employees (49 front line agents, 5 team leaders) officially interviewed (representing <5 percent of the workforce) 38 were female. The Call Centre overall

had a larger proportion of female workers (approximately 70:30), and a higher proportion of female than male team leaders. The participants had a mean age of 33.8 (SD = 8.6) and mean length of service of 4.2 years (SD = 2.9).

The range of education was varied but the highest percentage (40.7) had been educated to GCSE O' level standard, with 35.2 percent being educated to GCSE A' level and just one participant having no qualifications.

Managers and employees worked in very large, open plan, custom-built offices. Front line workers usually had access to their own personalised workspace and computer but this was shared according to shift patterns. Work was organised into teams, in general having 8-10 members. In general, part-time workers were put together in a team and this seemed to be a generally positive move, perhaps best illustrated by the comment of one study participant:

Teams are varied in size, usually between 8–10, but there are 12 in this team – all part-timers. They put all the part-timers together in a team and we all have the same kinds of issues - children, commitments etc. You get motivation from the team and it means you are more likely to hit targets (ORG01-PT04).

From an observer perspective, the calls seemed essentially straightforward, many of them relating to requests for simple factual information that was readily accessible via the supporting computer software. The initial training period was approximately 6 weeks. Pay levels were above average and this organisation was the only one of those participating who offered a variety of bonuses schemes and additional 'perks'. Official staff turnover was 13 percent and absence 7 percent.

It is perhaps worth noting that in the week prior to commencement of the study interviews, employees had experienced what they considered to be a fundamental change to their working practices. In brief, they were no longer required to account for their time in so far as this had ceased to be logged on the computer systems. While some viewed this as a very positive move, several expressed concern as to how performance would now be measured. As expressed by one participant: "Surely they will want some kind of evidence of what we're doing – they're unlikely

to just take my word for it without some supporting facts and figures” (ORG04-PT27). It appeared, from an observer perspective, that there was some downfall in communication at this point, as many people seemed concerned not because of the change *per se* but because they did not know what had replaced the previous system.

One issue of note pertained to the overall image of the organisation, which was largely seen very positively and at odds with what participants believed to be the *public* perception of call centres. For example, and as concluded by one participant: “The representation of call centres as sweatshops is an issue because a lot of people *think* this is how it is” (ORG04-PT26) or as expressed by another: “This [team leader support] can personally decrease people’s perception of the sweatshop image but it can’t affect the public perception” (ORG04-PT20).

7.6.5 Outsourcing (ORG05)

This outsourcing call centre (which performed the outsourced call centre activities of many well-known companies) had been in operation for three years. It employed approximately 80 front line workers, primarily on outward-bound calls. Of the 28 employees officially interviewed (representing approximately 35 percent of the workforce) (26 agents, 2 team leaders) 11 were female. The call centre overall had a higher proportion of male workers, and a higher proportion of male team leaders. The participants had a mean age of 26.3 (SD = 9.6) and mean length of service of 0.83 years (SD = 0.69). Almost half (46.4 percent) of the study participants had been educated to GCSE A’ level standard.

While the company had witnessed rapid expansion in its first three years, the climate was particularly volatile and employee numbers fluctuated. A large staff turnover was witnessed in the three months spent in this organisation (official figures revealed this to be almost 80 percent per annum). From an outsider perspective, the climate fluctuated from essentially warm, accommodating and at ease (with lots of social activities, for example, days when employees came to work in fancy dress, or took part in charity-based football matches) to very formal and quite stressful (where redundancies, official warning regarding work performance, and job dismissals took place). The ‘employee of the week’ was the following week given an official warning regarding failure to achieve set performance targets. At the end of the

period of fieldwork the call centre was operating at a loss (September), but looking forward to breaking even by the end of the calendar year.

All staff worked in one recently built, large, bright, open-plan office. Agents had no dedicated personal office space but moved round the office depending upon the promotion or campaign they were assigned to. The demands of the various customer campaigns also dictated team membership. Despite the fact that this often meant that team membership changed on a weekly basis, team competition played a large part in the organisation's culture. 'Instant' teams were set up in competition, marking their achievements up on a whiteboard for public consumption. It appeared that most enjoyed this competitive environment, though several mentioned that it would have been even more enjoyable if winning had led to 'real' rewards, in the form of bonuses and incentives. Staff essentially worked normal office hours, with some slight variations in shift patterns to accommodate 12-hour days and limited weekend service.

Induction training lasted between half-a-day and two days. However, the work relied heavily on the use of scripts, and any subsequent 'training' essentially involved being introduced to a new script for a different customer campaign. Pay was above average and if a person could sell they could quickly be promoted to team leader but just as easily demoted if they could not then motivate their team to sell also. As noted, staff turnover was almost 80 per cent. However, lots of employees were students, in their gap year prior to starting their degree course or earning money prior to spending some time travelling. The overall organisational employment strategy was to move to more agency contracts, to give the flexibility required to accommodate business peaks and troughs. No official absence figures were available but absence appeared to lead to dismissal.

7.7 Organisational Comparisons

As revealed, distinct differences between the organisations were apparent in terms of HR strategy, for example, training ranged from 16 weeks (Emergency Services) to between half-a-day and two days (Outsourcing). Distinct differences in employee statistics were also very obvious. For example, staff turnover levels ranged from an estimated 9 percent (Distribution) to almost 80 percent (Outsourcing).

Turning to individual differences variables, a Pearson chi-square test revealed significant differences ($p = .038^1$) across the five organisations in terms of level of education, as measured by the proxy variable level of qualification. Further to this, and as summarised in Table 7.3, a one-way between groups multivariate analysis of variance revealed statistically significant differences across the five organisations in several additional variables: age $F_{(6,187)} = 19.78$, $p = .000$; partial $\eta^2 = 0.29$ (medium effect size²), length of service in the employing call centre $F_{(6,187)} = 12.84$, $p = .000$, partial $\eta^2 = 0.21$ (small-medium effect size), length of non-call centre work experience $F_{(6,187)} = 9.45$, $p = .000$, partial $\eta^2 = 0.17$ (small effect size), work centrality $F_{(6,187)} = 2.47$, $p = .046$, partial $\eta^2 = 0.05$ (minimal effect size), and work locus of control $F_{(6,187)} = 6.98$, $p = .000$, partial $\eta^2 = 0.13$ (small effect size).

Table 7.3 – The mean (SD) individual differences variables scores across the five organisations

	Distribution	Emergency Services	Public Services	Finance	Outsourcing
Length of service	5.55 (4.68)	8.38 (7.02)	4.07 (4.25)	4.23 (2.91)	0.83 (0.69)
Non-call centre work experience	8.83 (6.64)	14.90 (12.63)	13.60 (9.47)	9.24 (7.56)	5.42 (5.67)
Age	34 (8.91)	43.49 (8.70)	39.93 (10.18)	33.78 (8.61)	26.27 (9.60)
Work centrality	18.13 (3.81)	19.77 (3.40)	17.67 (3.50)	17.63 (3.83)	18.18 (3.71)
Work locus of control	44.59 (11.27)	43.91 (10.10)	42.53 (9.10)	36.26 (8.32)	38.21 (7.07)

¹ Rather than exclude potentially valuable information from the presentation of findings (where full tables of exact probability are not included in associated appendices), exact p values are presented to three decimal places, i.e. a probability value of .000 would mean $p < .0005$.

² Effect sizes were calculated using partial η^2 (see, for example, Levine & Hullett, 2002; Tabachnick & Fidell, 2001: 52) and interpretation of effect size was based on Cohen (1988) and the more particular details of partial eta.

As noted in Chapter 6, low scores represented high work centrality, and an overall mean score of 18.43 and a standard deviation of 3.88 indicated a skew toward low work centrality. In terms of work locus of control, scores were skewed toward internality, with an overall mean of 41.1 and standard deviation of 10.1. Participants in Finance revealed the highest work centrality and were seen to have the most internal work locus of control scores.

7.8 Acceptability of the study methods to participants

As noted by Jenkins (1998), and demonstrated empirically by Hodgkinson *et al.* (in press), a critical design issue is the likely impression and benefit provided to the respondent. A simple questionnaire was circulated to 50 participants at the completion of interviews in the first organisation. Thirty-eight (76 percent) of these participants returned their questionnaires. Scoring the interview methods from 1 (most positive) to ten (most negative), the first question asked participants if they would agree to take part in another study using the same methods. Here the mean score was 1.71 (SD = 1.70). In terms of interest the mean score was 2.50 (SD = 1.40). While this is clearly a basic measure, this questionnaire was circulated to be returned on an anonymous basis, in an attempt to counteract any problems of social desirability (Crowne & Marlowe, 1964) as notes taken at the time of interviews had strongly indicated that the study methods had been very well-received. Notes made throughout the remainder of the fieldwork confirmed good reception of the study methods. For example, one participant stated that: “It was fun!” (ORGO1-PT02). A further participant said (at edit cause map stage): “You must be clairvoyant or something – that’s just how I see things ” (ORG01-PT09). On being told that this really only showed visually what the participant had said, there is no ‘magic’ involved, the participant went on to say “Well it didn’t seem as if I was making that much sense when I said it [eliciting cause map] but when I see it like this it just says what I mean”.

As the aim was to try to draw out the issues of a potentially complex situation, it was seen as inevitable that the cause map procedure would make people *think*. It was therefore unsurprising that, as stated by one participant:

“It felt a bit difficult at first. You have to think is there a link here. Then it’s difficult with some to think how it links. But it all makes more sense as you go on and when you took me through what I had said [at editing cause map stage] it did show up what I had meant” (ORG01-PT10).

As detailed by the next participant:

“It’s really interesting and well-thought out. It makes you work! It really makes you think about things” (ORG01-PT11)

And when questioned “But does it fairly capture what you want to say?” the response was: “ Yes - that is *just* how I think” (ORG01-PT11).

The next participant explained how different components of the procedure were seen to be of particular assistance:

“It seemed quite complex. I was glad you talked me through [simply reiterating instructions]. I also found it good talking it out loud to myself. At the end I was surprised that I had made that much sense. I think it is really interesting. I enjoyed it” (ORG01-PT12)

Or, alternatively:

“It makes you work but it’s good to get your brain working. I’ve broken my golden rule (in the past) and thrown questionnaires in the bin – they ask questions you can’t answer, this is good – at least it asks questions that mean something and you can connect to things” (ORG02-PT08).

A further question had asked participants to score the statement “I had a chance to talk about issues of relevance to me”. Here the mean score was 1.87 (SD = 1.46) indicating that the pool of constructs used in the interviews did encompass salient issues. This, again, confirmed the direct comments of study participants at interview.

7.9 Conclusions

A method of data collection was required which would allow a large-scale investigation among non-managerial workers in a varied range of organisations. The development of a pool of constructs followed by pairwise elicitation procedures

obtained a balance between not unduly restricting participant choice but yet giving some degree of control over the cause mapping procedure to allow subsequent comparisons. The procedure permitted 200 cause maps to be collected in a manner that displayed rigour but which was also viewed as acceptable by the study participants and in a time frame compatible with management workload schedules.

Collection of data in this manner allowed a number of possibilities in terms of testing the various study hypotheses (detailed in Table 7.4) and a range of techniques were chosen, as appropriate to the particular question posed.

Chapter 8 presents the results of the research hypotheses related to construct salience.

Table 7.4 - Complete list of study hypotheses

Cause Map Salience	
Contextual Differences and Similarities	
Hypothesis 1	There will be evidence of institutional effects across the sample as a whole in respect of category saliencies (i.e. to the extent that institutional influences have led to what might be termed an 'industry recipe' for the call centre industry (crossing private and public sector contexts) we will find high levels of consensus across the sample as a whole).
Hypothesis 2	There will be significant differences between organisations in category salience in terms of construct choice (reflecting differential sensemaking as a function of contextual variables at work within the organisations investigated).
Hypothesis 3	Contextual influences (either at the macro- or micro- level, and as revealed in Hypothesis 1 and Hypothesis 2) will be the dominant influence upon the sensemaking processes, i.e. after controlling for key covariates.
Individual Differences and Similarities	
Hypothesis 4	Job role will influence category salience (with some categories being more salient than others depending upon job role). In particular, team leaders will pay more attention to wider issues driving the organisation, while front line agents will pay more attention to parochial issues.
Hypothesis 6	Level of education will influence category salience (in terms of construct choice). In particular, 'tasks and technology' will be more salient relative to the increasing level of education.
Hypothesis 8	Length of time in the employing call centre will influence category salience. In particular, those with longer experience will find issues of 'health and well-being' and 'identity' to be more salient.

Hypothesis 10	Length of non-call centre work experience will influence category salience. In particular, those with longer experience beyond the call centre environment will reveal 'organisational structure and design' (culture and reward strategies) to be of more salience.
Hypothesis 11	Age will influence category salience, with more importance being placed upon issues of 'health and well-being', 'tasks and technology', and 'job design and work characteristics'.
Hypothesis 12	Gender will influence category salience; in particular men will find issues of control to be of more importance (particularly 'job design and work characteristics').
Hypothesis 13	The degree of work centrality will influence category choice. In particular, those with low work centrality will depict the category of 'health and well-being' as being more salient and those with high work centrality will depict the category of 'performance and satisfaction' as being of most importance.
Hypothesis 16	Work locus of control will influence category salience. In particular, 'health and well-being' will be of particular salience to those tending towards high externality and the category 'performance and satisfaction' will be of particular salience to those with a tendency to high internality.
Cause Map Structure	
Contextual Differences and Similarities	
Hypothesis 19	There will be statistically significant differences in the mean structural complexity levels across the five organisations.
Individual Differences	
Hypothesis 5	Job role will make a statistically significant difference to structural complexity: team leaders will have more complex cause maps
Hypothesis 7	The level of a person's education will make a statistically significant difference to the level of cause map complexity: the more educated the worker, the greater the overall complexity of their cause map.
Hypothesis 9	Length of service in the employing call centre will show a statistically significant positive correlation with cause map complexity (as employees gain more knowledge of the interconnections of various organisational issues).
Hypothesis 14	Those for whom work is more central will have more complex maps (as high work centrality scores depict low work centrality, this will manifest in the form of statistically significant negative correlation).
Hypothesis 17	Those individuals who tend towards internal work locus of control scores will have more complex cause maps.
Strength of Relationships	
Hypothesis 15	Those who state that work is most central will have richer cause maps in terms of the strength of relationships depicted within their maps.

Hypothesis 18	Those individuals who have the more internal work locus of control scores will have richer cause maps in terms of the strength of relationships depicted within their maps.
Individual Perceived Outcomes – implications rather than formal hypotheses	
Length of service in the employing call centre	Those with longer call centre service will perceive worse outcomes in terms of health and well-being, and performance and job satisfaction.
Age	Worse (perceived) outcomes upon issues pertaining to health and well-being will be depicted with greater age.
Work centrality	Those for whom work is most central will report the most negative outcomes (reflecting, for example, issues other than good customer service seeming to take precedence) vs. those for whom work is most central will report the most positive outcomes (reflecting identification with the role).
Work locus of control	Those individuals with the most internal scores will report the most positive outcomes (because of the belief that they are the ones controlling the situation).

CHAPTER 8

The Analysis of Construct Salience in the Sensemaking Process

This chapter first presents the results of the overall sample in a simple descriptive manner to look for initial evidence of an institutional effect at the level of the industry. This overview is followed by tests to locate inter-organisational differences, including the effect of several key covariates on organisational influence. The chapter then considers the issue of individual differences variables on the process of construct salience in the sensemaking process. The chapter examines some of the particular associations between various call centre issues and concludes by briefly exploring the possibilities of cause map aggregation in the detection of patterns of sensemaking across organisations and key sub-groups.

8.1 Situational/Contextual Effects Upon the Sensemaking Process

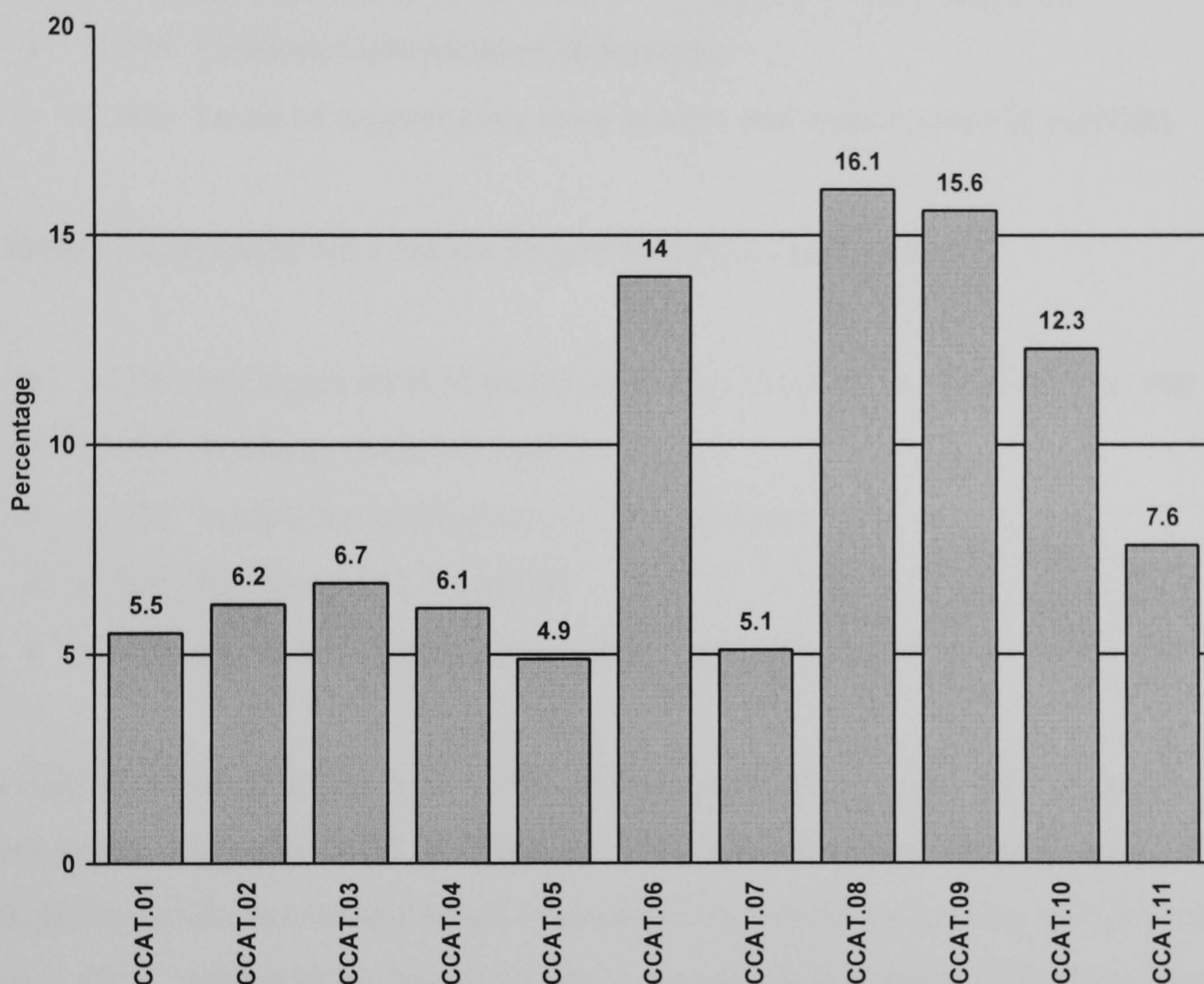
8.1.1 Investigation of a possible industry effect

Attending to the arguments culminating in Hypothesis 1, it was expected that evidence of institutional effects would be found across the sample as a whole in respect of category salencies. In other words, to the extent that institutional influences had led to what might be termed an ‘industry recipe’ for the call centre industry (crossing private and public sector contexts), it was expected that high levels of consensus would be found across the whole sample. It was not possible to directly compare the levels of consensus that has led other authors to conclude that consensuality (in management populations) exists at the level of the industry. For example, Porac *et al.* (1989: 405) stated that from their process of data analysis they sought: “to distil from interview and secondary data core beliefs that seemed to be repeated by our sources and widely accepted”. The authors report their findings, suggesting that, for example: “*Most* [italics added] of the Scottish producers perceive . . .” (p.406).

Summing the total construct citations in each of the 11 categories presented an initial descriptive overview of category salience. The overall pattern did not reveal any categories with overwhelmingly high levels of salience for the sample as a whole, or for *most* of the participants as depicted in Figure 8.1, which shows the

total percentage construct citations per category (i.e. of the total number of construct cited, what percentage came from which category). As can be seen, management and employee relations (CCAT.08) was the most cited category (16.1 percent), followed by performance and satisfaction (CCAT.09) (15.6 percent).

Figure 8.1 – Total percentage construct citations per category



CCAT.01	Economic and Political Drivers
CCAT.02	Physical Environment and Equipment
CCAT.03	Organisational Structure and Design
CCAT.04	Tasks and Technology
CCAT.05	Communication Processes
CCAT.06	Employment Conditions
CCAT.07	Job Design/Work Characteristics
CCAT.08	Management and Employee Relations
CCAT.09	Performance and Satisfaction
CCAT.10	Health and Well-Being
CCAT.11	Identity (Individual and Social)

It would be expected that if most of the participants held consensual agreement as to what were the most important constructs, this would, by definition, mean more than 50 percent. However, each of the 55 individual constructs was chosen by at least one participant (Appendix 5 details the full construct choice in each of the 11 categories) and only 3 were cited by ≥ 50 percent of participants, namely:

- C.047 My job satisfaction (cited by 63.5 percent of participants)
- C.045 Customer satisfaction (58 percent)
- C.039 Level of support from team leaders and supervisors (56 percent)

A further 5 constructs were chosen by ≥ 40 percent of participants:

- C.036 Managers level of understanding of working on the front line (46)
- C.029 Training levels (45 percent)
- C.015 Inadequate staffing levels (43.5 percent)
- C.026 Pay levels (42.5 percent)
- C.038 Level of support from management (40 percent)

As only three of 55 individual constructs were chosen by more than 50 percent of participants, logically, and in keeping with the literature review, these early descriptive results provided limited evidence of an overall call centre industry effect across the 5 participating organisations (covering both private and public sector organisations).

Thus Hypothesis 1, that there would be evidence of institutional effects spanning a variety of sectoral contexts (at the macro level) across the sample as a whole in respect of category saliencies was not supported. If an industry recipe exists in the call centre context, it was not evident in this study at or below the level of team leader/supervisor.

The salience of a construct is also determined by its relationships with other constructs. As detailed in Chapter 3, indegrees are indicators of the extent to which a construct is directly/or indirectly influenced by another construct and the outdegrees

are indicators of the extent to which a construct exerts a direct or indirect (reachability) causal influence on another construct (Axelrod, 1976; Ford & Hegarty, 1984; Harary *et al.*, 1965; Salancik & Porac, 1986). Generally, the greater the number of indegrees into and outdegrees from a construct, the more influential (salient) that construct is seen to be. Still using simple descriptive statistics, investigations were made to discover which of the individual constructs were most salient by this definition (degree of influence). A composite map was constructed for the total sample, by aggregation of all the concepts and relations found in all the individual maps. This was achieved via inspection of the adjacency matrices, which is the matrix that displays the complete set of constructs and links (Axelrod, 1976; Voyer & Faulkner, 1989; Weick, 1979).

Table 8.1 depicts those constructs that are most highly influenced and influencing (the full list of indegree and outdegree values are detailed in Appendix 6). As would be anticipated, almost all of the most highly chosen constructs were also most salient in terms of their relationships with other constructs. My job satisfaction (C.047), the mostly highly cited construct, was seen to be influenced by the highest number of constructs (52 out of a possible 54), with a total absolute weight value of 1200, and to influence 41 constructs. Pay levels (C.026), however, which was cited by 42.5 percent of participants as being one of the 10-13 most important constructs, does not appear on Table 8.1 because of its relatively low indegree and outdegree values.

Additional constructs: how well I carry out my job (C.041), my self-esteem (C.051), targets (C.027), employee attitudes (C.040), and stress (personal (C.046) and organisational (C.050)), were also seen to be highly salient in terms of the degree they were influenced and/or exerted influence. In other words, while not chosen by a high level of participants as being of most importance, when chosen these constructs tended to play a dominant role.

Table 8.1 - Construct salience in terms of direct indegree and outdegree values

Construct (Code)	<i>Indegree values</i>		<i>Outdegree values</i>	
	No. of constructs influencing	Total absolute values	No. of constructs being influenced	Total absolute values
My job satisfaction (C.047)	52	1200	41	605
Customer satisfaction (C.045)	50	867	42	566
Call centre stress levels (C.050)	50	732	38	515
How well I carry out my job (C.041)	48	624	41	551
My self-esteem (C.051)	46	371	38	142
Targets (C.027)	46	324	37	334
Employees attitudes (C.040)	45	565	34	293
Level of support from team leaders and supervisors (C.039)	45	455	40	666
Training levels (C.029)	45	352	41	400
Managers level of understanding of working on the front line (C.036)	45	206	44	319
My stress levels (C.046)	44	540	34	262
Inadequate staffing levels (C.015)	43	502	40	851
Level of support from Management (C.038)	43	218	41	350

8.1.2 Tests for inter-organisational differences

Hypothesis 2 proposed that there would be significant differences between organisations in category salience, in terms of construct choice (reflecting differential sensemaking as a function of contextual variables at work within the organisations investigated).

A one-way between groups analysis of variance (ANOVA) treating organisation as random (as opposed to fixed) effect was performed. Levene's test for homogeneity of variance was significant ($p = .000^1$) in two of the 11 categories, namely physical environment and equipment (CCAT.02) and organisational structure and design (CCAT.03). One potential option to correct this violation was to transform the dependent variable (DV) scores (though interpretation would then, of course, be limited to the transformed scores). The distribution of scores showed a positive skew and suggested the use of a square root transformation (Tabachnik & Fidell, 2001: 82). This did not remedy this violation, or change the underlying results. In both instances significance values of $p = .000$ were found between the organisations in these categories. Therefore, following Tabachnick and Fidell's (2001: 80) alternative option, untransformed scores with a more stringent alpha level (in this case $p < .01$), and the use of Pillai's trace (rather than Wilks' Lambda), were employed.

The ANOVA revealed mean profile differences commensurate with research Hypothesis 2. As seen in Table 8.2, statistically significant differences at $p < .01$ were found amongst the organisations across 7 of the 11 categories. Effect sizes for economic and political drivers (CCAT.01), tasks and technology (CCAT.04), job design and work characteristics (CCAT.07), and identity (CCAT.11) were minimal. Effect sizes for physical environment and equipment (CCAT.02) and for health and well-being (CCAT.10) were small-medium and medium for organisational structure and design (CCAT.03).

¹ As noted, rather than exclude potentially valuable information from the presentation of findings (where full tables of exact probability are not included in associated appendices), exact p values are presented to three decimal places, i.e. a probability value of .000 would mean $p < .0005$.

Table 8.2 - The mean (SD) category scores across the five organisations

Category and Code	Mean	SD	F	Exact p	Partial η^2
Economic and Political Drivers CCAT.01	.65	.70	4.56	.002	0.09
Physical Environment and Equipment CCAT.02	.73	.88	12.76	.000	0.21
Organisational Structure and Design CCAT.03	.79	.90	22.81	.000	0.32
Tasks and Technology CCAT.04	.72	.70	3.37	.011	0.06
Communication Processes CCAT.05	.58	.69	1.004	.407	0.02
Employment Conditions CCAT.06	1.65	.99	.988	.415	0.02
Job Design/Work Characteristics CCAT.07	.60	.70	3.23	.014	0.06
Management and Employee Relations CCAT.08	1.90	1.07	2.23	.067	0.04
Performance and Satisfaction CCAT.09	1.84	1.05	.594	.667	0.01
Health and Well-Being CCAT.10	1.45	1.10	14.20	.000	0.26
Identity (Individual and Social) CCAT.11	.90	.88	3.42	.010	0.07

Df = 4/195

Following on from the omnibus F-test, a series of post-hoc multiple comparisons, employing the Tukey test, indicated where the differences between the organisations lie. The key findings are summarised in the following section, which gives some additional detail acquired at the cause mapping exercise and/or by direct observation. Appendix 7 details the full organisational mean difference scores across the 11 categories.

Economic and Political Drivers (CCAT.01)

The highest mean score was for Distribution (M = .90, SD = .76), which was significantly different from Finance (M = .48, SD = .54) at the $p < .05$ level and Outsourcing (M = .36, SD = .62) at the $p < .01$ level. The scores for the participants of Distribution were therefore significantly different from the participants in the other participating organisations from the private sector.

Physical Environment and Equipment (CCAT.02)

Several statistically significant differences between the organisations were revealed at the $p < .01$ level. This included the mean score for Distribution ($M = .74$, $SD = .80$) which was significantly different from Finance ($M = .22$, $SD = .50$) but was most noticeable in terms of Emergency Services, whose highest mean organisational score ($M = 1.30$, $SD = .99$) was significantly different from all the other participating organisations: Distribution ($M = .74$, $SD = .80$), Public Services ($M = .53$, $SD = .74$), Finance ($M = .22$, $SD = .50$), and Outsourcing ($M = .68$, $SD = .82$). Eight participants in Emergency Services chose three (of the possible five) constructs in this category, compared to two participants from all of the remaining four organisations. This finding reflected the observations made during the period of fieldwork in that organisation, when the physical environment and equipment caused considerable comment. The participant quotations detailed below are chosen as being representative of the *many* detailed:

“The computer software is good for printing tables and statistics but not for the people working on it. It crashes, logs you off, etc. Again it’s not managers’ level of understanding – they know. (ORG02-PT23)

“Chairs get sorted so you can get comfortable. When I had RSI [repetitive strain injury] a year ago they got a chair, arm supports – everything. The work stations themselves are out of date and have just been plonked in the room”. (ORG02-PT08)

“It [work station seating and design] really links to lighting – where you are sitting and individual differences in terms of workable lighting. People have been round with their clipboards but nothing gets done. It’s hot or cold. It leads to friction – we have fans people are turning on and off, windows are opened and closed, it gets noisy when the windows are opened. It is not properly arranged” (ORG02-PT10).

“The lighting is diabolical. You cannot see the keyboard on some shifts” (ORG02-PT08).

“Lighting has been a ‘bone of contention’ for the past year but it does look like this will soon be sorted. Lighting is the only area of the three [air quality, temperature and lighting levels] where individuals have control but this means, for example, ten individuals have ten different ways of seeing things”(ORG02-PT02).

“These [air quality, temperature and lighting levels] are oppressive and all three are issues. It sounds trivial but it impacts on your comfort zone. Your position in the room makes a difference – where the lights are, whether they are directly overhead and cause a glare on the screen and so forth. Bugs go round. You may come in feeling unwell but you will go home feeling bad, with headaches and things” (ORG02-PT03).

“Acoustics in the room are particularly noisy. The centre of the room is bad. There’s also static on headsets, it’s a mechanical noise from the equipment itself. The issue comes up again and again but it’s not sorted, it is on-going and forever” (ORG02-PT03).

Organisational Structure and Design (CCAT.03)

The mean scores for Finance (M = 1.28, SD = .79) and Outsourcing (M = 1.57, SD = 1.14) were significantly different from Distribution (M = .44, SD = .70), Emergency Services (M = .34, SD = .48) and Public Services (M = .27, SD = .59) at the $p < .01$ level. The fact that Outsourcing has the highest mean score was not unexpected given that, during the period of fieldwork, issues of teamwork and team competition appeared to play a large part in the organisation’s culture. Also, once again, statistically significant differences were found between Distribution and the other participating private organisations.

Tasks and Technology (CCAT.04)

The mean score for Emergency Services (M = .45, SD = .61) was significantly different from Finance (M = .93, SD = .77) at the $p < .01$ level. Investigations were conducted at the level of the individual construct to detect whether this difference was a result of the fact that the participants of Emergency Services did not have a selling component to their role (though this non-selling role also applied to Public Services). This difference was not found to be simply a result of one construct. There was a statistically significant difference ($F_{(4,195)} = 4.216$, $p = .003$, partial $\eta^2 = 0.08$, minimal effect size), found between the mean scores of these two organisations for ‘complex and varied tasks’ (Emergency Services M = .08, SD = .27, Finance M = .26, SD = .44). From an observer perspective, it was slightly surprising that the highest mean score was for the participants working in Finance.

Job Design and Work Characteristics (CCAT.07)

The mean score for Distribution ($M = .86$, $SD = .81$) was significantly different from Finance ($M = .41$, $SD = .69$) at the $p < .01$ level.

Health and Well-being (CCAT.10)

There were several statistically significant differences between scores in this category at the $p < .01$ level. The highest mean score was that of Public Services ($M = 2.07$, $SD = .88$), which was significantly different from Finance ($M = 1.0$, $SD = .82$) and Outsourcing ($M = .61$, $SD = .83$). The mean score for Emergency Services ($M = 2.0$, $SD = 1.18$) was also significantly different from Finance and Outsourcing. The mean score for Distribution ($M = 1.62$, $SD = .99$) was significantly different from that of Outsourcing (and from that of Finance at the $p < .05$ level).

Identity (Social and Individual) (CCAT.11)

No statistically significant differences were revealed at the level $p < .01$. Differences in the mean category scores of Distribution ($M = .52$, $SD = .71$) and Finance ($M = 1.0$, $SD = .91$) were revealed at the $p < .05$ level. Participants in Finance were significantly more likely to choose issues pertaining to identity than Distribution and, again, the differences were seen to be between two private organisations rather than between public and private sector organisations. As noted in the profile given for Finance (Chapter 7), one issue that did appear to figure largely was that of organisational image. Several participants said they had joined the organisation because of its good name and reputation, and went on to speak of the contrast between this and the negative public perception of call centres.

As noted, there were no statistically significant differences across the organisations in 4 of the 11 categories, namely Communication Processes (CCAT.05), Employment Conditions (CCAT.06), Management and Employee Relations (CCAT.08) and Performance and Satisfaction (CCAT.09).

It was next examined whether the statistically significant mean differences found between the organisations were still in evidence once key individual variables differences were taken into consideration. The prediction of Hypothesis 3 was that contextual influences (which had been revealed at the level of the organisation)

would be the dominant influence upon the sensemaking processes, i.e. when controlling for key covariates.

As expected, it was not possible to use both age and experience as covariates: age correlated too highly with length of service in the employing call centre ($r = .473$, $p = .000$) and length of non-call centre employment ($r = .764$, $p = .000$). Investigation of a possible combination of variables via factor analysis did not reveal any sensible solutions, in particular the Kaiser-Meyer-Olkin value was, in all instances, unacceptable (less than .6). Consequently, five co-variables were investigated: length of service in the participating call centre, length of non-call centre work experience, highest qualification, work locus of control, and work centrality. While, as seen in Table 8.3, some statistical significance was detected, all effect sizes were small, and taking into consideration the size of the sample, focus was directed at the amount of shared variance where there was little variable overlap.

Table 8.3 – Pearson product-moment correlations of the five covariates

		1	2	3	4
		Length of service	Non-call centre emp	Highest qual	Work locus of control
1 Length of service					
2 Non-call centre exp	Pearson (p value)	.062 (.382)			
3 Highest qualification	Pearson (p value)	-.153 (.31)	-.124 (.080)		
4 Work locus of control	Pearson (p value)	-.043 (.549)	.156 (.029)	.100 (.162)	
5 Work centrality	Pearson (p value)	.212 (.003)	.094 (.189)	.010 (.890)	.173 (.015)

A one-way between-groups analysis of covariance (ANCOVA) controlling for all covariates revealed a significant main effect for organisation ($F(4,187) = 3.64$, $p = .000$, partial $\eta^2 = .182$, small effect size). Statistically significant differences in the mean profiles of category salience across the organisations remained even after

controlling for the possible effects of the five theoretically informed covariates, thus supporting Hypothesis 3.

8.2 Tests of Individual Differences Variables

It had been proposed that key individual differences would influence the sensemaking processes: some categories would be more important than others dependent on the nature of the individual difference variable. To test this general proposition, detailed hypotheses had been proposed (Hypotheses 4, 6, 8, 10-13, and 16).

Sequential multiple regression analyses were run on each of the 11 individual categories to detect if any of the individual differences variables were able to predict a statistically significant amount of the variance in mean category choice after controlling for the variable organisation. An initial investigation revealed skewed dependent variables. However, as one remedy in this situation is to use larger samples and, as the study sample size clearly exceeded the recommended $N \geq 104 + m$ (where m = the number of independent variables), this was not seen as problematic in this instance (Tabachnick & Fidell, 2001: 117). As a proxy for level of education, the ordinal variable 'highest qualification' was incorporated into the analyses. It has been shown by Monte Carlo methods that multiple regression is not badly affected if the categories are in some way *ordered*, i.e. if the variables are measured on an ordinal scale. However, this is not the case with unordered (nominal) categorical variables and 'organisation' was incorporated into the analysis by the use of dummy coding.

Economic and Political Drivers (CCAT.01)

The sequential regression (see Table 8.4) revealed that after the variable organisation was entered, the overall model explained 8.6 percent of the variance ($F_{(4,192)} = 4.492, p = .002$). After the individual differences variables were entered, the model *as a whole* explained 12.2 percent of the variance ($F_{(11,185)} = 2.239, p = .010$). When the effects of the variable organisation were statistically controlled for, the individual differences variables accounted for just 3.7 percent additional variance (i.e. R Square change = .037) and did not reach statistical significance ($p = .365$). In support of Hypothesis 4, job role continued to make a statistically

significant unique contribution at the $p < .05$ level (team leaders being more likely to choose this category).

Table 8.4 - Sequential multiple regression controlling for organisation to predict the contribution of individual differences variables to the variance in the category 'economic and political drivers'

	Unstandardised Coefficients		Standardised Coefficients		
	B	Std. Error	Beta	t	Exact p
(Constant)	.900	.096		9.343	.000
ORGDV1	-.126	.135	-.080	-.940	.349
ORGDV2	-.433	.201	-.163	-2.157	.032
ORGDV3	-.419	.134	-.266	-3.125	.002
ORGDV4	-.543	.161	-.269	-3.370	.001
(Constant)	1.078	.357		3.019	.003
ORGDV1	-.089	.149	-.056	-.595	.553
ORGDV2	-.456	.205	-.172	-2.230	.027
ORGDV3	-.398	.147	-.253	-2.713	.007
ORGDV4	-.481	.182	-.239	-2.649	.009
Job role	.374	.161	.168	2.320	.021
Highest qual	-.038	.064	-.045	-.599	.550
Length of service	-.005	.011	-.042	-.507	.613
Non-call centre work experience	.005	.007	.058	.744	.458
Gender	-.097	.111	-.068	-.874	.383
Work centrality	.002	.013	.016	.213	.832
Work locus of control	-.002	.006	-.029	-.368	.713

Physical Environment and Equipment (CCAT.02)

In this category, after the variable organisation was entered, the overall model explained 20.7 percent of the variance ($F_{(4,192)} = 12.559, p = .000$). After the individual differences variables were entered, the model as a whole explained 24.4 percent of the variance ($F_{(11,185)} = 5.418, p = .000$). When the effects of the variable organisation were statistically controlled for, the individual differences variables accounted for just 3.6 percent additional variance ($p = .269$). Just one individual difference variable, i.e. job role, made a statistically significant unique contribution at $p < .05$. As team leaders were less likely to choose this category (see Table 8.5) this gave further support to Hypothesis 4 (front line agents would pay more attention to parochial issues than team leaders).

Table 8.5 - Sequential multiple regression controlling for organisation to predict the contribution of individual differences variables to the variance in the category 'physical environment and equipment'

	Unstandardised Coefficients		Standardised Coefficients	t	Exact p
	B	Std. Error	Beta		
(Constant)	.740	.113		6.578	.000
ORGDV1	.562	.157	.283	3.576	.000
ORGDV2	-.207	.235	-.062	-.881	.380
ORGDV3	-.518	.156	-.262	-3.310	.001
ORGDV4	-.061	.188	-.024	-.327	.744
(Constant)	.851	.416		2.048	.042
ORGDV1	.583	.174	.293	3.360	.001
ORGDV2	-.201	.238	-.060	-.844	.400
ORGDV3	-.462	.171	-.234	-2.706	.007
ORGDV4	.060	.212	.024	.284	.776
Job role	-.436	.188	-.155	-2.318	.022
Highest qual	-.023	.074	-.021	-.304	.762
Length of service	.009	.013	.053	.682	.496
Non-call centre work experience	-.000	.008	-.002	-.032	.974
Gender	-.182	.129	-.101	-1.410	.160
Work centrality	-.008	.015	-.034	-.498	.619
Work locus of control	.008	.006	.086	1.173	.242

Organisational Structure and Design (CCAT.03)

The sequential regression (see Table 8.6) revealed that, after the variable organisation was entered, the overall model explained 31.9 percent of the variance ($F_{(4,192)} = 22.460, p = .000$). After the individual differences variables were entered, the model as a whole explained 34.7 percent of the variance ($F_{(11,185)} = 8.941, p = .000$). When the effects of the variable organisation were statistically controlled for, the individual differences variables accounted for just 2.8 percent additional variance ($p = .336$), with gender having a p value of .052. Refuting Hypothesis 10, rather than those with longer non-call centre experience giving more importance to issues of organisational structure and design (culture and reward strategies), the results revealed a non-significant *negative* standardised coefficient beta value.

Table 8.6 - Sequential multiple regression controlling for organisation to predict the contribution of individual differences variables to the variance in the category 'organisational structure and design'

	Unstandardised Coefficients		Standardised Coefficients	t	Exact p
	B	Std. Error	Beta		
(Constant)	.440	.106		4.140	.000
ORGDV1	-.100	.148	-.050	-.676	.500
ORGDV2	-.173	.222	-.051	-.782	.435
ORGDV3	.838	.148	.416	5.670	.000
ORGDV4	1.131	.178	.439	6.367	.000
(Constant)	.925	.394		2.350	.020
ORGDV1	-.067	.164	-.033	-.409	.683
ORGDV2	-.140	.226	-.041	-.621	.536
ORGDV3	.812	.162	.403	5.023	.000
ORGDV4	.992	.200	.385	4.950	.000
Job role	-.012	.178	-.004	-.065	.948
Highest qual	-.066	.070	-.060	-.939	.349
Length of service	-.008	.012	-.048	-.675	.500
Non-call centre work experience	-.008	.007	-.070	-1.044	.298
Gender	.239	.122	.131	1.954	.052
Work centrality	-.021	.015	-.091	-1.437	.153
Work locus of control	-.003	.006	-.033	-.489	.625

Tasks and Technology (CCAT.04)

The sequential multiple regression (see Table 8.7) revealed that, after the variable organisation was entered, the overall model explained 6.5 percent of the variance ($F_{(4,192)} = 3.322, p = .012$). After the individual differences variables were entered, the model as a whole explained 15 percent of the variance ($F_{(11,185)} = 2.969, p = .001$). When the effects of the variable organisation were statistically controlled for, the individual differences variables accounted for an additional 8.5 percent variance ($p = .012$). Two individual differences variables made statistically significant unique contributions at $p < .05$. The first was level of education (measured by level of qualification). This supported Hypothesis 6, which had proposed that the category 'tasks and technology' would be more salient relative to the increasing level of education. The second was job role (team leaders being less likely to choose this category). Two other noteworthy variables were length of service with a p value of .057 and gender with a p value of .058.

Table 8.7 - Sequential multiple regression controlling for organisation to predict the contribution of individual differences variables to the variance in the category 'tasks and technology'

	Unstandardised Coefficients		Standardised Coefficients		
	B	Std. Error	Beta	t	Exact p
(Constant)	.720	.098		7.371	.000
ORGDV1	-.267	.136	-.168	-1.958	.052
ORGDV2	.013	.204	.005	.065	.948
ORGDV3	.206	.136	.130	1.516	.131
ORGDV4	.101	.163	.050	.621	.535
(Constant)	.486	.352		1.379	.170
ORGDV1	-.411	.147	-.259	-2.795	.006
ORGDV2	-.008	.202	-.003	-.042	.967
ORGDV3	.095	.145	.060	.660	.510
ORGDV4	.015	.179	.007	.084	.933
Role	-.351	.159	-.157	-2.207	.029
Highest qual	.163	.063	.190	2.591	.010
Length of service	.021	.011	.156	1.915	.057
Non-call centre work experience	.002	.007	.028	.366	.715
Gender	.209	.109	.146	1.909	.058
Work centrality	-.019	.013	-.107	-1.475	.142
Work locus of control	.003	.005	-.047	-.601	.549

Communication Processes (CCAT.05)

The sequential multiple regression (Table 8.8) revealed that, after the variable organisation was entered, the overall model explained just 2 percent of the variance ($F_{(4,192)} = 0.988, p = .415$). After the individual differences variables were entered, the model as a whole explained 6.3 percent of the variance ($F_{(11,185)} = 1.135, p = .337$). When the effects of the variable organisation were statistically controlled for, the individual differences variables accounted for 4.3 percent additional variance ($p = .297$) and there were no unique contributions.

Table 8.8 - Sequential multiple regression controlling for organisation to predict the contribution of individual differences variables to the variance in the category 'communication processes'

	Unstandardised Coefficients		Standardised Coefficients		
	B	Std. Error	Beta	t	Exact p
(Constant)	.700	.098		7.127	.000
ORGDV1	-.191	.137	-.122	-1.389	.166
ORGDV2	-.367	.205	-.140	-1.790	.075
ORGDV3	-.126	.137	-.081	-.922	.358
ORGDV4	-.009	.164	-.047	-.565	.572
(Constant)	-.221	.363		-.609	.543
ORGDV1	-.231	.152	-.148	-1.524	.129
ORGDV2	-.361	.208	-.138	-1.734	.085
ORGDV3	-.103	.149	-.066	-.688	.492
ORGDV4	-.103	.185	-.052	-.557	.578
Job Role	.093	.164	.042	.568	.571
Highest qual	.107	.065	.127	1.649	.101
Length of service	-.000	.011	-.001	-.009	.993
Non-call centre work experience	.000	.007	.005	.057	.955
Gender	.042	.113	.030	.381	.704
Work centrality	.016	.013	.093	1.228	.221
Work locus of control	.006	.006	.097	1.186	.237

Employment Conditions (CCAT.06)

The sequential multiple regression (Table 8.9) revealed that, after the variable organisation was entered, the overall model explained just 2 percent of the variance ($F_{(4,192)} = 0.973, p = .424$). After the individual differences variables were entered the model as a whole explained 7.7 per cent of the variance ($F_{(11,185)} = 1.393, p = .179$). When the effects of the variable organisation were statistically controlled for, the individual differences variables accounted for 5.7 percent additional variance ($p = .132$). Length of service in the employing call centre gave a statistically significant unique contribution at $p < .05$ (with a negative standardised coefficient value).

Table 8.9 - Sequential multiple regression controlling for organisation to predict the contribution of individual differences variables to the variance in the category 'employment conditions'

	Unstandardised Coefficients		Standardised Coefficients		
	B	Std. Error	Beta	t	Exact p
(Constant)	1.700	.141		12.056	.000
ORGDV1	.036	.197	.016	.182	.856
ORGDV2	.233	.294	.062	.793	.429
ORGDV3	-.126	.196	-.057	-.642	.521
ORGDV4	-.307	.236	-.108	-1.303	.194
(Constant)	1.155	.518		2.231	.027
ORGDV1	.143	.216	.064	.661	.510
ORGDV2	.280	.297	.075	.943	.347
ORGDV3	-.031	.213	-.014	-.146	.884
ORGDV4	-.422	.264	-.148	-1.603	.111
Job Role	-.060	.234	-.019	-.256	.798
Highest qual	-.091	.093	-.075	-.983	.327
Length of service	-.035	.016	-.185	-2.177	.031
Non-call centre work experience	-.010	.010	-.080	-1.014	.312
Gender	.051	.161	.025	.318	.751
Work centrality	.028	.019	.108	1.430	.154
Work locus of control	.010	.008	.111	1.371	.172

Job Design and Work Characteristics (CCAT.07)

The sequential multiple regression (Table 8.10) revealed that, after the variable organisation was entered, the overall model explained 6.2 percent of the variance ($F_{(4,192)} = 3.181, p = .015$). After the individual differences variables were entered, the model as a whole explained 11.5 percent of the variance ($F_{(11,185)} = 2.184, p = .017$). Statistically controlling for the effects of organisation meant that the individual differences variables accounted for 5.3 percent additional variance ($p = .145$). Work centrality made a statistically significant unique contribution to the model at $p < .05$. Contrary to the proposal of Hypothesis 12, gender did not make a statistically unique contribution to the model.

Table 8.10 - Sequential multiple regression controlling for organisation to predict the contribution of individual differences variables to the variance in the category 'job design and work characteristics'

	Unstandardised Coefficients		Standardised Coefficients		
	B	Std. Error	Beta	t	Exact p
(Constant)	.860	.098		8.797	.000
ORGDV1	-.351	.137	-.221	-2.568	.011
ORGDV2	-.127	.204	-.048	-.621	.535
ORGDV3	-.453	.136	-.287	-3.330	.001
ORGDV4	-.289	.163	-.143	-1.765	.079
(Constant)	-.054	.359		-.149	.881
ORGDV1	-.386	.150	-.243	-2.577	.011
ORGDV2	-.148	.206	-.055	-.716	.475
ORGDV3	-.446	.148	-.283	-3.022	.003
ORGDV4	-.278	.183	-.138	-1.520	.130
Job Role	-.064	.162	-.028	-.391	.696
Highest qual	.121	.064	.141	1.878	.062
Length of service	-.002	.011	-.017	-.206	.837
Non-call centre work experience	.003	.007	.034	.435	.664
Gender	-.094	.112	-.065	-.839	.403
Work centrality	.027	.013	.148	2.010	.046
Work locus of control	.000	.006	.083	1.040	.300

Management and Employee Relationships (CCAT.08)

The sequential regression (Table 8.11) revealed that, after organisation was entered the model explained 4.4 per cent of the variance ($F_{(4,192)} = 2.194, p = .071$). After the individual differences variables were entered, the model as a whole explained 6.4 percent of the variance ($F_{(11,185)} = 1.146, p = .328$). When the effects of organisation were statistically controlled for, the individual differences variables accounted for just 2 per cent additional variance ($p = .782$).

Table 8.11 - Sequential multiple regression controlling for organisation to predict the contribution of individual differences variables to the variance in the category 'management and employee relationships'

	Unstandardised Coefficients		Standardised Coefficients		
	B	Std. Error	Beta	t	Exact p
(Constant)	2.040	.150		13.598	.000
ORGDV1	-.153	.210	-.063	-.731	.466
ORGDV2	-.373	.313	-.092	-1.193	.234
ORGDV3	-.410	.209	-.171	-1.967	.051
ORGDV4	.246	.251	.080	.979	.329
(Constant)	2.319	.562		4.130	.000
ORGDV1	-.106	.234	-.044	-.451	.653
ORGDV2	-.383	.322	-.095	-1.189	.236
ORGDV3	-.556	.231	-.232	-2.411	.017
ORGDV4	.057	.286	.019	.200	.842
Job role	.063	.254	.019	.250	.803
Highest qual	.111	.101	.085	1.105	.271
Length of service	-.007	.017	-.037	-.436	.663
Non-call centre work experience	-.008	.011	-.061	-.768	.443
Gender	.026	.174	.012	.152	.879
Work centrality	.003	.021	.011	.147	.884
Work locus of control	-.011	.009	-.112	-1.367	.173

Work Performance and Satisfaction (CCAT.09)

Here, after entering the variable organisation, the overall model explained just 1.2 per cent of the variance ($F_{(4,192)} = 0.585, p = .674$). After the individual differences variables were entered, the model as a whole explained 10.9 percent of the variance ($F_{(11,185)} = 2.067, p = .025$). When the effects of organisation were statistically controlled for, the individual differences variables accounted for 9.7 percent additional variance ($p = .007$).

Work locus of control contributed a statistically significant unique contribution at $p < .05$ (Table 8.12). In support of Hypothesis 16 the negative beta value indicated that this issue was more salient for those who had a tendency towards internality (low scores indicating internality).

While, in partial support of Hypothesis 13, work centrality had a negative beta value (depicting that those for whom work was most central were more likely to perceive this category to be of importance than their counterparts for whom work played as less central role), this was statistically non-significant.

Table 8.12 - Sequential multiple regression controlling for organisation to predict the contribution of the individual differences variables to the variance in the category 'performance and satisfaction'

	Unstandardised Coefficients		Standardised Coefficients	t	Exact p
	B	Std. Error	Beta		
(Constant)	1.800	.150		11.997	.000
ORGDV1	-.026	.210	-.011	-.126	.900
ORGDV2	-.067	.313	-.017	-.213	.832
ORGDV3	.219	.209	.093	1.048	.296
ORGDV4	-.086	.251	-.028	-.342	.733
(Constant)	3.325	.539		6.170	.000
ORGDV1	-.035	.225	-.015	-.155	.877
ORGDV2	-.177	.309	-.044	-.572	.568
ORGDV3	.109	.221	.046	.495	.621
ORGDV4	-.046	.274	-.015	-.166	.868
Job role	.433	.244	.129	1.776	.077
Highest qual	-.105	.096	-.081	-1.085	.279
Length of service	-.000	.017	-.004	-.053	.958
Non-call centre work experience	.018	.010	.136	1.745	.083
Gender	-.062	.167	-.029	-.373	.710
Work centrality	-.030	.020	-.112	-1.518	.131
Work locus of control	-.200	.008	-.187	-2.351	.020

Health and Well-Being (CCAT.10)

A sequential regression (Table 8.13) revealed that, after the variable organisation was entered the overall model explained 22.6 per cent of the variance ($F_{(4,192)} = 13.982, p = .000$). After the individual differences variables were entered, the model as a whole explained 30.4 percent of the variance ($F_{(11,185)} = 7.347, p = .000$). After statistically controlling for the effects of organisation, the individual differences variables accounted for 7.8 percent additional variance ($p = .006$).

In support of Hypothesis 16, work locus of control gave a statistically significant unique contribution at $p < .01$ with a positive beta value (with high scores meaning a tendency towards externality). Deery *et al.* (2002) concluded that the longer employees worked in call centres the more burnt out they became, and in support of Hypothesis 8, those with longer call centre tenure paid more attention to this category, with length of service in the employing organisation making a unique contribution at $p < .05$.

While, in partial support of Hypothesis 13, work centrality had a positive beta value (depicting that those for whom work was least central were more likely to perceive this category to be of importance than their counterparts for whom work played a more central role), this was statistically non-significant.

Table 8.13 - Sequential multiple regression controlling for organisation to predict the contribution of the individual differences variables to the variance in 'health and well-being'

	Unstandardised Coefficients		Standardised Coefficients	t	Exact p
	B	Std. Error	Beta		
(Constant)	1.620	.139		11.680	.000
ORGDV1	.380	.194	.153	1.962	.051
ORGDV2	.447	.289	.108	1.544	.124
ORGDV3	-.620	.193	-.252	-3.215	.002
ORGDV4	-1.013	.232	-.321	-4.367	.000
(Constant)	.018	.497		.035	.972
ORGDV1	.257	.208	.104	1.237	.218
ORGDV2	.564	.285	.136	1.979	.049
ORGDV3	-.332	.204	-.135	-1.628	.105
ORGDV4	-.626	.253	-.198	-2.471	.014
Job role	.220	.225	.063	.976	.330
Highest qual	-.064	.089	-.048	-.719	.473
Length of service	.038	.015	.180	2.441	.016
Non-call centre work experience	.002	.009	.013	.185	.854
Gender	-.068	.154	-.030	-.441	.660
Work centrality	.034	.018	.122	1.867	.063
Work locus of control	.021	.008	.197	2.796	.006

Identity (Social and Individual) (CCAT.11)

A sequential regression (Table 8.14) revealed that, after the variable organisation was entered the overall model explained 6.5 percent of the variance ($F_{(4,192)} = 3.362$, $p = .011$). After the individual differences variables were entered, the model as a whole explained 9.8 percent of the variance ($F_{(11,185)} = 1.821$, $p = .053$). When the effects of organisation were statistically controlled for, the individual differences variables accounted for just 3.2 percent additional variance ($p = .474$), with none making a unique contribution.

Table 8.14 - Sequential multiple regression controlling for organisation to predict the contribution of the individual differences variables to the variance in 'identity'

	Unstandardised Coefficients		Standardised Coefficients	t	Exact p
	B	Std. Error	Beta		
(Constant)	.520	.123		4.244	.000
ORGDV1	.442	.171	.222	2.584	.010
ORGDV2	.680	.256	.204	2.661	.008
ORGDV3	.480	.170	.242	2.818	.005
ORGDV4	.551	.205	.217	2.691	.008
(Constant)	1.496	.455		3.285	.001
ORGDV1	.476	.190	.239	2.505	.013
ORGDV2	.626	.261	.187	2.395	.018
ORGDV3	.427	.187	.215	2.281	.024
ORGDV4	.583	.232	.230	2.515	.013
Job role	.021	.206	.007	.100	.920
Highest qual	-.048	.082	-.044	-.587	.558
Length of service	-.000	.014	.000	-.001	.999
Non-call centre work experience	.006	.009	.059	.754	.452
Gender	-.098	.141	-.055	-.694	.488
Work centrality	-.026	.017	-.112	-1.509	.133
Work locus of control	-.008	.007	-.086	-1.077	.283

As it was not possible to use the variable age in the above sequential multiple regressions (because of the high correlations with other variables) a Pearson product-moment correlation was performed to examine whether age had any statistically significant correlation with mean category scores. It was found that, in part support of Hypothesis 11, age was positively associated with health and well-being ($r = .306$, $p = .000$, medium effect size). However, the categories of tasks and technology ($r = -.056$, $p = .427$) and job design/work characteristics ($r = -.008$, $p = .912$) had negative, non-significant correlations with age.

Hypothesis 12 was largely unsupported; the category of job design and work characteristics was of no more salience to the male or female participants in this study. However, p values of .052 and .058 were seen respectively in terms of ‘organisational structure and design’, and ‘tasks and technology’ (the higher scores being those of the male participants). As a result of the complicated mix of explicit issues that might have theoretically influenced salience (for example, issues related to control and promotional prospects), and which might have been masked at the level of the category, these factors were also investigated for *differences* (one-way ANOVA) at the level of the individual construct where no statistically significant differences in the mean scores between men and women were revealed.

In summary, in those categories where the model explained the highest percentage of variance (>20 percent) organisation was the dominant variable (organisational structure and design, health and well-being, physical environment and equipment) with lesser contributions from the various individual differences variables. However, in several other categories a variety of individual differences variables made a larger contribution to the model than organisation (performance and satisfaction, tasks and technology, communication processes, employment conditions, and job design/work characteristics).

8.3 Tests of Associations (Practical Implications)

The practical implications of all the study results will be discussed fully in Chapter 11 (Discussion and Conclusions). In addition, correlation coefficients were calculated using Spearman (initial investigations having revealed a curvilinear relationship between the data points) to provide a numerical summary of the

direction and strength of the relationships between: 1) the categories, and 2) the individual constructs, in order to detect any particular associations that might be of additional practical significance. Bearing in mind that in a sample of this size very small correlations might be statistically significant, the focus was directed at the amount of shared variance.

8.3.1 Associations at the level of the category

Summarised below are the categories exhibiting statistically significant associations at the $p < .01$ level. The full mean and SD scores, together with the exact p values are detailed in Appendix 8.

Physical Environment and Equipment (CCAT.02)

Two statistically significant negative correlations were detected at the $p < .01$ level with organisational structure and design (CCAT.03), and performance and satisfaction (CCAT.09). A further statistically significant positive correlation was detected at the $p < .01$ level with health and well-being (CCAT.10). However, the highest shared variance value was only 6.4 percent (performance and satisfaction).

Organisational Structure and Design (CCAT.03)

In addition to the above noted association with the category physical environment and equipment (CCAT.02), several further statistically significant correlations were identified at the $p < .01$ level, all of which revealed a negative association: employment conditions (CCAT.06), job design and work characteristics (CCAT.07), and health and well-being (CCAT.10). The shared variance with health and well-being was 12.5 percent. All others were less than 7 percent:

Tasks and Technology (CCAT.04)

A statistically significant negative correlation was found at the level $p < .01$ with the category management and employee relations (CCAT.08), with a shared variance value of 4.5 percent.

Communication Processes (CCAT.05)

Two statistically significant negative correlations were found at the level $p < .01$, i.e. with the categories performance and satisfaction (CCAT.09) and identity (CCAT.11). Both had shared variance values of less than 5 percent.

Employment Conditions (CCAT.06)

In addition to the above noted association with organisational structure and design (CCAT.03), a statistically significant negative association at $p < .01$ was detected with the category identity (CCAT.11), with a shared variance value of 4 percent.

Management and Employee Relations (CCAT.08)

In addition to the statistically significant negative correlations at $p < .01$ noted above with the category tasks and technology (CCAT.04), there was an additional negative association at this level with health and well being (CCAT.10), with a shared variance value of less than 7 percent.

Performance and Satisfaction (CCAT.09)

In addition to the already noted associations with organisational structure and design (CCAT.03) and communication processes (CCAT.05), a statistically significant negative association at the $p < .01$ level was detected with the category health and well being (CCAT.10), with a shared variance value of 5.4 percent.

8.3.2 Associations at the level of the individual construct

Details of the statistically significant associations (together with mean (SD) scores) at the level of the individual construct are summarised in Appendix 9 (detailing the more particular associations between each of the 55 constructs covered a considerable amount data which made it prohibitive to fully incorporate this into the thesis). Those individual constructs with the highest number of statistically significant associations at the $p < .01$ level, are summarised below. All shared variance values were less than 7 percent.

Inadequate staffing levels (C.015) showed the highest number of statistically significant negative correlations at the level $p < .01$: the organisation of work into teams (C.012), opportunities for interaction (C.014), complex and varied tasks

(C.020), the use of scripts (C.031), my job satisfaction (C.047), and my self esteem (C.051). Further statistically significant positive correlations at the level $p < .01$ were noted with my stress levels (C.046), and call centre stress levels (C.050).

Air quality, temperature and lighting levels (C.007) revealed negative correlations with complex and varied tasks (C.020) and my physical health (C.048), and a positive correlation with noise levels (C.008).

Noise levels had a negative correlation with prospects for promotion (C.030) and identification with my team (C.055), and a positive association with my physical health (C.048).

Opportunities for interaction (C.014) revealed negative associations with work quantity overload (C.034), and call centre stress levels (C.050).

Excessive monitoring (C.025) revealed negative correlations with pay levels (C.026), and the good name and reputation of the call centre (C.053), and a positive association with sales and promotions (C.028).

Targets (C.027) showed negative correlations with work quantity overload (C.034) and my physical health (C.048), and positive correlations with team competition (C.013) and sales and promotions (C.028).

The study highlights the need take account of the overall impact of constructs. For example, in terms of individual constructs, inadequate staffing levels was cited by more than 40 percent of participants as being one of the most important 10-13 constructs. However, unlike pay levels, which was also cited by more than 40 percent of front line employees, the issue of staffing levels was also perceived to have considerable influence within participant cause maps, to correlate significantly with several other constructs, particularly those in the category health and well being and, more particularly, with the individual construct call centre stress levels.

8.4 Exploration of the Variations in Representations of Working Conditions

One study expectation was that there would be considerable variation in the way in which working conditions were represented in the cause maps of participants, with some individuals (or groups of individuals) construing their worlds more favourably than others.

While an aggregated map cannot be said to be representative of any individual map, it can allow for uneven representation in group-level structure (Walsh, 1995: 292). It allows the identification of mean sub-group response in terms of, for example, the perception of how much a construct influences, or is influenced by, other constructs, the overall detrimental or beneficial effect, and whether there are any clear differences between the sub-groups. Similarly, Sitkin (2001: 76) points out that cognition is a “rubric” under which is included collective, aggregate patterns of individual cognition within the organisation and that: “This aspect of organizational cognition reflects the value of examining aggregated individual cognition both to see patterns as group or organizational level attributes”. The possibilities of aggregation were therefore explored in an attempt to detect patterns in variation across organisations and key sub-groups.

8.4.1 The representation of working conditions across organisations

A composite map was constructed for each of the five organisations by aggregation of all the concepts and relations found in all the individual maps of the relevant organisation (via inspection of the adjacency matrices). As this exercise was not to give a full organisational diagnosis, the focus was concentrated on the top three categories of choice, where no statistically significant differences were found across the five organisations. In other words, while there was no significant difference in category choice, could any differences in perceptions of practical outcomes be detected via the use of cause map aggregation? The indegree mean (SD) weight was calculated (see Table 8.15). First, it should be noted that the standard deviations from the mean values were, in most instances, large. Nevertheless, in summary, taking into account the caveats regarding aggregation and the large standard deviations revealed, constructs were related in a different manner across the five organisations, depicting differing mean perceived outcomes: the most negative picture presented was that of Distribution, with Finance and Outsourcing presenting

the most consistently positive perceptions. It had been envisaged (Chapter 5) that judgements of the level of understanding of managers for the front line role and/or the perception of their level of support, would be reflected in participants' perceptions of outcomes, as would issues of team leader support and peer relationships. As seen here, Distribution depicted the most negative picture of organisational relationships and of 'performance and satisfaction' and 'health and well-being'.

Table 8.15 - Indegree mean (SD) weight across the five organisations

	Distribution	Emergency Services	Public Services	Finance	Outsource
Management and Employee Relations					
Team leader support	0.08 (4.60)	4.38 (4.02)	2.22 (1.56)	4.50 (3.68)	3.21 (4.56)
Managers understanding	0.41 (2.48)	1.39 (2.51)	0.92 (1.51)	2.50 (2.73)	0.77 (2.37)
Managers support	-0.33 (3.62)	1.04 (2.63)	2.40 (1.55)	2.12 (1.27)	1.72 (2.35)
Employee attitudes	-3.91 (6.63)	-0.68 (4.88)	0.29 (2.69)	1.91 (4.70)	2.43 (5.36)
Oppressive management	2.92 (2.84)	2.61 (2.06)	0.60 (1.67)	1.50 (0.58)	1.00 (2.42)
Performance and Satisfaction					
My job satisfaction	-1.14 (9.56)	-0.81 (9.11)	2.15 (3.22)	5.72 (12.40)	3.97 (7.08)
My performance	-1.44 (3.72)	1.03 (7.37)	-0.23 (2.83)	5.39 (7.30)	2.42 (5.22)
Customer satisfaction	-2.12 (11.60)	-1.45 (8.67)	0.88 (3.30)	5.29 (10.61)	1.96 (3.34)
Call centre performance	-1.36 (4.27)	1.39 (5.62)	1.64 (2.34)	3.36 (3.96)	2.26 (3.85)
Staff turnover	1.86 (1.57)	0 (0)	0.80 (1.79)	2.56 (1.42)	1.67 (1.22)
Employment Conditions					
Inadequate staffing levels	7.15 (8.17)	5.13 (6.24)	1.82 (3.43)	2.40 (3.90)	0.20 (2.28)
Pay levels	0.33 (2.55)	1.83 (2.04)	2.40 (1.52)	4.09 (4.23)	1.11 (1.76)
Training levels	-0.10 (6.27)	0.53 (5.85)	3.17 (2.59)	1.69 (2.63)	1.48 (3.58)
Prospects for promotion	0.62 (2.55)	1.22 (2.33)	2.12 (2.17)	3.96 (5.92)	1.00 (2.36)
Electronic performance measurement	1.83 (0.98)	3.00 (0.00)	0 (0)	0.90 (2.60)	0 (0)

8.4.2 The representation of working conditions across key sub-groups

Length of Service in the Employing Call Centre

As seen (Table 8.13), tenure made a statistically significant contribution to the mean category score of health and well-being. It did not make a statistically significant contribution to performance and satisfaction (Table 8.12).

Length of service was collapsed into a new variable with three groups: the first at the 33.33 percentile cut-off point represented those classified as having short service (0 - ≤ 1.5 years), the second at the 66.67 percentile cut-off point were classified as having medium service (> 1.5 - ≤ 6 years), and the third were classified as having long service (> 6 years) in the employing call centre. The overall pattern revealed (see Table 8.16) that personal stress, physical health, job satisfaction and work performance were perceived more negatively for those with long tenure. Similarly, absence levels, call centre stress, customer satisfaction, and call centre performance also revealed negative relationships (i.e. in terms of practical application) with longer tenure. With the exception of work performance (personal and organisational), which was perceived to increase with medium service, the pattern shows one of linear (detrimental) decline. While a worse perception of overall call centre health and well-being and more indication of issues leading to staff turnover were depicted by those with medium service, it did appear that the mean response for those with longer call centre service was a relatively more negative relationship with health and well-being, and performance and satisfaction. However, once again, the standard deviations were, in most instances, large.

Table 8.16 - Length of service in the employing call centre indegree mean (SD) weight across the three groups

	Short Service	Medium Service	Long Service
Health and Well-being			
My stress levels	2.59 (3.88)	4.36 (5.15)	6.89 (7.79)
My physical health	0.56 (4.43)	-2.38 (1.89)	-2.59 (5.75)
Absence levels	2.15 (2.86)	2.93 (4.93)	5.66 (8.21)
Call centre stress	2.73 (3.97)	4.83 (6.93)	6.89 (11.02)
Call centre health and well-being	-0.66 (4.67)	-2.14 (4.46)	-1.94 (4.32)
Perf/Satis			
My job satisfaction	6.04 (12.72)	3.50 (14.29)	-1.87 (11.23)
My performance	2.52 (7.93)	3.11 (7.94)	0.42 (7.02)
Customer satisfaction	3.48 (10.23)	1.64 (11.37)	-1.68 (10.75)
Call centre performance	1.46 (3.74)	2.91 (7.04)	0.82 (5.56)
Staff turnover levels	1.60 (1.65)	2.42 (2.07)	2.00 (1.00)

Age

As revealed, health and well-being correlated positively with age, i.e. this category became more salient with increasing age, revealing a statistically significant result at the $p < .01$ level. Performance and satisfaction also correlated positively with age but the results were not significant. As noted in Chapter 6, for the most part, occupational research considers 'young' workers to be those aged between 15 and 24 (Loughlin & Barling, 2001). In this study this pertained to only 17.5 per cent of participants (whose average age of >35 was rather older than the industry average, i.e. 65 percent aged 35 or less according to Taylor et al., 2003). Therefore, the continuous variable 'age' was collapsed into a new variable with three groups: the first at the 33.33 percentile cut-off point were classified as young (≤ 31 years of age), the second at the 66.67 percentile cut-off point were classified as middle aged (> 31 years - ≤ 41 years of age), and the third group as old (> 41 years of age). As seen in Table 8.17, comparison of the young and old groups showed consistently more negative outcomes for the latter. However, this was not a linear deterioration, as the

'middle-aged' group perceived better outcomes in some areas. Splitting the groups into two, i.e. 50 percentile cut-off point ≤ 34.5 years of age and > 34.5 years of age, once again, with the exception of call centre performance (in line with Holman, 2002), revealed consistently higher levels of negative outcomes for the older group. The patterns revealed were 'sensible' (reflecting theory and empirical evidence) but, as with length of service, the standard deviations were large.

Table 8.17 - Age indegree mean (SD) weight across the three groups

	Young	Middle-aged	Old
Health and Well-being			
My stress levels	3.61 (4.55)	5.08 (8.07)	4.81 (4.97)
My physical health	-1.00 (2.99)	-0.25 (3.78)	-2.61 (5.68)
Absence levels	2.26 (4.74)	3.23 (5.63)	6.10 (7.06)
Call centre stress	4.11 (6.22)	4.71 (7.38)	8.14 (8.95)
Call centre health and well-being	-2.21 (3.34)	0.39 (4.33)	-2.68 (5.97)
Perf/Satis			
My job satisfaction	3.02 (13.05)	4.37 (12.78)	0.44 (10.49)
My performance	2.53 (6.84)	3.02 (8.14)	0.65 (7.08)
Customer satisfaction	1.87 (9.91)	1.75 (11.73)	0.02 (9.03)
Call centre performance	1.97 (5.94)	1.37 (5.10)	1.89 (5.49)
Staff turnover levels	1.67 (1.22)	2.89 (1.45)	1.56 (1.74)

Work Locus of Control

As seen (Table 8.13), work locus of control made a statistically significant contribution to the mean category score of health and well-being and of performance and satisfaction (Table 8.12.). Three groups were formed (as above) creating a new variable with three values, corresponding to low (most external ≤ 36), medium (37-45), and high (most internal ≥ 46) scores. Again, standard deviations were large but the *overall* pattern depicted was one of a detrimental impact on individual and organisational health and well-being (see Table 8.18). However, this was less pronounced for those with low scores, i.e. those most internal, who consistently

report lower levels of stress, less of a detrimental impact on physical health and an actual improvement in overall call centre health and well-being.

Table 8.18 - Work Locus of Control Aggregated Sub-Groups indegree mean (SD) weight

	Most internal ≤36	37-45	Most external ≥46
Health and well-being			
My stress levels	2.39 (5.17)	3.53 (3.30)	6.56 (9.41)
My physical health	-0.14 (3.41)	0.94 (4.14)	-2.92 (4.85)
Absence levels	1.70 (3.35)	4.37 (5.61)	4.80 (7.14)
Call centre stress	2.61 (4.71)	6.72 (7.73)	7.29 (8.72)
Call centre health and well-being	1.43 (3.78)	-3.22 (4.77)	-2.38 (5.51)
Perf/Satis			
My job satisfaction	6.08 (16.28)	2.52 (10.49)	-0.41 (8.97)
My performance	5.33 (11.15)	1.00 (6.61)	-0.48 (6.02)
Customer satisfaction	6.24 (13.11)	0.07 (9.49)	-2.31 (10.09)
Call centre performance	4.32 (7.53)	1.43 (3.53)	-0.50 (4.87)
Staff turnover levels	1.00 (1.41)	2.27 (1.67)	1.86 (1.57)

Work Centrality

As seen (Table 8.13), work centrality did not make a statistically significant contribution to the mean category score of health and well-being, or to performance and satisfaction (Table 8.12.). In order to examine the competing implications that had been proposed as to how this would manifest in terms of outcomes, work centrality was collapsed into a new variable with three groups. The first at the 33.33 percentile cut-off point contained those for whom work was most central (0 - ≤18). The second, at the 66.67 percentile cut-off point, was the mid-group (18 – 21), and the third group pertained to those for whom work was classified as least central (with scores of ≥22). As seen in Table 8.19, with the exception of personal and organisational stress (the levels of which are highest in the mid-group 18-21), those for whom work was least central depicted worse outcomes. Essentially, those for

whom work was most central depicted the most positive perceived outcomes but, again, the standard deviations were large.

Table 8.19 - Work centrality indegree mean (SD) weight across the three groups

	Lowest work centrality score (0 - ≤17) (work most central)	Medium work centrality score (18-21)	Highest work centrality score (≥22) (work least central)
Health and Well-being			
My stress levels	1.45 (4.36)	7.13 (7.29)	4.48 (6.15)
My physical health	1.21 (3.86)	-2.25 (4.39)	-3.54 (4.27)
Absence levels	1.96 (4.78)	4.37 (6.51)	4.71 (5.74)
Call centre stress	2.89 (5.50)	7.40 (9.05)	6.51 (6.82)
Call centre health and well-being	0.56 (5.51)	-2.31 (4.58)	-2.85 (2.98)
Perf/Satis			
My job satisfaction	8.86 (18.1)	1.62 (12.37)	-3.41 (5.37)
My performance	4.02 (7.53)	2.81 (9.34)	-0.95 (4.92)
Customer satisfaction	7.55 (15.16)	-0.66 (11.49)	-3.15 (6.20)
Call centre performance	6.68 (6.41)	0.76 (5.20)	0.04 (4.52)
Staff turnover levels	0.33 (1.15)	1.55 (1.57)	2.31 (1.54)

8. 5 Conclusions

Initial analysis of the overall maps revealed little evidence of an institutional effect at the level of the call centre industry. Statistically significant differences in category salience were revealed across the organisations, which persisted after controlling for five potentially key covariates. Therefore it was concluded that organisational contexts affect what employees attend to in their sensemaking process, i.e. differential sensemaking was a function of contextual variables at work within the organisations investigated.

Further support for the dominance of the contextual variable 'organisation' was provided by the series of sequential multiple regressions that were carried out at the level of the category, using organisation as a control. However, several of the study hypotheses, which stated that individual differences variables would influence category salience, were also supported and in several categories they contributed more to the sequential multiple regression model than the control, i.e. organisation.

Looking at associations between categories and individual constructs for additional practical implications of any call centre working practices, there were several statistically significant correlations but none revealed high shared variance. However, the results gave support to the need to identify any given construct's relationships with other constructs in order to establish its level of influence within a cause map.

Exploratory investigations of aggregation of a variety of individual differences variables sub-groups provided 'sensible' results, which gave some overall patterns of perceived implications, and supported both theory and empirical work to-date, but the standard deviations in all cases were large and clearly supported the fact that an aggregated map cannot be seen to be representative of any individual map.

Chapter 9 moves on to consider the analysis of structural complexity in the sensemaking process.

CHAPTER 9

The Analysis of Structural Complexity in the Sensemaking Process

The initial issue to be addressed in this Chapter is the extent to which, having found significant differences in category salience across the five organisations (which persist after controlling for a variety of covariates) there were also significant differences in terms of structural complexity between the organisations. The results of the tests of various hypotheses formulated to ascertain which individual differences variables made a difference to the level of structural complexity found in the cause maps of the frontline participants in the study will also be detailed. The Chapter additionally investigates the strength of beliefs of influences within the cause maps, as depicted by link strength density.

9.1 Structural Measures

There are several cited measures that may provide some evidence of cognitive complexity; individuals whose maps are more interconnected being generally seen to have a greater understanding of the relationships impacting upon an issue. Table 9.1 illustrates a variety of measures of map complexity applied to overall participants in this study.

The number of constructs is perhaps of less relevance in this study where limits were imposed upon the number of constructs participants were able to choose (a minimum of 10 and maximum of 13). For this reason, this structural measure was not used and, following from this line of reasoning, simply counting the number of links within any given map was also inappropriate.

A measure which may provide some evidence of cognitive complexity, and which is not affected by restriction of constructs is the link-to-construct ratio¹, i.e. the

¹ As noted, within cause (or cognitive) mapping terminology, there is inconsistency in the use of a variety of terms. Within this study, the term 'construct' is used to define the variables or nodes incorporated within the map. Thus, while this measure is formally termed link-to-node ratio (Eden et al., 1992), it will, for the sake of consistency within this thesis, be referred to as link-to-construct ratio.

proportion of links to constructs within any given map (Eden *et al.*, 1992). Similarly, map density, which is computed by dividing the number of observed links by the total number of links theoretically possible given the subset of constructs selected for incorporation in the participants' map (Goldberg, 1996; Hart, 1976) is a further acceptable measure in the context of this study, i.e. it is not affected by restriction of constructs.

Table 9.1 - Mean (SD) of a variety of measures of map complexity for all study participants

	Mean (SD)	Minimum	Maximum
Number of constructs	11.76 (1.05)	10	13
Number of links	45.05 (23.22)	6	139
Link density (link-to-construct ratio)	3.81 (1.86)	0.58	10.69
Map density	0.36 (.172)	0.05	0.90

For both link-to-construct ratio and map density, higher scores denote greater structural complexity. One study participant's causal map, which is illustrative of a simple or 'flat' structure, is shown in Figure 9.1, while Figure 9.2 depicts a more complex map structure produced by a further study participant.

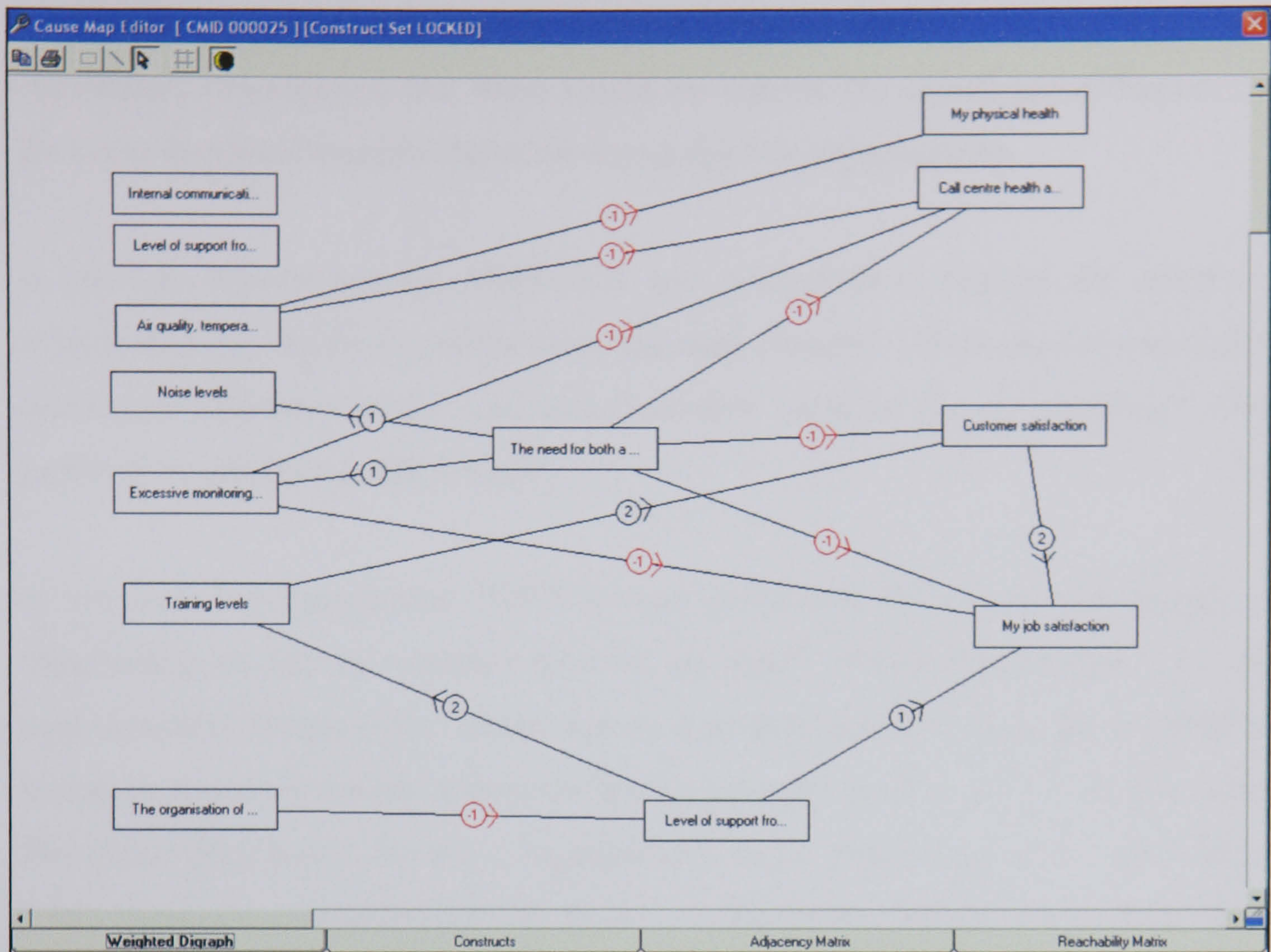


Figure 9.1 - A simply structured cause map (ORGO2-PT06)

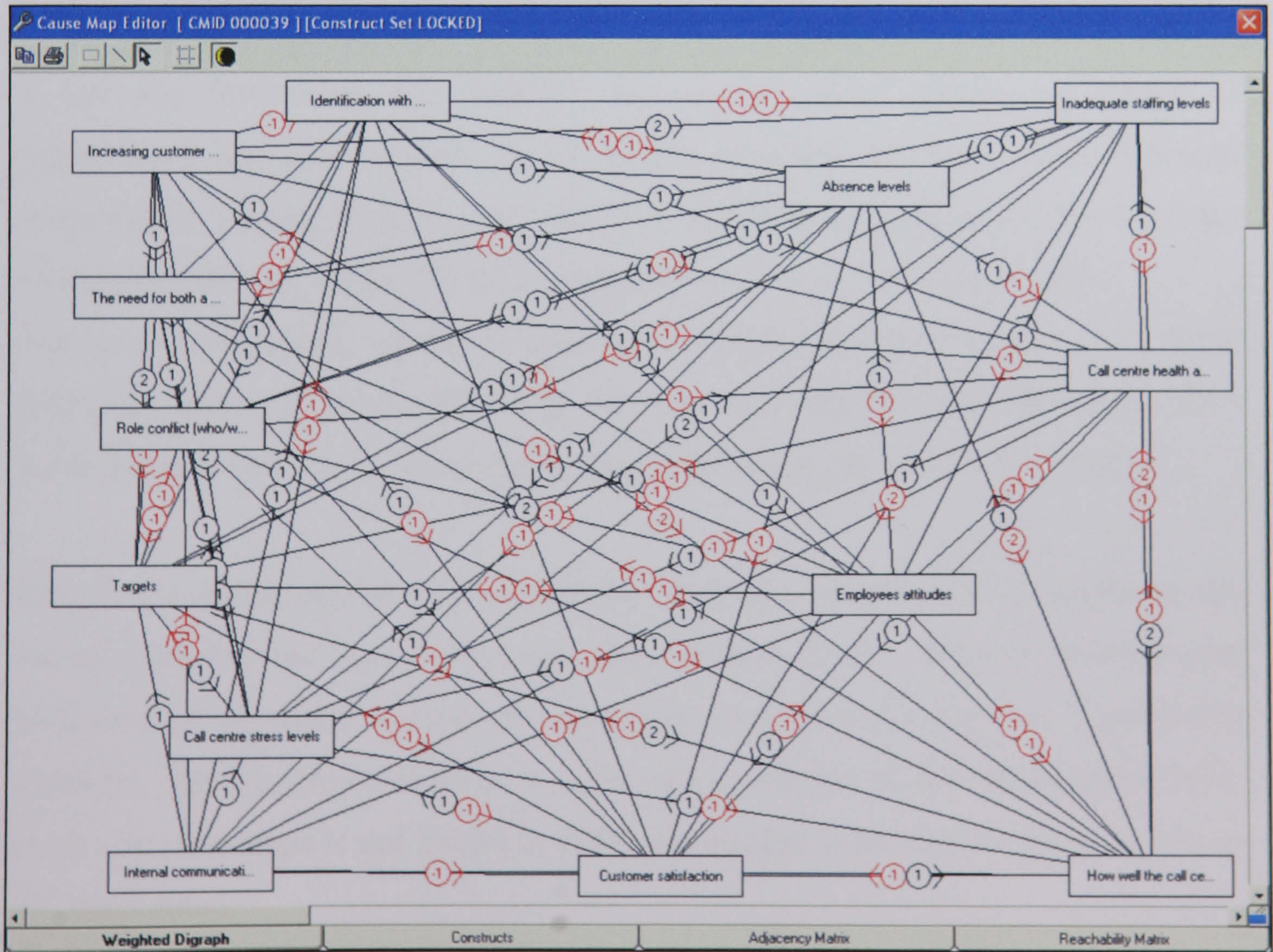


Figure 9.2. - A complex cause map structure (ORG02-PT13)

9.2 Structural Complexity Across the Five Organisations

Hypothesis 19 proposed that there would be statistically significant differences in the mean structural complexity levels across the five organisations.

A one-way between-groups MANOVA was performed to explore the impact of organisation on link-to-construct ratio and map density. There was a statistically significant difference on the combined dependent variables ($F_{(8,390)} = 4.69, p = .000$, partial $\eta^2 = .088$ (small effect size)).

A one-way between-groups ANOVA was performed to explore the impact of organisation on link-to-construct ratio (as an initial independent measure of cause map structural complexity). There was no statistical significance at the $p < .05$ level in link-to-construct density scores for the 5 organisations ($F_{(4,195)} = 1.78, p = .135$). The mean (SD) scores for the 5 organisations were: Distribution ($M = 4.03, SD = 1.66$), Emergency Services ($M = 4.10, SD = 1.94$), Public Services ($M = 3.02, SD = 1.59$); Finance ($M = 3.44, SD = 1.80$), and Outsourcing ($M = 3.98, SD = 2.17$).

A one-way between-groups ANOVA was performed to explore the impact of organisation on map density (as a further measure of cause map structural complexity). Again, there was no statistical significance at the $p < .05$ level in link-to-construct density scores for the 5 organisations ($F_{(4,195)} = 0.96, p = .434$).

The mean (SD) scores for the 5 organisations were: Distribution ($M = 0.37, SD = 0.15$), Emergency Services ($M = 0.36, SD = 0.16$), Public Services ($M = 0.28, SD = 0.14$), Finance ($M = 0.34, SD = 0.18$), and Outsourcing ($M = 0.37, SD = 0.20$).

Clearly the accumulation of the evidence from the independent measures in the overall tests had led to an initial significant result (Manly, 1994) as the individual indicators of structural complexity across the organisations were not significantly different. The conclusion reached was that the conditions under which people build more complex maps is not linked to different organisational context and Hypothesis 19 was refuted.

9.3 Structural Complexity and Individual Differences Variables

As no inter-organisational differences had been demonstrated, the full sample of data were pooled to test for hypotheses pertaining to individual differences variables.

Pearson product-moment correlation coefficients were calculated to provide a numerical summary of the direction and strength of the linear relationships between each variable and the 2 measures of structural complexity. As seen in Table 9.2, and confirming hypothesis 5, team leaders had more complex maps than front line agents and, in support of hypothesis 7, as the level of qualification of a participant increased so did the complexity of the cause map structure: job role and highest qualification showed statistically significant positive correlations (at $p < .01$) with both link-to-construct ratio and map density. The shared variance percentage was inspected for these two statistically significant correlations. The greatest shared variance percentage was for highest qualification (link-to-construct ratio 6.8 percent and map density 7.3 percent; job role link-to-construct ratio 4.8 per cent and map density 4.3 percent). Using qualification as a categorical variable on this occasion, and applying a simple Chi-square test for independence, it was found that there was no difference in the proportion of team leaders and front line agents holding the various levels of qualification.

Length of service in the employing call centre showed a positive correlation with cause map complexity. However, and refuting Hypothesis 9, the result did not reach statistical significance.

As proposed by Hypothesis 14, work centrality correlated negatively with link-to-construct ratio and map density (essentially, those for whom work was least central having the least complex maps). However, and contrary this hypothesis, the findings were statistically non-significant. Work locus of control showed slightly contrary findings in so far as, as proposed in Hypothesis 16, the scores correlated negatively with map density (essentially, the most external individuals having the least complex maps) but positively with link-to-construct ratio. In effect, both correlations were slight and, refuting Hypothesis 16, the findings were statistically non-significant.

Table 9.2 - Pearson product-moment correlations (exact significance) of measures of structural complexity with other variables

Variables	Link-to-construct ratio	Map density
Role	.219 (.002)	.207 (.003)
Highest qualification	.261 (.000)	.271(.000)
Length of service this call centre	.077 (.277)	.044 (.539)
Work centrality	-.051 (.473)	-.080 (.260)
Work locus of control	.035 (.630)	-.013 (.859)

Correlation = 2-tailed

Two standard multiple regression analyses were run to predict how much variance in the link-to-construct ratio and the map density measures of complexity could be predicted by the chosen variables. One outlier was detected but, given the size of the data sample, this was not adjusted.

Examining link-to-construct ratio, it was found that 12.1 percent of the variance was explained by the model (i.e. R Square = .121). The model reached statistical significance $F_{(5,191)} = 5.253$, $p = .000$. Two variables contributed significantly to the model: the level of highest qualification, which gave the largest unique contribution (standardised beta coefficient .263, $p = .000$), and job role (standardised beta coefficient .185, $p = .010$) (see Table 9.3).

Table 9.3 – Standard multiple regression to predict impact on structural complexity as measured by link-to-construct ratio

	Unstandardised Coefficients		Standardised Coefficients		
	B	Std. Error	Beta	t	Exact p
(Constant)	2.128	.838		2.539	.012
Role	1.095	.418	.185	2.620	.010
Highest qualification	.599	.158	.263	3.799	.000
Length of service	.035	.026	.099	1.364	.174
Work centrality	-.025	.034	-.052	-.731	.466
Work locus of control	.007	.013	.040	.570	.569

In terms of map density, 11.8 percent of the variance was explained by the model, which reached statistical significance ($F_{(5,191)} = 5.127, p = .000$). Again, 2 variables contributed significantly to the model: highest qualification, which gave the largest contribution (standardised beta coefficient .274, $p = .000$), and role (standardised beta coefficient .171, $p = .017$) (see Table 9.4).

Table 9.4 – Standard multiple regression to predict impact on structural complexity as measured by map density

	Unstandardised Coefficients		Standardised Coefficients		
	B	Std. Error	Beta	t	Exact p
(Constant)	.248	.077		3.236	.001
Job role	.092	.038	.171	2.418	.017
Highest qualification	.057	.014	.274	3.944	.000
Length of service	.002	.002	.071	.979	.329
Work centrality	-.003	.003	-.069	-.962	.337
Work locus of control	-.000	.001	-.008	-.118	.906

9.4 Measures of Link Strength Density

As noted, a further indicator of belief (or assertion) strength is link strength density (see Langfield-Smith & Wirth, 1992: 114). The link strength density of the selected constructs (i.e. the total link strength divided by the number of constructs) gives an indication of the strength of relationships within the map (irrespective of polarity). Figure 9.3 depicts an overall pattern of strong links (all constructs are moderately or strongly linked). It can be seen, for example, that this individual perceives his own personal influence to be strong (personal job satisfaction has a strong effect on overall call centre performance) and to also be strongly influenced (overall call centre performance strongly influences personal job satisfaction). Contrary to this, Figure 9.4 depicts a weak (all constructs are slightly or moderately linked) link pattern. For example, no construct has more than a slight influence on personal job satisfaction; similarly personal job satisfaction only exerts slight influence.

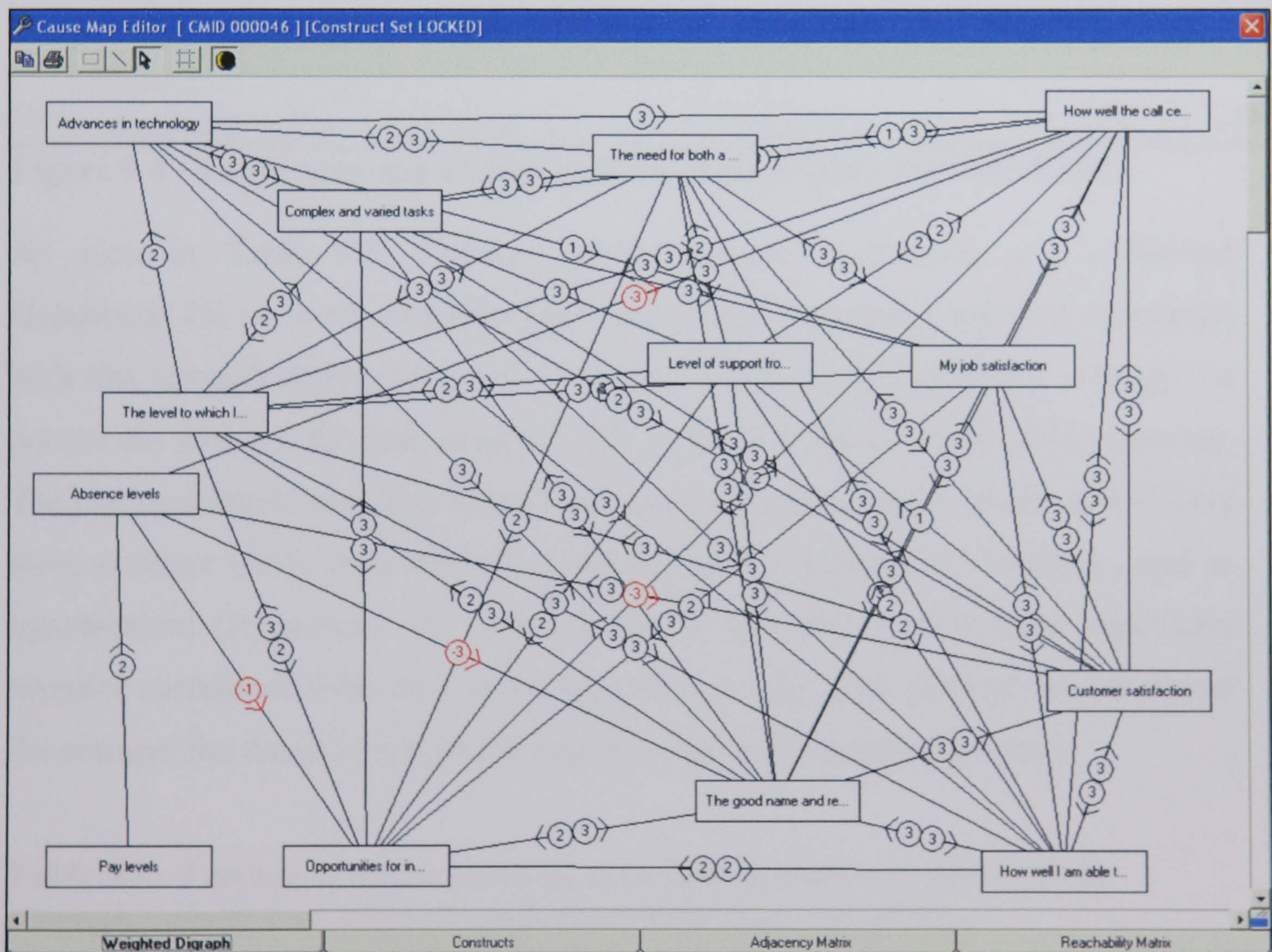


Figure 9.3 - Cause map depicting a pattern of strong links (ORG02-PT17)

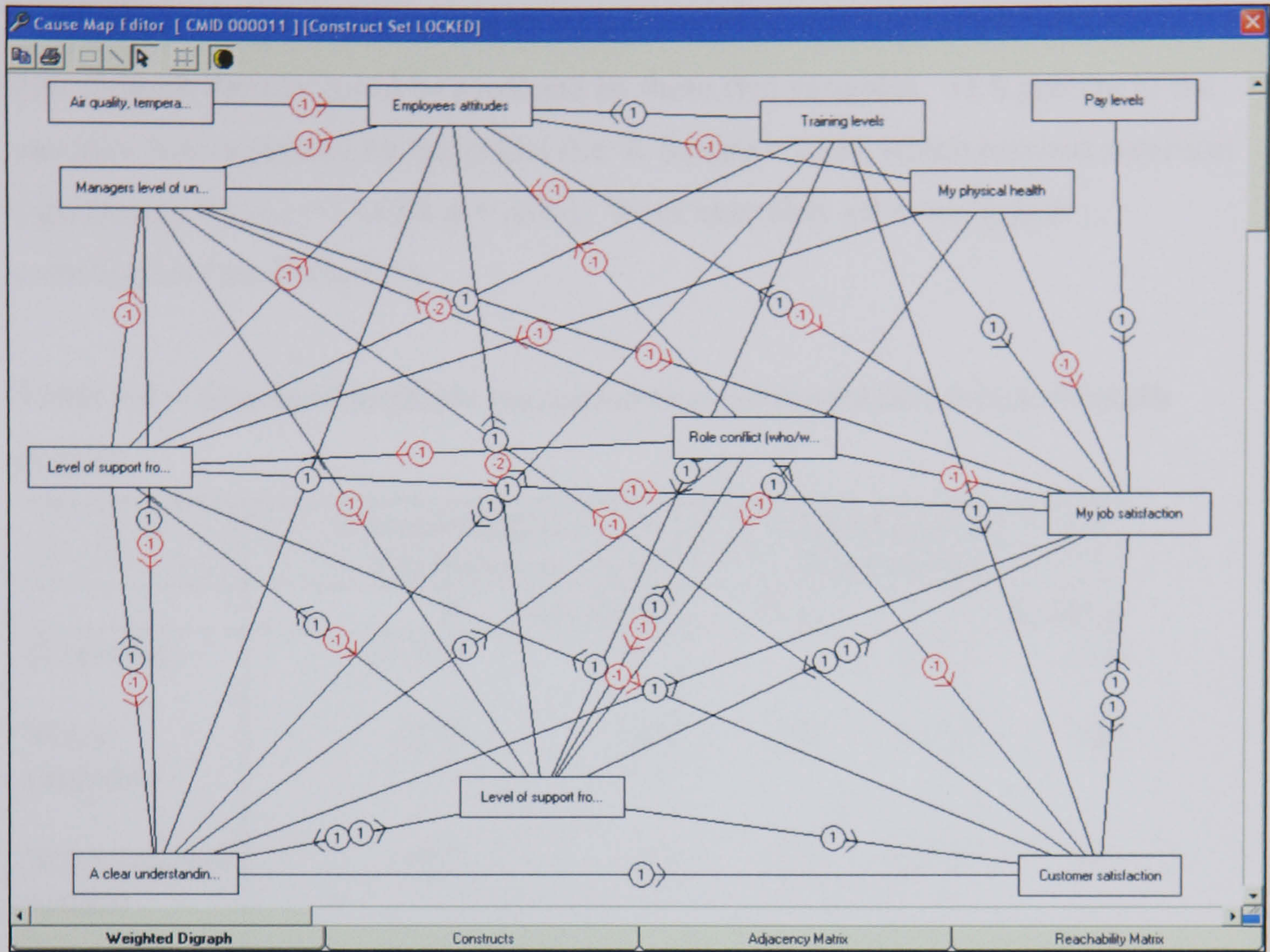


Figure 9.4 - Cause map depicting a pattern of weak links (ORG02-PT02)

As seen in Table 9.5, Pearson product-moment correlation test confirmed Hypothesis 15, i.e. work centrality had a statistically significant negative correlation with link strength density (at $p < .01$). In other words, the more central work is to a person the stronger the link density (with a shared variance value of 8.9 percent). The practical implication here being that people for whom work is more central have more stronger views than their more disinterested counterparts. Similarly, and as hypothesised (Hypothesis 18), link strength density had a statistically significant negative correlation with work locus of control, i.e. the more internal the participant the stronger the density (though the shared variance was just 4.8 percent).

Table 9.5 - Pearson product-moment correlations (exact p value) of link strength density (for selected constructs) with other variables

Variables	Link strength density (for selected constructs)
Work centrality	-.299 (.000)
Work locus of control	-.218 (.002)

Correlation = (2-tailed)

A standard multiple regression analysis was run to predict how much variance in link strength density could be predicted by these two variables. 11.8 percent of the variance was explained by the model (i.e. R Square =.118), which reached statistical significance $F_{(2,194)} = 13.020$, $p = .000$). Work centrality gave the largest contribution (see Table 9.6).

Table 9.6 – Standard multiple regression to predict impact on link strength density

	Unstandardised Coefficients		Standardised Coefficients		
	B	Std. Error	Beta	t	Exact p
(Constant)	10.790	1.552		6.952	.000
Work centrality	-.273	.069	-.270	-3.943	.000
Work locus of control	-.007	.027	-.172	-2.508	.013

9.5 Conclusions

It can be seen that the conditions under which the people in this study built more complex maps was not linked to different organisational context but to educational level (using level of qualification as a proxy) and to job role. The level of highest qualification gave the largest contribution to the standardised regression model but, while significant at $p < .0005$, the percentage of explained variance was low.

In terms of the strength of the relationships within the cause maps, as hypothesised, work centrality and work locus of control gave statistically significant results but, again, the percentage of explained variance was low.

Cause maps can be analysed by focusing on two main dimensions: the content and the structure of each map, though, in practice, the two are often interrelated, i.e. content measures are affected by the size and structural aspects of maps and structure is partly a consequence of content (Langfield-Smith & Wirth, 1992; Eden & Ackermann, 1998). Chapter 10 employs the use of distance ratio measurements, which take into account both the constructs incorporated within the maps and the

relationships between these constructs. Using these measurements, the hypotheses tested in Chapters 8 and 9 were revisited to see if the conclusions drawn up to this point were supported once the two dimensions of map content and structure were simultaneously taken into consideration.

CHAPTER 10

The Analysis of Distance Ratios in the Sensemaking Process

When comparing the cause maps of two individuals several types of difference can be identified: (a) the existence or non-existence of constructs (one person believes A is important, the next person does not), (b) the existence or non-existence of links (relationships) between those constructs (one person believes A influences B, the next person does not), (c) the polarity of those links (for one person any increase in A causes a decrease in B, while for the next person the perception is that an increase in A results in a corresponding increase in B), and (d) the differing strength of relationships between those constructs (one person thinks there is a strong relationship between A and B, but for the next person the relationship is only slight). This Chapter employs the use of distance ratio measurements that take into account all these differences between pairs of individual cause maps to arrive at a quantitative measurement ascertaining the level of map similarity or, in fact, in terms of the specific method used in this study, dissimilarity.

10.1 Distance Ratio Formula

The distance ratio formula advocated by Markóczy and Goldberg (1995: 314) (see Figure 10.1 below) is essentially a parameterised version of the Langfield-Smith and Wirth (1992) distance formula 12. This is a dissimilarity measure that allows the distances to be collected on every individual pair of maps, by taking into account *both* the constructs incorporated in the maps and the relationships between those constructs. A distance ratio of 0 would indicate maps are identical and 1 that the distance between the maps is maximal.

The parameterised version takes into account a number of variations in mapping procedures, and distance ratios were calculated on the causal maps generated in this study with parameters set at: $\alpha = 1$ (no variation in the amount of direct self-influence in the matrices); $\beta = 3$ (maximum absolute strength of the links in the map); $\gamma = 2$ (differences in constructs will always lead to larger distance ratios); $\delta = 0$ (giving no additional weight to a polarity change); $\varepsilon = 2$ (maps have two polarities).

$$DR(A, B) = \frac{\sum_{i=1}^p \sum_{j=1}^p \text{diff}(i, j)}{(\varepsilon\beta + \delta)p_c^2 + \gamma'(2p_c(p_{uA} + p_{uB}) + p_{uA}^2 + p_{uB}^2) - \alpha((\varepsilon\beta + \delta)p_c + \gamma'(p_{uA} + p_{uB}))}$$

$$\text{diff}(i, j) = \begin{cases} 0 & \text{(i) if } i = j \text{ and } \alpha = 1 \\ \Gamma(a_{ij}, b_{ij}) & \text{(ii) if either } i \text{ or } j \notin P_c \text{ and } i, j \in N_A \text{ or } i, j \in N_B \\ |a_{ij} - b_{ij}| + \delta & \text{(iii) if } a_{ij}b_{ij} < 0 \\ |a_{ij} - b_{ij}| & \text{(iv) otherwise} \end{cases}$$

$$\Gamma(a_{ij}, b_{ij}) = \begin{cases} 0 & \text{(a) if } \gamma = 0 \\ 0 & \text{(b) if } \gamma = 1 \text{ and } a_{ij} = b_{ij} = 0 \\ 1 & \text{(c) otherwise} \end{cases}$$

$$\gamma' = \begin{cases} 0 & \text{if } \gamma = 0 \\ 1 & \text{otherwise} \end{cases}$$

Figure 10.1 - Distance ratio formula (Markóczy & Goldberg, 1995: 314)

10.2 Cluster Analysis

Cluster analysis can be a useful tool in the exploration of multivariate data but there are a variety of caveats regarding potential over-interpretation of any results (see, for example, Everitt & Dunn, 2001; Everitt, Landau & Leese, 2001). In this study, once the distances had been collected on every individual pair of maps, the data were subjected to cluster analysis in order to group the data (Markóczy, 1997, 2000; Markóczy & Goldberg, 1995) to see which, if any, of the patterns found in the earlier analyses were still evident when both the constructs incorporated in the maps and the relationships between those constructs were simultaneously taken into account.

While clustering analysis is (in itself) objective, the decision as to how many clusters to choose is not and both optimisation and hierarchical clustering methods are largely subjective. There is no 'correct' method on which to base cluster choice, though optimisation methods have not found as wide a degree of acceptance as hierarchical procedures (Everitt *et al.*, 2001). Blashfield (1976) applied a variety of clustering methods to data generated from multivariate normal mixtures (each of 50

data sets was a mixture of samples from a number of different populations), which revealed Ward's method (alternatively known as minimum sum of squares) performed rather better than single linkage, complete linkage or group average methods. Contrary to this, Milligan's (1980) comprehensive study demonstrated that no single method could be claimed superior for all types of data. Milligan also concluded that when the data were such that they contained a true cluster structure masked by the addition of 'noise', Ward's method and group average were far superior to single or complete linkage methods. As this was a particular condition that may apply in this study, Ward's method, which tends to find same size spherical clusters (Everitt *et al.*, 2001: 60; Markóczy and Goldberg, 1995: 320), was applied.

Arguably there was a clear rationale for using a predefined number of clusters (Markóczy & Goldberg, 1995), as theory had predicted that organisation would be a key variable. However, while this had proved to be the case in terms of salience of constructs in terms of choice of constructs, differences across the organisations were revealed in terms of relationships between those constructs (Chapter 8). Further to this, and in terms of measures of structural complexity, it had been found (Chapter 9) that highest qualification and role were the main contributors to the sensemaking process. Basing cluster numbers on what 'naturally' occurs (acknowledging that 'natural' is still dependent on method employed) would allow organisation to emerge once again as a key variable in the subsequent analysis if this proved to be the case, yet the procedure was not 'forcing' five (one per organisation) clusters and this latter strategy was therefore employed. Agglomerative hierarchical techniques produce partitions by a series of successive fusions of the n individuals into groups. When represented in a two-dimensional diagram, i.e. a dendrogram, it is (generally) possible to distinguish clear breaks as to where the individuals 'cluster' (the method employed by Markóczy, 1997). The dendrogram was viewed as giving six clusters (cluster membership counts are given in Table 10.1).

Table 10.1 - Cluster membership counts

Cluster Number	Frequency	Percent	Valid Percent	Cumulative Percent
1	20	10.0	10.0	10.0
2	54	27.0	27.0	37.0
3	23	11.5	11.5	48.5
4	28	14.0	14.0	62.5
5	34	17.0	17.0	79.5
6	41	20.5	20.5	100.0
Total	200	100.0	100.0	

Figure 10.2 shows the basic shape/outline of the dendrogram (for details of full cluster membership see Appendix 10). This is shown *prior* to Figure 10.3, which employs the use of shading to illustrate researcher interpretation of the six clusters. Clearly, presentation in such a manner is somewhat leading, i.e. a particular cluster formation then becomes potentially 'obvious'. This, again, demonstrates the subjectivity involved in this form of analysis.

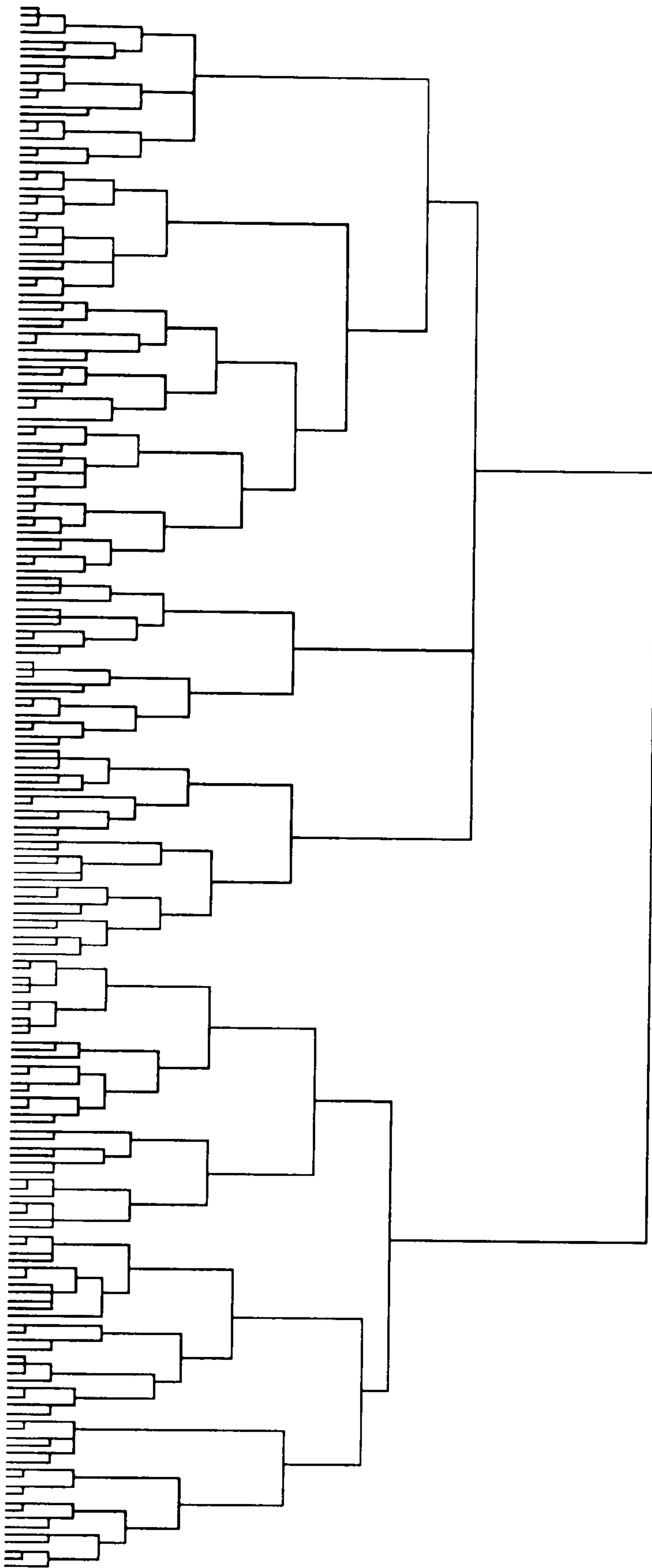


Figure 10.2 – Dendrogram – line diagram

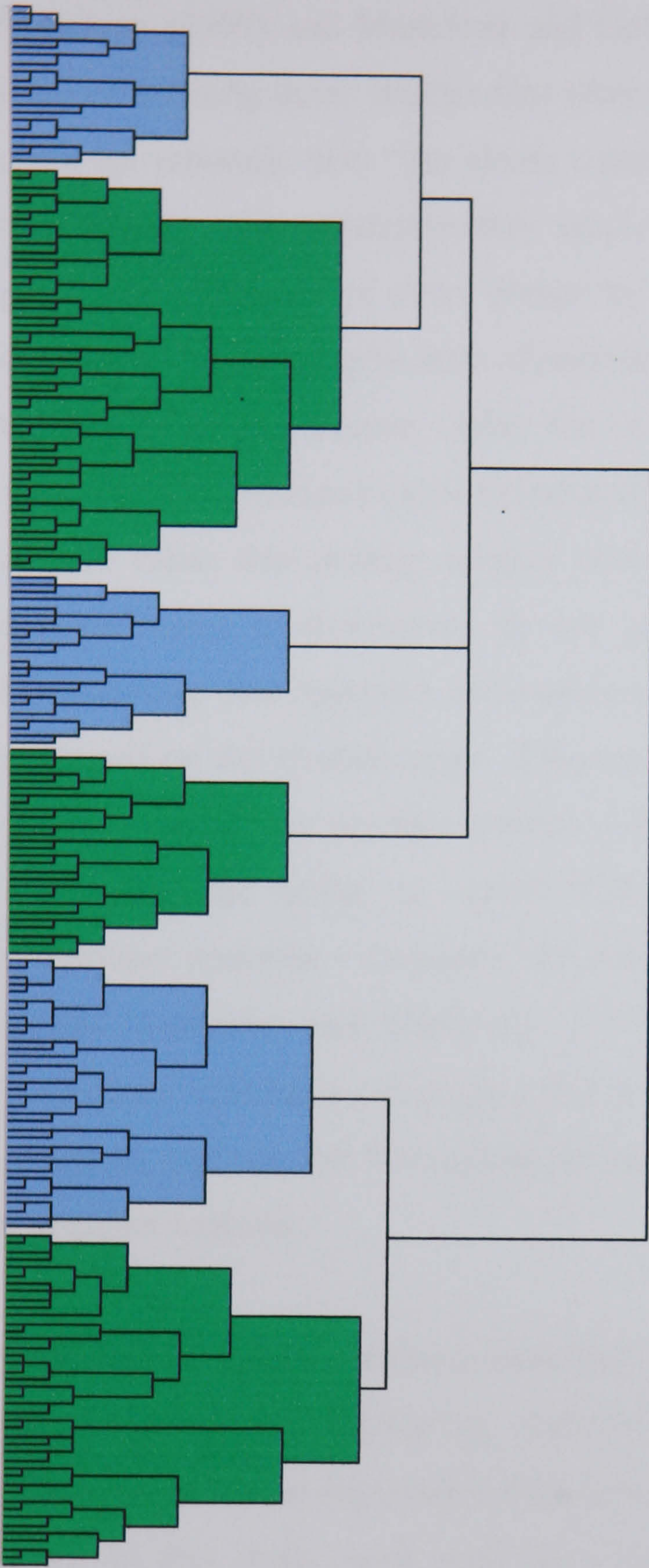


Figure 10.3 – Dendrogram – block diagram

Markóczy (1997) and Markóczy and Goldberg (1995: 320) attempted to solve the issue of defining those entities that were not clearly central to a cluster, essentially using the rationale that: “the closer a map is to a cluster centre, the more it is ‘in’ that cluster”. The procedure they employed was to measure the distance of each map from the centre of every cluster by aggregating their maps, in so far as they used mean links strengths after identifying constructs which appeared in more than half the maps in a cluster. After the central maps were created, the authors then worked out the distance ratios between all the maps and all the cluster central maps. At face value, this strategy permits more sophisticated analyses particularly as the distance ratios in themselves do not give a continuous value for any variable. Nevertheless, this approach demonstrates some inconsistency. The distance ratios are based on the overall maps. Dipping into the content, choosing constructs that appear together, to produce precise distance ratios from the centre, leaves one considering the centre of what? This ultimately challenges the basis of any subsequent analyses. Certainly, the authors realise the shortcomings in terms of cluster formation and Markóczy (1997) ran a series of “complex” analytical procedures, ultimately concluding that the consistency indicated that the limitations of cluster analysis and the calculation of the central maps did not highly distort the regression analysis.

Essentially standard statistical tests (such as analysis of variance) are inappropriate for comparing the clustering variables between clusters since the clustering technique will have maximised between-cluster differences on the variable in some way. In this study, each participant was allocated an additional variable value, cluster membership 1 – 6 which formed the basis of the subsequent analyses.

10.2.1 The relationship between cluster membership and contextual/individual differences variables

Using basic descriptive statistics, chi-square tests were used initially to explore the relationship between the cluster membership and the categories of organisation, role, level of highest qualification, and gender. The continuous variables: length of service in the employing call centre, length of experience outside the call centre industry, age, work centrality and work locus of control, were also collapsed into categorical format (using three categories in each) for the purposes of this exercise.

As seen in Table 10.2, statistically significant relationships at the $p < .01$ level were found between cluster and organisation, length of time in the employing call centre, age, and work locus of control. Additional statistically significant relationships at the $p < .05$ level were found between cluster and job role and work centrality.

Table 10.2 - Relationships between cluster and key variables using Pearson chi-square values

Variable	Pearson Chi-Square Value	Asym. Sig. (2-sided)
Organisation	59.39	.000
Role	11.58	.041
Highest Qualification	22.19	.103
Length of time in the employing call centre	29.13	.001
Length of non-call centre experience	15.15	.127
Age	5.65	.004
Gender	3.97	.554
Work centrality	21.95	.015
Work locus of control	24.97	.005

10.2.2 Predictors of cluster membership

To help confirm or refute earlier results as to the best predictor of cluster membership (bearing in mind the caveats surrounding the use of statistical techniques following clustering), a multinomial (polytomous) logistic regression was performed to test for overall effects (excluding age because of its high correlation with several of the other variables).

The dependent variable was cluster and, while factors can be numeric or categorical, the test was run on the statistical package SPSS where it is recommended: a) that factors are classified as categorical variables and covariates as continuous variables, and b) that categorical variables are entered into the analysis prior to any continuous variables. This resulted in the following entry sequence: organisation, highest qualification, role, gender, length of service in the employing call centre, length of non-call centre service, work centrality, and work locus of control.

The model fitting information revealed a final -2 log likelihood of 281.10, a chi-square value of 159.20, with 65 df, and an exact p value of .000. Thus, the null hypothesis that all effects of the independent variables were zero was rejected. A Nagelkerke pseudo R-square measure of .572 indicated that the model performed fairly well. The likelihood ratio tests showed that the null hypothesis that the effects of all log odds-ratios of the variable 'cluster' were simultaneously equal to zero was rejected for the independent variables length of service in the employing call centre, length of non-call centre work experience, work centrality, and organisation, with a similar loss of fit (see Table 10.3).

Table 10.3 – Multinomial regression likelihood ratio tests

Effect	-2 Log Likelihood of Reduced Model	Chi-Square	df	Exact p
Intercept	523.580	.000	0	.
V.002 Role	529.777	6.197	5	.288
V.020 Gender	525.588	2.008	5	.848
V.010 Length of service in cc	554.231	30.651	5	.000
V.016 Non cc work experience	538.042	14.462	5	.013
V.028 Work centrality	551.664	28.084	5	.000
V.027 Work locus of control	533.792	10.212	5	.069
V.001 Organisation	569.421	45.841	20	.001
V.017 Highest qualification	539.359	15.779	15	.397

Logistic regression analyses were used to test for the best predictors of individual cluster membership. As there was an absence of multicollinearity and a high tolerance, a direct logistic regression analysis procedure was used. In each instance, the dependent (outcome) variable was the individual cluster and the predictors used were: organisation, highest qualification, role, gender, length of service, length of non- call centre service, work centrality, and work locus of control.

Cluster One: A test of the full model with all predictors against a constant-only model was statistically significant, chi-square (13, 183) = 39.27, $p = .000$. Using the Wald criterion (see Table 10.4), work centrality was statistically significant at $p < .01$. Length of service in the call centre and length of non-call centre work experience were statistically significant at $p < .05$. As these effects were also statistically significant in the multinomial regression, it was possible to be confident that there was a real effect.

Table 10.4 – Direct logistic regression to predict membership of cluster one

Variables	B	Std. Error	Wald	df	Exact p.	Exp(B)
V.001 Organisation			9.100	4	.059	
V.001(1)	-2.397	1.239	3.745	1	.053	.091
V.001(2)	-.223	1.005	.049	1	.825	.800
V.001(3)	-8.172	24.848	.108	1	.742	.000
V.001(4)	-2.146	1.100	3.807	1	.051	.117
V.017 Highest qual			.880	3	.830	
V.017(1)	-.810	1.633	.246	1	.620	.445
V.017(2)	.189	1.107	.029	1	.864	1.208
V.017(3)	-.255	1.167	.048	1	.827	.775
V.002 Role	1.037	1.179	.774	1	.379	2.820
V.020 Gender	.706	.639	1.222	1	.269	2.026
V.010 Length in cc	.127	.054	5.498	1	.019	1.135
V.016 Non cc work	.084	.041	4.198	1	.040	1.087
V.028 Work centrality	-.285	.079	12.946	1	.000	.752
V.027 W locus control	.049	.030	2.622	1	.105	1.050
Constant	-1.250	2.308	.293	1	.588	.286

Cluster Two: A test of the full model with all predictors against a constant-only model was statistically significant, chi-square (13, 183) = 35.42, $p = .001$. Using the Wald criterion only the length of service in the employing call centre gave a statistically significant value $p = .001$, with a negative beta value (see Table 10.5). As this variable was also statistically significant in the multinomial regression, it was possible to be confident that there was a real effect.

Table 10.5 – Direct logistic regression to predict membership of cluster two

Variables	B	Std. Error	Wald	df	Exact p.	Exp(B)
V.001 Organisation			4.166	4	.384	
V.001(1)	.155	.610	.064	1	.800	1.167
V.001(2)	-.276	.717	.149	1	.700	.759
V.001(3)	-.215	.855	.063	1	.802	.807
V.001(4)	.741	.562	1.736	1	.188	2.097
V.017 Highest qual			2.999	3	.392	
V.017(1)	1.688	1.053	2.571	1	.109	5.409
V.017(2)	.630	.566	1.240	1	.265	1.879
V.017(3)	.760	.587	1.674	1	.196	2.138
V.002 Role	-.214	.623	.118	1	.732	.808
V.020 Gender	-.097	.417	.054	1	.816	.908
V.010 Length in cc	-.206	.063	10.546	1	.001	.814
V.016 Non cc work	-.035	.027	1.699	1	.192	.966
V.028 Work centrality	.015	.048	.094	1	.760	1.015
V.027 W locus control	-.034	.023	2.343	1	.126	.966
Constant	.720	1.374	.275	1	.600	2.054

Cluster Three: A test of the full model with all predictors against a constant-only model was statistically significant, chi-square (13, 183) = 39.34, $p = .000$. Using the Wald criterion, length of service in the employing call centre gave a statistically significant value at $p < .01$. Length of non-call centre work experience and work centrality also gave statistically significant values at the level $p < .05$ (see Table 10.6). As these effects were also statistically significant in the multinomial regression, it was possible to be confident that there was a real effect.

Table 10.6 – Direct logistic regression to predict membership of cluster three

Variables	B	Std. Error	Wald	df	Exact p.	Exp(B)
V.001 Organisation			5.872	4	.209	
V.001(1)	-1.819	1.223	2.212	1	.137	.162
V.001(2)	-2.870	1.460	3.865	1	.049	.057
V.001(3)	-.271	1.269	.046	1	.831	.762
V.001(4)	-.666	.975	.467	1	.494	.514
V.017 Highest qual			1.188	3	.756	
V.017(1)	1.098	1.455	.570	1	.450	2.999
V.017(2)	1.291	1.187	1.183	1	.277	3.638
V.017(3)	1.102	1.198	.846	1	.358	3.010
V.002 Role	-1.303	.694	3.529	1	.060	.272
V.020 Gender	.148	.709	.044	1	.834	1.160
V.010 Length in cc	.216	.072	9.109	1	.003	1.242
V.016 Non cc work	.097	.040	5.796	1	.016	1.102
V.028 Work centrality	-.153	.075	4.184	1	.041	.858
V.027 W locus control	-.058	.033	3.174	1	.075	.944
Constant	1.485	2.247	.437	1	.509	4.415

Cluster Four: A test of the full model with all predictors against a constant-only model was statistically significant, chi-square (13, 183) = 24.36, $p = .028$. Using the Wald criterion, the level of highest qualification had a statistically significant value at $p < .05$ (see Table 10.7). However, this effect required consideration in the context of no overall multinomial effect, from which it was concluded that there was less confidence that the logistic regression had revealed a real effect.

Table 10.7 – Direct logistic regression to predict membership of cluster four

Variables	B	Std. Error	Wald	df	Exact p.	Exp(B)
V.001 Organisation			2.635	4	.621	
V.001(1)	.312	.778	.161	1	.688	1.367
V.001(2)	-.581	.897	.419	1	.517	.560
V.001(3)	-1.157	1.265	.836	1	.361	.314
V.001(4)	.048	.719	.004	1	.947	1.049
V.017 Highest qual			9.887	3	.020	
V.017(1)	-1.202	1.212	.983	1	.321	.300
V.017(2)	-1.945	.627	9.621	1	.002	.143
V.017(3)	-1.365	.610	5.008	1	.025	.255
V.002 Role	1.341	1.107	1.469	1	.226	3.823
V.020 Gender	.272	.513	.281	1	.596	1.313
V.010 Length in cc	-.039	.061	.419	1	.518	.961
V.016 Non cc work	-.021	.031	.455	1	.500	.979
V.028 Work centrality	.100	.064	2.448	1	.118	1.105
V.027 W locus control	.028	.026	1.214	1	.271	1.029
Constant	-4.516	1.901	5.643	1	.018	.011

Cluster Five: A test of the full model with all predictors against a constant-only model was statistically significant, chi-square (13, 183) = 31.10, $p = .003$. Using the Wald criterion work centrality made a statistically significant at $p < .05$ (see Table 10.8). As this variable was also statistically significant in the multinomial regression, it was possible to be confident that there was a real effect.

Table 10.8 – Direct logistic regression to predict membership of cluster five

Variables	B	Std. Error	Wald	df	Exact p.	Exp(B)
V.001 Organisation			9.057	4	.060	
V.001(1)	1.632	.896	3.319	1	.068	5.112
V.001(2)	1.679	.942	3.181	1	.075	5.362
V.001(3)	-5.296	15.320	.120	1	.730	.005
V.001(4)	-.202	.997	.041	1	.840	.817
V.017 Highest qual			1.280	3	.734	
V.017(1)	-.168	1.378	.015	1	.903	.846
V.017(2)	.600	.758	.627	1	.429	1.822
V.017(3)	.239	.819	.085	1	.770	1.270
V.002 Role	.242	.741	.106	1	.744	1.274
V.020 Gender	.024	.474	.003	1	.959	1.025
V.010 Length in cc	.001	.041	.000	1	.984	1.001
V.016 Non cc work	-.020	.030	.435	1	.510	.980
V.028 Work centrality	.129	.066	3.861	1	.049	1.138
V.027 W locus control	-.007	.022	.096	1	.757	.993
Constant	-5.184	1.744	8.837	1	.003	.006

Cluster Six: A test of the full model with all predictors against a constant-only model was not statistically significant, chi-square (13, 183) = 15.73, $p = .264$. Using the Wald criterion the variable organisation was statistically significant at $<.05$ (see Table 10.9). As this variable was also statistically significant in the multinomial regression, it was possible to be confident that there was a real effect.

Table 10.9 – Direct logistic regression to predict membership of cluster six

Variables	B	Std. Error	Wald	df	Exact p.	Exp(B)
V.001 Organisation			11.178	4	.025	
V.001(1)	.022	.778	.001	1	.978	1.022
V.001(2)	.230	.806	.081	1	.775	1.259
V.001(3)	2.256	.870	6.717	1	.010	9.544
V.001(4)	.612	.711	.742	1	.389	1.845
V.017 Highest qual			.623	3	.891	
V.017(1)	-.148	1.064	.019	1	.889	.863
V.017(2)	.292	.576	.256	1	.613	1.338
V.017(3)	.393	.603	.426	1	.514	1.482
V.002 Role	-.477	.608	.616	1	.433	.621
V.020 Gender	-.304	.439	.478	1	.489	.738
V.010 Length in cc	-.013	.044	.087	1	.768	.987
V.016 Non cc work	-.009	.026	.122	1	.727	.991
V.028 Work centrality	.076	.056	1.809	1	.179	1.078
V.027 W locus control	.029	.022	1.768	1	.184	1.029
Constant	-3.995	1.506	7.035	1	.008	.018

10.3 Conclusions

Taking into account the limitations imposed on interpretation of cluster analysis, these results did, once again, suggest that contextual influences at the level of the organisation played a key role in the sensemaking processes of the front line call centre employees in this study. The use of both chi square and multinomial logistic regression analytical techniques revealed a statistically significant relationship between the variable 'organisation' and cluster membership at the level $p < .01$. In addition, a statistically significant relationship was revealed with one of the six logistic regressions carried out to inspect predictors of individual cluster membership, and p values of .050 and .060 were revealed with two further clusters.

The individual differences variable 'length of time in the employing call centre' showed a statistically significant relationship with cluster membership at the level $p < .01$ using both these techniques of analysis. This variable was also statistically significant in *three* of the six logistic regressions. Similarly, the variable 'work centrality' showed a statistically significant relationship with cluster membership, though this was at differing levels of significance dependent upon the method of analysis.

While several additional individual differences variables showed statistically significant results, the levels differed dependent on the particular analytical technique. The variable 'age' showed a statistically significant relationship using chi-square but was not included in the subsequent regression analyses because of high correlation with the other variables included in the model.

In Chapter 11 (Discussion and Conclusions), the final chapter of this thesis, the full study results are taken into account, and consideration is given as to the level to which each of the 19 study hypotheses were supported, being critically open to the methods employed.

CHAPTER 11

Discussion and Conclusions

While a variety of issues have been examined from a sensemaking perspective the main focus of existing literature has been that of strategic management. If we are to understand sensemaking processes more generally there is a need to pay attention to non-managerial levels. However, despite calls to extend research beyond managerial populations (Huff, 1997; Weick, 1995), researchers have failed largely to turn their attention to those who make up the vast majority of those working in almost any organisation. In contrast, the present study focused directly upon sensemaking at the lower levels of the organisation, by exploring the cause maps of front line call centre employees.

The main concerns in the study were to conduct a large-scale investigation among non-managerial populations, and to collect data in a manner that did not unduly restrict participant sensemaking yet which was also amenable to systematic comparison. Throughout the thesis there has been a continued endeavour to explain the decision-making as to why certain techniques have been employed over others, and during the course of the study to gather evidence through systematic procedures. The methods developed allowed a deeper understanding of the issues involved in working at the call centre front line, as revealed through 200 individual cause maps.

The study has extended our knowledge by gaining some insight into the important contextual and individual differences variables that have been seen to influence the sensemaking of this non-managerial population. In summary, it was found that the various attempts to institutionalise call centres into an industry with common practices and standards has not yet penetrated the lower reaches of organisations, such as the ones investigated in this study, as evidenced by the low levels of consensus as to what constitute the important issues. Whatever institutional processes *may* be operating at managerial levels, as evidenced by the rise of specific associations, call centre conferences and specialist practitioner journals (*Call Centre Focus*, *Call Center Magazine*, *Communications News*, *Fast Company*, *IT Week*, *Network World*, *Telephony*) targeted at call centre organisations, these have not

manifested themselves at the level of front line agents and team leaders in this study. Within a sensemaking approach individuals are *primarily* viewed as being responsive to situational cues, i.e. the current information context guides information processing in an ‘upstream’ (Meindl *et al.*, 1996b) or ‘bottom-up’ manner (Walsh, 1995) and, at the risk of over-simplification, overall the organisational context was found to be the dominant influence on front line sensemaking. However, cognition is viewed as the product of a complex interplay involving both contextual cues and individual prior beliefs (top-down processes). Walsh (1995) states that top managers draw largely from past experience rather than context, while others (Hodgkinson & Sparrow, 2002) conclude that the balance of top-down (conceptually driven) and bottom-up (stimulus driven) processes is likely to vary across tasks and situations. In this study, the likelihood is that both bottom-up and top-down processes have informed participants’ responses in a complex interplay.

This chapter considers the extent to which each of these processes was manifest in the data set gathered by examining the level to which each of the 19 study hypotheses were supported or refuted. The chapter is critically open to the methods employed, and attention is paid throughout to the research limitations and delimitations that may have a particular bearing on the present study findings. This chapter evaluates the study in terms of its implications for the development of theory and contribution to research methodology, considers the implications for policy, and details several areas where further research is now required.

11.1 Theoretical Implications

The study has productively taken a multidisciplinary approach, and utilised a broad body of relevant literature from the organisational sciences that has variously addressed issues expected to form the substance of sensemaking in the study population. As introduced in Chapter 2, theories pertaining to both the computational and interpretive approach to managerial and organisational cognition research have been taken into consideration. The social psychology literature has also been utilised to investigate the interplay between the individual and their environment with the cognitive material, most particularly incorporating the related theories of social identity (Ashforth & Mael, 1989; Haslam, 2001; Hogg & Terry,

2000), and self-categorisation (Turner, 1985), in combination with the insights of institutional theory (DiMaggio & Powell, 1983, 1991; Scott, 2001; Scott & Christensen, 1995) from the field of organisational sociology. The study has utilised knowledge gleaned from explicit call centre research to-date (as introduced in Chapter 4), and several adjacent literatures from the occupational health and psychology literature (as detailed in Chapter 5), incorporating theory and empirical evidence regarding, for example, employee relationships, psychological work contracts, and job design.

It was seen in Chapter 2 (p.14) that one of the seven key properties of sensemaking is that it is a social process (Weick, 1995), and social identity should provide workers with a common perspective on reality and align and render more homogenous their otherwise unique experiences (Haslam, 2001). It was also seen in Chapter 2 (pp.13-14) that a further property of sensemaking is that it is enactive of sensible environments (essentially meaning that people produce at least part of the environment they face). In the context of the present study, this would imply that via this social construction process (enactment) call centre employees have selectively perceived which constructs are deemed to be of importance and how. As cause maps imply links to action, it is on the basis of these constructs that these employees will then take action, ultimately, at least to some extent, shaping the call centre environment.

The institutionalising of social constructions into what is important, or the way things are done, firmly links ideas about sensemaking with those of institutional theory and the notion of 'isomorphism', i.e. the observed tendency for firms to develop shared beliefs, structures, practices, strategies and networks of relations. The call centre environment has been an ideal context to extend our insight into institutional characteristics in the context of this non-managerial population. Institutional theory would argue that institutionalism can encourage convergence at the level of the industry, the (strategic) group and within institutionalised practices linked to management functions and levels (cf. Daniels *et al.*, 1994a, 2002a; Hodgkinson & Johnson, 1994; Sutcliffe & Huber, 1998). The call centre environment presents a complex mixture of macro- and micro- forces as to where

the convergence of beliefs may occur, and hypotheses were set at the level of the industry, organisation, and individual.

11.1.1 Influence of Industry Processes on Employee Sensemaking

It was first hypothesised that the main consensus of agreement as to the most important constructs in this non-managerial population would manifest at the level of the industry. The 55 constructs were combined into 11 categories, and inspected individually, to ascertain the level of agreement. Consensuality does not imply perfect agreement but rather that, after a time, individuals will achieve a certain similarity in the way they process and evaluate information (Gioia & Sims, 1986). However, the low levels of agreement found suggest that there is insufficient homogeneity to talk about an industry effect in this non-managerial population. In other words, and refuting Hypothesis 1, at this point in time in the evolution of the call centre industry, at the level of team leader and below, homogeneity at the level of the industry is not apparent in this study context. To consider why, the discussion examines the factors that led to the conclusion that institutionalism would be likely to manifest at this macro level.

As noted in Chapter 2, some researchers conclude that industry wide institutional forces, or forces operating at the inter-organisational level point towards more homogenised beliefs, extending beyond organisational boundaries (Chatman & Jehn, 1994; Porac *et al.*, 1989, 1995; Spender, 1989). Phillips (1994) agreed and her findings also suggested that industry-based cognitive constructs could be productively broadened to include a wider set of industry participants. Applying these conclusions to the present study context, the institutionalisation of social constructions into the 'way things are done' at the industry level was illustrated in Chapter 4 (p.44) by Taylor & Bain's (1997) reporting of one manager in the finance sector who stated that once one organisation in that sector had chosen to use the call centre form of work organisation/customer transactions the rest had to follow. To a large degree the phenomenal growth of call centres in the UK context can be attributed to the earlier adoption of this highly profitable innovation in the conduct of customer transactions in the finance sector. However, this form of working has spread far beyond this sector, and the CCA equate current figures to almost two percent of the UK working population. The industry (despite the lack of an industry

effect in this sample, this term will be used throughout the remainder of the thesis) has generated specialist practitioner journals, specific associations, and events to the extent that CCA will host its 9th Annual Members Convention in late 2003. Via these common trade associations, conferences and a host of potential networking events, managers are then able to span different organisational and functional boundaries. However, membership criteria to these various associations actively prohibits those whose role does not encompass managerial responsibilities, thus excluding front line workers from the numerous potential networking mechanisms open to managers.

In their study of managers and non-managers, Ibarra and Andrews (1993) found support for the assertion that informal interaction networks, in channelling social influences, have a significant impact on job-related perceptions, over and above the effects of traditionally emphasised sources of influence such as formal position and departmental affiliation. However, the front line call centre worker is not enmeshed in the same social network as management and therefore the routes into isomorphism are different from those of managers. Non-managerial networking in the call centre context is essentially by proxy. The main routes that front line workers potentially have in common are health and safety bulletins (though the effectiveness of such communications are likely to be dependent upon management), trade union membership (Taylor & Bain, 2001a), and the high media profile (Arkin, 1997; Wylie, 1997). However, any union attempts to form a common mental model in these particular study participants have been unsuccessful, and while several participants spoke of the adverse media profile of call centres, this has not resulted in homogeneity at the industry level.

Of course, while an institutional effect at the level of the industry was not found in this study at the level of team leader and below, it may be that those performing a management role share beliefs along the lines suggested by Spender (1989) in his book 'Industry Recipes'. Turning to, for example, the issue of attrition/staff turnover rates, which according to the call centre literature is seen as being a particularly problematic for the call centre manager, only 9 of the participants in this study stated that this construct was one of most importance. It is not possible to know whether, once faced with 54 additional constructs, attrition would be viewed

as one of the 10-13 most important managerial issues. Albeit to differing degrees, depending on factors such as geographical proximity, organisational size and sector, turnover rates are seen to be a problem for managers beyond the more specific call centre environment (CIPD, 2001b). In some sectors the figures are certainly larger than those of several of the organisations in this study, and may be a problem associated with the management function per se as opposed to an explicit call centre management issue. However, the key theme in this study was that of non-management populations and, in practical terms, the flat organisational structure meant there were so few managers in these organisations (in Distribution there was, for example, just one manager), that it would not have been possible to test for differences/similarities or to preserve participant anonymity. Recruitment of managers from other organisations into the study would have introduced a variety of confounding variables.

With the benefit of hindsight, it may have been naïve to expect that the limited networking opportunities available to this non-managerial population would have led to consensuality at the macro (industry) level. However, other factors were taken into account, which were more explicitly directed at this non-managerial population. The call centre organisation reflects a mass production approach to customer service (Batt, 1999) and, as noted at various points throughout this thesis (most particularly in Chapter 4), concerns regarding the intense labour regime have been expressed from many sources, including government bodies, unions, and academics, with jobs being characterised as low status, tightly monitored and controlled, and stressful. While recent academic work tells us that call centre workers no longer fit the earlier stereotypical front line agent image, and that these characteristic features are not universal, they are still depicted as dominant (Taylor *et al.*, 2002), the work regime is seen to be intense (Richardson *et al.*, 2000), and the front line agent's job to be unique (HELA, 2001). Given the relatively simple context of the call centre environment, taking into account that this study of non-managerial staff encompassed both front line agent and team leader, it would, again, have been expected that the functional simplicity of the front line role would have led to a convergence of beliefs at the level of the industry.

One theoretical consideration as to why the findings suggest the lack of an institutional effect at the level of the industry pertains to the argument that the *more* institutionalised a set of cognitive or behavioural assumptions are, the less they will be an explicit part of the considerations of individual members (Sitkin, 2001). As noted in Chapter 3, one cited reason that McDonald *et al.* (in press) found it necessary to facilitate the cognitive mapping process was because some information and/or associations may be so deeply ingrained as to take the form of taken-for-granted assumptions. In this study context this may mean that some of the factors that were expected to figure particularly largely, or in direct reference to one of Weick's (1995) sensemaking properties be 'extracted by cues', for example those pertaining to the repetitive work pattern and/or issues of excessive levels of surveillance and control, but which did not, may be so institutionalised that participants no longer recognised these as important issues but rather as things that were 'simply there'. Perhaps the strongest counter-argument here is that these factors formed an explicit part of the pool of construct that was directly presented to the study participants: participants were explicitly 'reminded' of these issues. As participants were given a maximum number of constructs they could choose to use in their cause map, this does not mean that these constructs did not figure in some way in participant cognition. What it does mean is that once presented with an extensive range of potentially salient possibilities (as advocated, in particular, by Parker *et al.*, 2001) 10-13 other issues took precedence.

A further consideration relates to the preservation of self-esteem. From the perspective of what Weick believes is arguably the most important property of sensemaking that it is 'grounded in identity construction', it has been observed that people derive part of their identity and sense of self from the organisation (or industry) to which they belong (Ashforth & Mael, 1989; Haslam, 2001; Hogg & Terry, 2000). From earlier research, in particular's Warr's extensive work on psychological well-being (for example, see Warr 1987, 1994, 1999), it is also known that preserving self-esteem in the form of a valued social position is important for well-being. Subsequently, people tend to defend themselves from anything that has negative connotations for their personal identity. The implications of this could have been that, despite the confidential nature of participation in the study, participants failed to report many of the alleged negative aspects of call centre

employment, bypassing, for example, issues such as intensive monitoring and surveillance. Clearly, preservation of self-esteem extends beyond the implications of what the participants were willing to reveal to the researcher, and that 52 participants chose the construct 'my self-esteem' as being one of their 10-13 most important issues, and encompasses how people internalise issues to make them more or less acceptable to *themselves*. However, while not choosing the specific expected issues, participants appeared to speak freely about others which had negative implications, including those which illustrated their perceived lack of control over a particular aspect of their working environment. As observed in Chapter 8, for example, many participants in Emergency Services detailed their perceived lack of control in response to the physical working environment. There was additional evidence that suggested that, at least for some, various issues, which were expected to be highly salient, simply were not. For example, as illustrated in Chapter 7, the participants employed in Public Services generally did not understand the visible management display system and several had not realised the display was actually there.

Summary

Taking into account the above theoretical arguments, it is concluded that there is no clear rationale to counteract the findings that for the participants in this study an institutional effect at the level of the industry is not present. Despite some participants clearly being aware of the media image of the call centre, the most important chosen constructs were not those consistent with that image. The situation is more complex at this level of employee than it would *prima facie* appear to be. Another source of potential homogeneity are organisational processes, and the contrary hypothesis (Hypothesis 2) that an institutional effect at the level of the organisation has greater explanatory power than that at the level of the industry is next given consideration.

11.1.2 Influence of Organisational Processes on Employee Sensemaking

As noted in Chapter 2, individual sensemaking does not take place in isolation but is shaped by a variety of factors including interactions with others who are engaged in similar endeavours. When members of a group are exposed to similar information, through processes of collective sensemaking, groups of individuals are said to

construct shared interpretations of reality (Berger & Luckmann, 1967; Weick, 1995). The second study hypothesis, that there would be significant differences between organisations in category salience in terms of construct choice, reflecting differential sensemaking as a function of contextual variables at work within the organisations investigated, was supported. In summary (and as detailed in Chapter 8 pp.137-141), statistically significant differences at the $p < .01$ level were found between the mean category scores (in 7 of the 11 categories) across the organisations. Effect sizes ranged from minimal to medium and the variance in categories attributable to the variable organisation ranged from just 2 to more than 30 percent.

Of course, it could have been found that all the same kind of individual differences occurred within an organisation and the analysis controlled for these: significant differences in the mean profiles of category salience across the five organisations remained even after controlling for the possible effects of five theoretically informed covariates (supporting Hypothesis 3). In those categories showing the largest degrees of variance 'organisation' was the most influential variable. In addition, simultaneously taking into consideration the two dimensions of map content and structure, employing the use of distance ratio measurements to arrive at a quantitative measurement (ascertaining the level of map dissimilarity), again suggested that contextual influences at the level of the organisation played a key role.

The findings of this study give additional weighting to the conclusions of recent studies that call centres are not uniform (Holman, 2002; Holman & Wood, 2002; Houlihan, 2002; Taylor *et al.*, 2002). Examining the objective criteria, not only were these organisations not uniform in terms of the wider economic context in which they were operating, but also in respect of physical working environments, key HR practices, and work organisation and design. However, as noted earlier in this discussion, while Taylor *et al.* (2002) agree that call centre workers no longer fit the earlier stereotypical front line agent image, they conclude that routinisation, repetitiveness and a general absence of employee control are the dominant feature of the work organisation. Similarly, and as detailed in Chapter 5, Holman and Wood (2002) revealed that front line agents were not seen to have a great deal of job

variety but this was the conclusion of senior managers not the direct view of front line agents.

Contrary to this, this research found no dominance in terms of participants choosing features relating to tasks and the level of control that employees have over them. Moreover, statistically significant differences in the mean profiles for the specific categories 'tasks and technology' and 'job design and work characteristics' were found between the organisations. Similarly, while the call centre environment is alleged to be particularly stressful, there were several statistically significant differences between scores in the category 'health and well-being' at the $p < .01$ level across the five organisations. Taking into account the caveats regarding aggregation and the large standard deviations, the most cited constructs were also related in a different manner across the five organisations, depicting differing mean perceived outcomes: the most negative picture presented was that of Distribution, with Finance and Outsourcing presenting the most consistently positive perceptions. Salancik & Pfeffer (1978) conclude that workers are likely to use social information in developing their perceptions of how meaningful and important their job is and (once again at the risk of over-simplifying what is clearly a complex issue) the overall negative implications depicted by the media, and acknowledged by several study participants, were not found to be as powerful an influence upon the participants in this study as was the organisational context.

This study has revealed varied internal organisational characteristics. It was seen, for example, that the participants in Emergency Services paid considerable attention to the physical working environment and equipment. However, this organisation was the only one practicing rotating shift patterns, reported to be a potential stressor (Daus *et al.*, 1998) with some evidence that occupational noise exposure interacts with the impacts of shift work on health (Evans *et al.*, 1994). It is therefore feasible that rotating shift working and/or hot-desking work practices utilised in this organisation, and which are also seen to be a problematic (HELA, 2001), *might* focus attention onto the physical environment. Clearly, a number of additional factors could have come into play here, including the interplay with various individual factors. In adopting the industry level as the unit of analysis there was an inevitable trade-off made between the richness of data gathering and an informed

understanding of the broader context, and it is beyond the scope of this thesis to research these processes in detail but it demonstrates clear reasoning for probing further.

Cause Map Structure

As noted in Chapter 3, in his detailed summary of the managerial and organisational cognition literature, Walsh (1995) concluded that research into map structure fell way behind that of content, with a recommendation that more work should be carried out to substantiate the tentative findings to-date. In this study, following the logic that there would be organisational differences in terms of salience, it was proposed that this would extend itself into the area of cause map structure (Hypothesis 19). Two closely linked measures of map complexity, link-to-node (construct) ratio (Eden *et al.*, 1992) and map density (Goldberg, 1996; Hart, 1976), were employed. However, it was found that the organisational context did not have a significant influence on the complexity of participant cause maps (thereby refuting Hypothesis 19).

Summary

The call centre environment has been an ideal context to enable some insight to be gained into institutional characteristics, i.e. the potential convergence of beliefs, at the non-managerial level, as the environment presents a complex mixture of macro- and micro- forces. The findings of this study support scholars who assert the primacy of intra-organisational processes, either from empirical studies (Hodgkinson & Johnson, 1994) or from a theoretical standpoint (Jelinek & Litterer, 1994; Ocasio, 2001). A critical observation by Rousseau and Fried (2001) is that samples are often drawn from one firm or many firms without considering the nature of the settings involved or any potential impact on the variables of interest. These authors observe that the work setting can substantially alter the underlying dynamics of worker-organisational relations, and the present study gives support to these observations.

Despite finding that the organisational context was influential in the sensemaking process, it had been further hypothesised that this would not negate the potential role of various individual difference variables. While researchers such as Ocasio (2001)

highlight how individual cognition is shaped by context. Sitkin (2001: 77) speaks of a “structuration-like picture of cognition in which individual cognition both shapes and is shaped by its context”, and the discussion next examines the role of the eight individual differences variables taken into account in the present study.

11.1.3 Influence of Individual Processes on Sensemaking

As noted in Chapter 2 (p.22), Zucker (1991) concludes that institutional theorists sometimes assume ideologies (institutional systems) are more homogenous for larger sets of people than close inquiry shows to be the case but individuals also have agency and take actions that shape their environments (Giddens, 1979; Gioia & Pitre, 1990). Moreover, the role of the individual is acknowledged from an interpretive approach (Lincoln & Guba, 2000) including more specifically that of sensemaking (Weick, 1995). Therefore, while it was hypothesised that the organisational context would exert the greatest influence on sensemaking, it was further hypothesised (Hypotheses 4-18) that key individual differences would influence the sensemaking processes. A number of meaningful relations between these individual differences variables and front line sensemaking were ascertained and, while in those categories showing greater degrees of variance organisation was the more influential variable, in several categories various individual differences variables were seen to make a larger contribution than the variable organisation. Simultaneously taking into consideration the two dimensions of map content and structure, once again, a variety of individual differences variables exerted additional unique variance upon the process of cluster membership.

To *briefly* summarise: (1) In support of Hypothesis 4, team leaders paid more attention to wider contextual issues and less to parochial issues than their front line agent counterparts, (2) In support of Hypothesis 6, as a participant’s level of education increased so did the attention paid to the category ‘tasks and technology’, (3) In partial support of Hypothesis 8, length of service in the employing call centre made a statistically significant (though small) contribution to the categories ‘health and well-being’ and ‘employment conditions’ as measured by construct salience (by simple construct counts). This variable also played a significant role in terms of cluster membership and, using this indicator of sensemaking, played a slightly larger role than the contextual variable ‘organisation’. The overall pattern of the

aggregated sub-groups essentially showed worse perceived health-related outcomes associated with greater length of service (in line with Deery *et al.*, 2002) and performance and satisfaction (in line with Holman, 2002). (4) Refuting Hypothesis 10, the length of non-call centre work experience played very little role in determining sensemaking of the front line workers in this study. (5) In partial support of Hypothesis 11, age was found to be positively associated with the category 'health and well-being' (medium effect size), and comparison of the younger and older groups of employees consistently revealed relatively more negative outcomes for the latter (as detected by their aggregated cause maps). (6) In terms of gender there were some examples where the imbalance in numbers (which reflected the ratio of men to women working within the industry but resulted in differences in terms of the units available for analysis) may have influenced the results and further research may reveal additional differences. However, in line with the observations of Deery *et al.* (2002) and Kessler & McRae (1981), and refuting Hypothesis 12, no *strong* differences were apparent between the female and male participants in this study, (7) In partial support of Hypothesis 13, those tending towards low centrality of work chose the category 'job design and work characteristics' to be of more importance. In line with Ashforth & Humphrey (1993) and the tentative conclusions of Holman (2002), those for whom work was most central revealed the most positive perceived outcomes (again as depicted in their aggregated cause maps), and (8) In support of Hypothesis 16, work locus of control made statistically significant contributions to the categories 'performance and satisfaction', and 'health and well-being'. The aggregated sub-groups maps showed those tending towards most internal scores consistently reported more positive perceptions in terms of personal and organisational health and well-being, and performance and satisfaction.

As detailed in Chapter 2, examination of research into the management population revealed that relatively few studies have directly tested the assumed relationship between individual external characteristics and cognition, and those that have yielded equivocal results. Markóczy (1997) investigated the validity of using external, individual characteristics as proxy variables for executive cognition and concluded that the case for substitutability was not supported. It is suggested (Hodgkinson, 2001; Walsh, 1995) that the equivocal findings point to a need for further studies in

which the search for correlates of (executive) perceptions and beliefs is widened, in an attempt to better understand the antecedents of (managerial) cognition. While in the current study the individual contributions to variance values were low, the results did ascertain a number of meaningful relations between individual differences variables in this non-management population. This is a clear indication that further work is now needed to follow-up some of the promising lines of enquiry raised regarding these variables.

One particularly promising avenue of further research is follow-up of work locus of control. Hodgkinson (1993) concluded that the group level excessive externality might lead to a climate of cynicism. In the current study, statistically significant differences were revealed across the five organisations, with the profile of those tending towards most externality being exhibited by Distribution. The composite aggregated map for Distribution showed an *overall* depiction of a relatively more negative image than that depicted by the other participating organisations. In his original work on locus of control, Rotter (1966) stated that the studies carried out revealed only the indirect issues of the role of antecedents of internal-external beliefs but that: “clearly it would be expected that unpredictable parents would encourage the development of attitudes of external control” (p.24). Similarly, the organisational setting may also encourage the development of particular work locus of control tendencies. Longitudinal work would be required to test the proposition that organisation is the independent variable and, in doing so, would potentially make a contribution to Weick’s ‘on-going’ property of sensemaking.

Further research should also incorporate additional variables of theoretical and practical interest, though, as pointed out by Parker *et al.* (2001), while a wider approach is required this does not simply mean a longer list of variables but rather an integrative, holistic approach. While closely linked to locus of control, self-efficacy (Bandura, 1986; Wood & Bandura, 1989) more explicitly pertains to a person’s beliefs that they can actually perform adequately in a situation. Following from this, an employee’s sense of capability influences perception and motivation. Future work is also now needed to explore the extent to which differences in self-efficacy yield superior work-related outcomes for the individuals concerned.

Cause Map Structure

In this study it had been hypothesised that several individual differences variables would make a difference to the cause map structural complexity of this non-managerial population. The results (Chapter 9) revealed that only job role (supporting Hypothesis 5) and level of education (supporting Hypothesis 7) made a statistically significant difference to the complexity of the sensemaking process: team leaders and those with higher levels of education producing relatively more complex cause maps. The two closely linked measures of structural complexity employed explained small but meaningful variance. As detailed in Chapter 3, some scholars have argued that a simply structured map would lead to negative consequences (Bartunek *et al.*, 1983; Weick, 1979), but the limited empirical research in the management population has produced equivocal results (see, Calori *et al.*, 1994; Clarke & Mackaness, 2001; Hall, 1976, 1984; Nair, 2001). In their study of 26 Chief Executive Officers, Calori *et al.* (1994) concluded that managers of firms with an international geographic scope were seen to have more complex maps pertaining to the structure of their environment because additional complexity was required. The implications of this in this study are that those occupying a team leader role may have developed more complicated sensemaking mechanisms to cope with the greater amount of information they have access to relative to those occupying a front line agent role. It may also reflect their additional responsibilities (Hodgkinson & Johnson, 1994) and/or the degree of accountability they have (Walsh, 1995), relative to the front line agent. Following from this, it would be expected that the more complex manner of sensemaking to be found in those with higher levels of education would lead to more effective behaviour. However, this is less than straightforward and may be context dependent. Those with a more complex manner of sensemaking may find it difficult to exhibit behaviours appropriate for a routine, repetitive or controlled environment.

This study also looked at a further unexploited map feature, depicting additional elaboration of beliefs, i.e. link strength density for selected nodes, which gives an indication of the strength of relationships within the map (see Langfield-Smith & Wirth, 1992: 114). This depiction of additional elaboration of beliefs revealed that stronger beliefs overall were evident among those for whom work was most central

(supporting Hypothesis 15) and for those exhibiting a tendency towards greater internality in their work locus of control scores (supporting Hypothesis 18).

While we can draw some tentative practical conclusions from this (and policy implications are detailed below), further work is now required here to take these essentially abstract finding through to clear, practical implications for the work organisation. As pointed out by Daniels *et al.* (1994b: 149):

“The drawback of most of these indices of structure is that they are not necessarily assessing content, rather they are assessing cognitive style of the individual (e.g., cognitive complexity). Therefore, such indices sometimes can only be useful for comparing how different managers organize knowledge, rather than what knowledge is being organized”.

This being the case, we need to explore the need for cognition, i.e. the tendency for an individual to engage in and enjoy thinking (Cacioppo & Petty, 1982) and individual’s cognitive style, i.e. the individual differences in processing of information and quality of sensemaking (Hayes & Allinson, 1998; Streufert & Nogami, 1989).

Longitudinal work is also required, not least to disentangle cause and effect, for example to monitor the potential changes in cause map structure associated with increasing responsibility and accountability, and to link into hard behavioural outcome measures. We know that those with higher levels of education build more complex maps, but does this mean recruitment of a graduate is a good or bad practice? Does this complexity invite paralysis by analysis or alternatively does it provide degrees of insight to cut through the detail? The likelihood is that those with more complex maps are less likely to be intuitive, therefore unlikely to cut through the detail (Clarke & Mackaness, 2001) but that they are more likely to be better equipped to survive the pressures of the call centre environment

Summary

As noted in Chapter 5 (p.79), Weick (1995: 88) suggests that, as turbulence increases, sensemaking will be defined more idiosyncratically, i.e. *unless* there are strong, homogenous organisational cultures or binding industry recipes (Spender, 1989). The results of this study have not revealed a binding industry ‘recipe’.

though participant sensemaking is influenced by organisational context. However, the study has also revealed further complexity in the sensemaking process, whereby taking into consideration eight individual differences variables has revealed differences in variance between employees in terms of what is perceived to be of most importance, how these important constructs are linked, and to what effect.

11.2 Methodological Contribution

As noted in Chapter 3, wide-ranging methods have been employed to study sensemaking. However, if this study was to achieve any generalising of the experiences of the non-managerial participants, then the use of a detailed case study approach was essentially problematic, and if larger scale studies were to be used, there was a fundamental need to capture a more complex interplay of issues than is generally possible from the typical survey methods employed. Though their application has largely been restricted to the context of strategic management research, cause maps appeared to be the method of choice, because of their ability to capture complexity and their implied links to action, *if* they could be used on a wider scale than their more usual application enabling comparisons in a range of contexts. Equally compelling as the theoretical insights in this study is the methodology developed.

11.2.1 Research Design and Instrumentation

In this study of sensemaking a method of cause mapping was required that would not be too constraining and thereby potentially meaningless for the study participants. However, to detect homogeneity at the level of the industry required a relatively large data set and it would have been less than helpful to acquire a mass of potentially non-comparable mass of data. While it has been possible to collect 200 cause maps, the effort employed in doing so is not underestimated, i.e. approximately 300 hours in formal interviews (plus many hours renegotiating postponed interviews due to, for example, a flurry of calls which had not been forecast in call centre work schedules, or unexpected absence). However, the method developed (using a variant of the procedure used by Markóczy & Goldberg, 1995) allowed participants to choose from a reasonably wide range of constructs to incorporate into their cause maps. Participants were, in keeping with the literal sensemaking recipe: "How can I know what I mean till I see what I say?" (Weick,

1979: 133), able to immediately validate their individual cause map (incorporating the strengths of cause map visualisation, Eden *et al.*, 1992) thus negating the non-trivial pragmatic issue of negotiation of additional access (Easterby-Smith *et al.*, 1991) and/or spending additional time in interview procedures. Moreover, the method employed avoided post-hoc rationalisation of participant sensemaking, and meant that maps did not require post-hoc coding, which would have also required additional input to ensure inter-coder reliability. This would have been prohibitive in terms of time in this study and it is expected that, even working beyond the capability of a single interviewer, it would have made the present study impractical or alternatively have led to the use of a less than optimal sample size.

Construct Pool Design

Despite the range of choice, participants faced constraints, i.e. the choice was from a researcher-designed framework, and a maximum was imposed on the number of constructs to be used in each individual's cause map. A potential criticism of constraining choice is that this may lead to greater convergence of response (Daniels *et al.*, 2002a). However, this has not led to a convergence of sensemaking in this study. Rather participants showed a wide variability in their choice of 10-13 most important constructs, and elected to choose from the full construct pool.

It is difficult to isolate causal impact on behaviour and outcomes (causation being perceived not proven in the scientific sense) and certainly 55 constructs cannot fully represent all possibilities. Nevertheless, the construct pool allowed the systematic examination of the interactions between a wide range of theoretically and empirically informed issues, as viewed in the minds of front line employees, and took into account a wide range of work characteristics.

The construct list incorporated quite explicit issues that have emerged from the call centre literature. However, it was not restricted solely to those issues, as this strategy may have resulted in a form of 'self-fulfilling prophesy' (Weick, 1979: 162). In this context this would essentially have meant that from the call centre literature certain constructs were expected to be highly salient and, on this basis, the construct list would then have been restricted *solely* to those constructs, people would choose from those this restricted list, and hence we would then have fulfilled

our expectations – work on the front line is as we expected. For example, much of the call centre literature refers to the repetitive nature of, and lack of variety in, the front line role: “Call centres are characterized by a narrow range of occupations and skills, and the work regime in them is intense” (Richardson *et al.*, 2000: 357). Yet, as detailed in Chapter 4, we also know that a variety of skills are required from those on the front line (keyboard skills, customer-related social skills, a flexible attitude, high energy, speed at handling and processing calls, quality of call handling, ability to acquire product knowledge in a short time, and the ability to work in a team). Following from this, and from knowledge gained from the literature on job design, it was viewed that the salient issue for some may, in fact, be one of ‘complex and varied tasks’ and, as seen in Chapter 8, statistically significant findings were observed across the five organisations, with Finance having the highest mean score for this individual construct.

A potentially negative aspect of using such an explicit range is that it may be that participants have chosen one construct to reflect an overall category. For example, a participant may have chosen ‘my stress levels’ or ‘organisational stress levels’ to depict stress and/or health and well-being overall. This *may* be one reason for the overall low level of category salience which, to some extent, masks the fact that more than eighty percent of participants chose *some* issue pertaining to health and well-being as being of importance. Though, contrary to this, this similarly explicit range of constructs in the category management and employee relationships did not appear to have this effect.

11.2.2 Study Sample

It has not been possible to locate within the call centre literature a study comparable to the current research project in terms of the number of/time spent in interviews, ascertaining the view from the front line. The largest government study carried out to-date (HELA, 2001) was based on questionnaire data supplemented by a total of 37 interviews (for the exploratory and main study) of which the majority of those in the main study (15) were with front line agents. Many of the largest academic studies have been carried out primarily by survey methods (Batt, 1999, 2000; Batt & Applebaum, 1995). This includes telephone surveys (Batt, 2002) though, after initial site visits which included some interviews [number not stipulated] with front line

workers, this particular survey was aimed at general managers. The latter example illustrates a particular form of methodological insensitivity found in several academic publications that renders it difficult to establish whether the responses of managers are being treated as synonymous with those of from the front line, ultimately creating difficulties in attempts to make meaningful comparisons across studies.

Single organisation studies (Callaghan & Thompson, 2002; Knights & McCabe, 1998), albeit involving more than one call centre within a single organisation (Holman, 2002), allow the capture of richness of detail but may reflect the organisational context rather than being representative of the wider call centre industry. Similarly, work carried out in one industry, for example the telecommunications sector, (Batt, 1999, 2000, 2002; Batt & Moynihan, 2002; Deery *et al.*, 2002), or one function, for example, insurance (Brown & Maxwell, 2002), may be representative of that sector/function rather than the entire call centre industry. Of course, neither in this study was it possible to carry out a systematic cross-industry study, or to test for functional differences, other than those related to the two roles of front line agent and team leader, and it would extend our confidence if future studies could be extended to incorporate these factors. Nevertheless, a varied sampling frame was chosen to take into account that call centres as a whole cover a wide range of private and public sectors and functions. As a result of the noted definitional problems (Chapter 4), we cannot know exactly how representative the sample is of all UK call centres but key issues were taken into consideration (sector, size, history), which lead to the conclusion that the sample is likely to be reasonably representative.

Despite the large growth of call centre working practices in the public sector (National Audit Office, 2002), there is little evidence of its representation in most call centre research (for exceptions see Baldry *et al.*, 1998; HELA, 2001; Richardson & Marshall, 1999). Of interest, albeit without the official label, call centre working practices had evidently been in practice for some considerable length of time in the participating organisations in this study. However, taking the task environment to be that of the competitive environment and the resource constraints faced by organisations (in line with institution theory and empirical research carried out by, for example, Daniels *et al.*, 2002a), any differences in this sample do not appear to reflect any clear division between the public and private sectors.

Statistically significant differences in choice of important constructs were, in several instances, not to be found between the public and private sector organisations but rather between two private sector organisations (Finance and Outsourcing) vs. one private (Distribution) and the two public sector organisations (see Chapter 8, pp.139-142). Thus, the inclusion of public sector representation does not appear to account for the limited evidence of an institutional effect in this study. Worrall and Cooper (1998: 17) detail that public sector organisations have been “systematically, and perhaps uncritically, adopting the managerial models and approaches developed in the private sector”. Notwithstanding the lack of an institutional effect, the study gained new insights into the public sector, one perhaps being that it is *not* particularly useful to think in terms of clear divisions between the public and private sectors.

One factor of note may be that of geographical proximity of the sample. Attention has been paid to call centre research on a global basis, for example in the United States (Batt, 1999, 2000, 2002), Australia (Deery *et al.*, 2002; Wallace *et al.*, 2000), and in non-UK comparative studies (Frenkel *et al.*, 1999; Korczynski, Shire, Frenkel & Tam, 1996). One of the largest research groups identified is that of Taylor, Bain and colleagues (see, for example, Bain *et al.*, 2002; Taylor & Bain, 1997, 1999, 2001a, 2001b; Taylor *et al.*, 2002, 2003), whom have carried out work in Scotland for a variety of bodies, including Scottish Enterprise and the Economic and Social Research Council’s Future of Work Programme. Contrary to this, all the call centres in this study were located in the Yorkshire Region of the UK. This helped overcome the problems that might have occurred if systematic regional differences had been introduced into the sample but, as a result, the study was then concentrated in an area of relatively low unemployment, where, for example, overall people have relatively more employment opportunities than those participants featuring in the work of Taylor, Bain and colleagues in high unemployment localities in Scotland. However, while the difference in geographical proximity might have accounted for some of the differences between this and other studies, it does not account for the differences *within* the study, which arguably should have been diminished rather than exaggerated by their similar locations.

The overall profile of the study participants appears to be somewhat different from the typical call centre employee. For example, attrition rates of up to 80 percent per annum are reported in the call centre industry (Incomes Data Services, 2000). However, in the current sample only 20 percent of the sample had worked in any other call centre, yet it is reported that call centres in Yorkshire are *more* likely than average to report a problem with attrition, and the mean length of service in the employing call centre was more than 5 (5.17) years. However, Incomes Data Services state that attrition rates are very variable and statistically significant differences were found across the 5 organisations in this study. Additionally, as pointed out by Bain *et al.* (2002), the concept of a 'typical' call centre is difficult to sustain. Similarly, Taylor *et al.* (2002) agree that call centre workers no longer fit the earlier stereotypical front line image. This is likely to be compounded by the scarcity of factual information available regarding the call centre employee profile (linking into definitional problems, and a general lack of reporting of individual characteristics within the academic literature).

Summary

As noted earlier, Huff and Fletcher (1990) concluded that mapping is likely to be more labour-intensive and time-consuming than other research methods, and Nair (2001) suggests that it is perhaps because of the tedium of working with larger samples that researchers have continued to conduct small sample size studies. Clearly there are times when small-scale studies, often exploratory in nature and operating in unfamiliar areas, are invaluable, but to enable the possibility of an institutional effect to be detected at the industry level (as in this study context) requires a relatively large sample size. However, other large-scale studies of the call centre environment have used survey methods that give more limited insight. The larger numbers in this study enabled us to look for an industry effect but the use of cause maps have allowed the capture of a more insightful, richer depiction of the call centre environment than that which is possible by any of the various forms of surveys possible. The relatively large non-managerial representation in the study sample compared to other studies, and the employment of a varied sampling frame, which is thought to be a reasonable representation of the contemporary call centre environment, means that considerably more confidence can be placed on the study findings.

The “tedium” (Nair, 2001) associated with cause map collection is more often associated with its effect on the researcher but, of course, this also applies to participants. However, as noted in Chapter 7 (pp.128-129), the method of data elicitation developed was viewed as interesting or indeed “fun” to study participants, while also permitting a substantial amount of information to be collected within a timeframe that was deemed acceptable to managers.

11.3 Implications for Policy

As noted in Chapter 5 (p.67), from a practitioner perspective, Garrett *et al.* (2002) believe the message being communicated regarding the call centre industry is that it is essentially a ‘sweatshop’, established in areas of high unemployment, employing people with low skills, offering little in the way of training and advancement, and suffering from high employee turnover. Similarly, in the academic literature, Belt *et al.* (2000) spoke of the ‘bad image’ attached to the job. From one perspective, it could be seen as a positive implication that the participants in this study did not reveal high levels of consensus, as this has meant that some of the most negative issues that are alleged to be of major concern in the call centre environment, in particular those pertaining to repetitiveness, routine, and control, were not of high importance for most of the front line workers in this study. Contrary to this, the fact that less than 60 percent of these front line workers, who are essentially representatives of the call centre industry to the external environment, reported ‘customer satisfaction’ to be one of their 10-13 most important constructs has rather more negative implications. Perhaps of more concern, are the detrimental implications that some participants perceived to be attached to the label ‘call centre’. Moreover, the nature of the industry is questioned if it not recognised by its front line workers. While, as noted above, we do not know if any industry effect would, in fact, be detected within the call centre management population, it is thought likely that this is more probable because of the aforementioned associations, journals, conferences and general networking opportunities. These types of activities would require broadening to encompass those in non-managerial positions if front line employees are to recognise themselves to be members of an environment wider than their employing organisation.

According to Weick, reality within organisations is relative. This research has revealed a variety of differences in terms of what is important to the front line employee. Differences were detected between front line agents and team leaders, and it is likely that these differences will be larger between employees and management with these multiple realities potentially leading to fundamental misconceptions between the two parties. This has implications for wide-ranging issues as job design, organisational structure and design, reward systems, and three particularly pertinent issues which have emerged from the study results: (1) management and employee relationships, (2) performance management, and (3) personnel selection.

11.3.1 Management and Employee Relationships

From the general HRM literature (see, for example, Bratton & Gold, 1999) it is known that low individualism management style is more likely to be found in firms operating in a market where low unit cost is important, and we also know from the specific call centre literature that the need to reduce costs is a primary motivator behind the move to call centre work organisation (Anton, 2000). Yet the most cited category for the front line workers in this study was that of 'Management and employee relationships'. No significant differences were seen across the organisations in terms of the salience of this category; neither did any of the individual differences variables considered in this study make any unique contribution.

In line with research in the general work context (Warr, 1999; Winnubst & Schabracq, 1996), and more explicit call centre studies that have revealed the importance of supervisory style on employee attitudes and behaviour (Deery *et al.* 2002; Frenkel *et al.*, 1998, 1999) and on worker well-being (HELA, 2001; Holman, 2002), the level of support received from team leaders and supervisors was seen to be of particular importance to 56 percent of the participants in this study. Management support and management understanding were also salient issues, as was employee attitudes, when measured in terms of construct influence. The individual construct in this category that was not cited highly in any form was that of oppressive management (Lamb, 1999).

In terms of this specific study population, further work would be required to disentangle the varied internal characteristics which may have accounted for the fact that of the five participating organisations Distribution depicted the worse perceived outcomes in terms of management and employee relationships (Chapter 8. pp.171-172). However, the implications of this finding are clearly more generic. As the style of management is a salient issue for front line workers, research is now needed to identify what employees believe to be effective and motivational team leadership and management style. The differences revealed in variance between the employees in this study, and between team leader and front line agent, are likely to be even larger in the two parties of employee and manager. This has massive implications for how we conceptualise and managers' expectations of motivations need to be matched with those at the level of the front line, otherwise risking potentially enormous misunderstanding. Moreover, it is on the basis of sensemaking that individuals act and will therefore shape, or influence, their working context via their subsequent performance or by their decisions to stay or leave the organisation. This is not inconsistent with process theories of motivation referred to in Chapter 2, such as equity theory (Adams, 1963), expectancy theory (Vroom, 1964), and goal-setting theory (Locke, 1968), and the problems associated with assigning actions to a single explanation, and links directly into the issue of performance measurement.

11.3.2 Performance Measurement

The issue of performance measure requires further academic research but is also very much an issue that requires practitioner attention, both aspects are complementary and, as such, discussed together at this point. Weick (1983) suggests the need for researchers to redefine and refine the concept of 'environment' in terms of objectively measured attributes and how subjectivity and objectivity are blended. Pertaining to Weick's sensemaking property 'plausibility rather than accuracy' (filtered information almost certainly being less accurate but more understandable), the results from this study reveal the likelihood of considerable 'noise' (sensemaking) potentially distorting the communications between manager and employee. As seen in this research, people's sensemaking is shaped by the organisation and a variety of individual factors. The first important step taken in this study has been to identify some of the most influential issues. However, and as pointed out by Jones and Fletcher (1996), in the context of job control, while

individual perceptions are clearly an important issue in their own right, if they are not valid representations of objective job characteristics, redesigning jobs on the basis of these perceptions will not have the desired positive effect on health or other outcomes.

Drawing upon earlier research (Daniels *et al.*, 2002b) it has been found that mental models have an influence on subsequent indices of psychological well-being, performance and physical symptoms. However, there is a need to: (1) further validate participant cause maps, and (2) clarify the objective expectations regarding performance. As noted in Chapter 7, in each of the participating organisations there were a wide variety of perceptions on what were supposedly the official and objective facts and figures regarding performance. This included basic facts, for example what was expected in terms of performance, either daily or in terms of the requirements for formal appraisals and promotion. In Chapter 5, it was detailed that others (HELA, 2001) reported that front line agents were found to believe targets were too strongly influenced by team leader subjective judgements, which not only further increased rivalry between members of the same team and but also between different teams. As detailed in Chapter 7, the results from this study revealed team leader awareness of the problematic nature of defining any individual agent's performance in a fair and consistent manner. While answering calls promptly to all customers might sometimes be seen as being the criterion on which performance was judged, as opposed to providing an excellent service to some and leaving other customers to wait, different circumstances would lead to emphasis being placed on different aspects of performance. Hockey (2002) points out that most human performance assessment is based on the measurement of a limited range of actions in response to quite specific task goals. However, Hockey states that a concern with overall system efficiency (rather than with single task effectiveness) will allow a better understanding of performance changes in relation to broader goals and priorities of human behaviour (and the implications of these for the management of both performance and well-being). In either event, to begin to untangle these issues, research is likely to entail working at the level of the organisation, at least in the first instance, clarifying expectations. Without such objective criteria, at best on the lines suggested by Hockey but at least clearly defined, measures of performance are likely

to be meaningless, and worse as they are likely to be misleading and to have an adverse impact on employee motivation.

11.3.3 Personnel Selection

As noted above and at several points throughout this thesis, an individual's sensemaking will inform their decision making in terms of whether to leave the organisation or what degree of effort and enthusiasm they will invest – in their work and/or the building of the work community - hence helping to shape the internal organisational environment. What the observations in this study seem to reflect, to the extent that cause maps can be linked to action, is that the chances are that those with strong internal work locus of control tendencies, who have expressed stronger beliefs than their more external counterparts, will, having perceived their environment more favourably, go on to shape (enact) their environment in a more positive manner. This likelihood is supported by the known benefits of perceptions of control in general (Baum & Singer, 1982; Dépret & Fiske, 1993). Moreover, previous validation studies that have shown locus of control to be related to a number of organisationally relevant variables. For example, internals tend to be more satisfied with their jobs than externals, see their supervisors as higher on consideration and initiating structure, report less role stress, perceive more autonomy and control and enjoy longer job tenure (Spector, 1982). Taking all these factors into account this variable is clearly worthy of consideration as part of the front line selection procedure.

The supporting theory and empirical evidence regarding centrality of work is not as clear, with Leidner (1996) stating that it is those employees most committed to service orientation who will experience the greatest frustration when management puts efficiency ahead of service. However, this was not evidenced in this study, which seem to reflect the views of (Ashforth & Humphrey, 1993) who argue that the greater the identification with the role the stronger the positive effects. Taking into account these arguments and the specific study findings, the likelihood is that those for whom work is more central, who have expressed stronger beliefs than their more disinterested counterparts, having perceived their environment more favourably, will also go on to shape their environment in an essentially more positive manner.

11.4 Implications for Future Research

As detailed throughout this discussion, the results of this study have provided some wide implications for future research, including the need for sensitivity to context while engaging in larger scale survey work. A further implication is that, if we are to better understand the formal patterns of institutionalism at work across the different groups, future work (which may require research into a different, less flatly structured industry) is required to enable the incorporation of the formal views of management, and to examine more systematically for patterns of similarities and differences across managers and non-managers. Other reasonable and specific next steps to be taken to forward our knowledge in several areas have also been detailed, regarding, for example, the individual differences variables work locus of control, self-efficacy, the need for cognition and cognitive style. However, two additional key issues are raised at this point: (1) the need to extend this study to longitudinal work, which is related to the ‘ongoing’ property of the sensemaking process, and (2) the need for appropriate analytical tools, which is particularly pertinent in the context of relatively large scale studies.

11.4.1 Extending to Longitudinal Research

Weber and Manning (2001) depict cause maps as portraying a comprehensive “snapshot” of sensemaking but cause maps are thought to have some predictive ability. After checking the differences between the maps of individuals over five and eight week periods, Markóczy and Goldberg (1995) were satisfied with the external reliability of their cause mapping technique (of which the present study was a variant). Other empirical studies have also supported the predictive value (Bonham & Shapiro, 1976) and enduring stability of mental models (Hodgkinson, 1997b; Lindell *et al.*, 1998). Contrary to this, Isabella (1990) demonstrated empirically that environmental changes were reflected in cognitive change.

There is also a vast literature on the role of emotion and cognition (see, for example, Power & Dalgleish, 1997) and, using diaries to capture developing cognitive processes, Daniels *et al.* (2002b) found that poor mood meant mental models with negative connotations were recalled involuntarily and information processing directed towards negative information in the environment (and similar implications for good mood). These authors also found that mental models of demands on well-

being influenced daily well-being after work. In the present study, pragmatic issues of call centre workloads would have made it unrealistic to ask for interviews to be scheduled to fit in with a particular time in an individual's timetable. However, longitudinal work is now required to test the implications of mood vs. enduring characteristics.

11.4.2 Development of Analytical Tools

It is not always possible to work with large samples. Neither is it always desirable. We have seen the influence of the organisational context, clearly work is required at this level, and at times this will involve small numbers of participants. However, it is not satisfactory to speak of an industry effect on the basis of such samples and if we are to detect industry effects then larger scale studies are required. The study methods developed made it possible to elicit maps on a relatively large scale, and in a structured manner, which made it possible to use a range of descriptive and inferential statistics in order to test the key study hypotheses, as seen in Chapter 8 (construct salience) and Chapter 9 (cause map structure). Distance ratio measurements (as employed in Chapter 10) proved to be useful as one further measure of the sensemaking process, providing additional support to the pattern of results gained by earlier measures. However, these essentially captured sensemaking in an 'abstract' manner and there were many caveats as to how these could be employed, ultimately meaning that a considerable degree of subjectivity was required in any subsequent interpretation.

It has been concluded (Axelrod, 1976; Ford & Hegarty, 1984) that cause maps have (as the ultimate dependent variable) some form of utility. It was thought that cause map data might also enable us to better understand the associations between various practices and issues and the links to outcomes, for example organisational and individual performance and health and well-being, as perceived by these non-managerial workers. Again, cause maps elicitation procedures were helpful, and the use of indegree and outdegree values highlight the difficulties of assessing the importance of any construct within a system, without an understanding of its links to other constructs (Axelrod, 1976; Ford & Hegarty, 1984; Harary *et al.*, 1965; Salancik & Porac, 1986).

A further study expectation was that evidence of considerable variation in the way in which working conditions were represented in the cause maps of participants would be found, with some individuals (or groups of individuals) construing their worlds more favourably than others. While it was possible to formally test whether participants paid attention to, for example, issues of health and well-being, less success was achieved in capturing the perceptions of outcomes beyond this in a practical and meaningful manner. The possibilities of cause map aggregation (Bougon *et al.*, 1977; Sitkin, 2001; Voyer & Faulkner, 1989; Walsh, 1995) were explored in Chapter 8. As had been suggested, they did permit the identification of mean sub-group response, which helped to show patterns of sensemaking. These appeared sensible and, where information was available, to be in line with both theory and empirical evidence. However, the large standard deviations also revealed that they were clearly unrepresentative of many participants within each sub-group.

While we may be able to investigate the idiosyncrasies of individual (Cossette & Audet, 1992) or small numbers (Clarke & Mackaness, 2001), as noted by, and in support of, Daniels *et al.* (1994b: 161) it would appear that the area of quantitative comparison of cognitive maps is in its “infancy”. The capture of cause maps on this relatively large scale employed in the current study magnified the problems of analysis, particularly in terms of map comparisons, across different groups, in relation to perception of practical outcomes. While Daniels *et al.* (1994b) further note that structures imposed by raters may be capable of detecting patterns in the data that mathematical techniques cannot, they further point to the practical issues concerning the degree of cause map complexity which raters are capable of comparing. Referring back to Figure 9.2 (p.181), which illustrates a complex cause map structure, it is possible to directly observe some of the difficulties involved in endeavouring to conclude how favourably a participant construes their world. Assessing this map in comparison to a further 199 cause maps (as in this study) is, given the status of the available tools of analysis, not feasible.

In Chapter 3, the issue of circular links or ‘loops’ were raised (Axelrod, 1976; Voyer & Faulkner, 1989; Weick, 1979). Weick (1979: 76-81), and Stubbart and Ramaprasad (1990: 267), raise some of the main issues, in terms of cognitive maps generally (i.e. rather than specifically to cause maps). As constructs and linkages

are perceptual, it is not inconceivable that each construct could be directly linked to every other construct, creating a very large number of loops, even in a cognitive map with a few constructs. In any complex cognitive map one can find a large number of circular linkages. Are all these loops? If we look for loops within the map, and find more than one [clearly likely] how are we to assess the importance of each of these loops? Are all loops to be seen as equal? In other words, a single higher order loop can be a much more potent locus of change than a multitude of lower order loops. are all loops to be considered at the same level? From this then, how are we to assess whether a deviation-amplifying loop (or a deviation-counteracting loop) is a vicious or virtuous circle? For example, the loop that spirals upwards causing increasing stress, is very different from the one that, as it spirals, leads to increasing team leader support.

Cognitive mapping employs some of the mathematical ideas of graph theory (Axelrod, 1976; Harary *et al.*, 1965). Clearly this has developed in the past thirty years (Balakrishnan & Ranganathan, 2000), and it seems opportune to revisit this. Lots of difficult researcher decisions would be required regarding the above questions of prioritisation but, and while clearly out of the scope of this PhD project, the potential of an appropriate algorithm *may* help to address this issue. What is known is that we require better tools and techniques of analysis if we are to be able to interpret the complexity of cause maps to full advantage, thus enabling us to fully exploit their utility. We now need analytical tools that will allow us to state with greater levels of confidence, how these are reflected in terms of how favourably an individual (or group of individuals) then construe(s) their world. This is an important step because, and as noted in Chapter 1, the broad goal of a cognitive approach is to identify how people think, how they understand their environments and how these mental processes might account for different patterns of behaviour which are ultimately linked into tangible and measurable outcomes.

11.5 Concluding Comments

The fundamental aim of this study has been to engage in, and make a contribution to, the sensemaking concept. It has responded to the challenge to extend the utility of this concept to a non-managerial population by productively applying it in the United Kingdom call centre context where it focused upon the sensemaking

processes of the front line worker. Research to-date has verified that knowing the 'facts' does not determine our sensemaking and perceptions and the cognitive problem is to find out what else influences their shape. This has been achieved on a relatively large-scale whereby a systematic examination of both context and several individual differences variables have been carried out in order to assess their contributions to the sensemaking process. In doing so the study has, as planned, contributed to our theoretical and empirical knowledge of sensemaking, and related concepts, and developed the methodological knowledge to enable this to be achieved. The relevance of this study can be judged not only on the questions answered but also on the promising lines of inquiry raised, each of which now needs to be taken forward in future research.

APPENDIX 1

Pilot study – summary

	Requirements	Methods and Conclusions
Stage One	(1) For the researcher to become familiar with the particular vocabulary of the call centre environment, and (2) to gain some initial insight into experience of call centre working from a variety of perspectives.	This involved opportunistic sampling of a variety of personnel with (current or past) call centre experience: students, colleagues, and informal contacts. Data was captured in the form of unstructured individual and group interviews.
Stage Two	(3) For the researcher to gain initial primary insight into the call centre environment.	This was gained via access to one large call centre in the financial sector. Activities formally authorised and undertaken included: (a) shadowing one team leader, (b) access to other team leaders and call centre front line agents, (c) joining call centre front line agents, listening to calls, (d) speaking to those responsible for recruitment, training and development, and health and safety, (e) allocated time with the call centre manager discussing issues from her personal perspective, and (f) obtaining objective material in the form of organisational structure, job descriptions, methods of assessing performance, recruitment and selection procedures.
Stage Three	<p>(4) For a decision to be made as to the optimum method of cause map data collection given three main requirements (i) to collect data that was meaningful to participants, (ii) to collect data that was amenable to comparison, and (iii) to devise a method of collection that was practically possible – particularly given the time constraints of the call centre environment.</p> <p>In other words, the aim was to achieve an acceptable balance between some degree of control over the data collection process without the imposition of undue constraints upon participant choice, a vital requisite if high quality data was to be amassed.</p>	<p>a) Initial meetings were arranged off-site with five frontline call centre agents from the pilot organisation. The meetings were audio-taped. The first map, drawn freehand and in an unstructured manner, took in excess of four hours to construct. The following four maps were drawn in 1.25 – 2.50 hours. The view that mapping directly in the presence of the interviewee achieves benefits of ownership, clarity of findings and direct validation of the map by the interviewee was fully appreciated following this exercise. These first interviewees listed <i>many</i> issues of salience – mirroring the call centre literature, and supporting the consideration of adjacent literatures. The potential problematic issues of comparability and timing were very apparent. A further issue was consideration of the researcher's sensemaking</p>

		<p>evolving over time – potentially leading to bias in the procedure.</p> <p>b) A group meeting was arranged with a further five call centre workers where various degrees of interview structure were employed with each participant, which was followed by focus group discussion. Conclusions: a pool of constructs was worthy of further consideration but participants also very much enjoyed visualising their maps (in keeping with the theory of sensemaking). The software package ‘Decision Explorer’ permitted this activity but issues of comparability (or rather potential non-comparability) were apparent.</p> <p>Once again, returning to opportunistic sampling, participants were involved in testing pairwise comparisons. Despite much effort, it was clearly impossible to change pairwise drawn list into graphical format within acceptable interview time scales.</p>
<p>Stage 4/Stage 5 carried out in parallel</p>	<p>(5) For computer software to be developed and for (6) a construct list to be constructed.</p>	<p>Extensive piloting was carried out for the particular purposes of this thesis to ensure: the proposed methods were engaging, ease of this essentially rigorous procedure, optimum configuration of screen headings, and feasibility in terms of time constraints, which eventually led to the specific elicitation procedure detailed in Chapter 7.</p> <p>An extensive literature review (see Chapter 5) and pilot participant discussion led to the refined/ finalised language form used in the construct list.</p>

APPENDIX 2

Study questionnaire

ORG05-PT30	Front line agent/Team leader	Female/Male
<p>1. CONTRACT TYPE</p> <p>Full time and permanent</p> <p>Full time and fixed term</p> <p>Part time and permanent</p> <p>Part time and fixed term</p> <p>Agency</p> <p><i>Please circle your contract type</i></p>	<p>2. TOTAL LENGTH OF SERVICE IN THIS CALL CENTRE</p>	<p>3. IF YOU HAVE HELD OTHER POSITIONS IN THIS CALL CENTRE PLEASE INDICATE:</p> <p>Position(s) held</p> <p>Length of service</p>
<p>4. PREVIOUS CALL CENTRE EMPLOYMENT</p> <p>Total years worked</p> <p>Main employment</p> <p><i>Please indicate your main type of employment occupation (front line agent, supervisor or management) and area (for example, banking, retailing, NHS).</i></p>	<p>5. PREVIOUS OTHER EMPLOYMENT</p> <p>Total years worked</p> <p>Main employment</p> <p><i>Please indicate your main employment (occupation and area).</i></p>	<p>6. HIGHEST QUALIFICATION</p> <p>None</p> <p>GCSE or equivalent</p> <p>A levels or equivalent</p> <p>Degree or equivalent</p> <p>Postgraduate or equivalent</p> <p><i>Please circle the level which most closely matches your own. Equivalent includes <u>all</u> professional or vocational qualifications you feel are appropriate.</i></p>
<p>7. MAIN REASON FOR CALL CENTRE EMPLOYMENT</p> <p>Career decision</p> <p>Convenience</p> <p>Levels of pay</p> <p>Lack of choice</p> <p>Other (<i>please specify</i>)</p> <p><i>Please circle as appropriate.</i></p>	<p>8. CAREER ASPIRATIONS</p> <p>Same or related industry and same occupation</p> <p>Different industry but same occupation</p> <p>Same or related industry but not in the call centre</p> <p>Same or related industry move to call centre management (or senior management)</p> <p>Different industry and move to call centre management (or senior management)</p> <p>Different industry and different occupation</p> <p>Other (<i>please specify</i>)</p>	<p>9. AGE</p> <hr/> <p>10. HOME CIRCUMSTANCES</p> <p>Single without dependents</p> <p>Single with dependents</p> <p>Non-single without dependents</p> <p>Non-single with dependents</p> <p><i>Please circle the one (broad) category which most closely describes your home circumstances.</i></p>

11. For each question below, please circle the one response which most closely matches your own

1. I live to work

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
very much	moderately	slightly	slightly	moderately	very much

2. If I had enough money I would not work

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
very much	moderately	slightly	slightly	moderately	very much

3. Most of my personal goals are work related

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
very much	moderately	slightly	slightly	moderately	very much

4. My leisure is more important to me than my work

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
very much	moderately	slightly	slightly	moderately	very much

5. It is hard to see where work ends and leisure begins

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
very much	moderately	slightly	slightly	moderately	very much

6. I work to live

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
very much	moderately	slightly	slightly	moderately	very much

12. For each question below, please circle the one response which most closely matches your own

1. A job is what you make of it

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
very much	moderately	slightly	slightly	moderately	very much

2. On most jobs, people can pretty much accomplish whatever they set out to accomplish

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
very much	moderately	slightly	slightly	moderately	very much

3. If you know what you want out of a job, you can find a job that gives it to you

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
very much	moderately	slightly	slightly	moderately	very much

4. If employees are unhappy with a decision made by their boss, they should do something about it

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
very much	moderately	slightly	slightly	moderately	very much

5. Getting the job you want is mostly a matter of luck

1	2	3	4	5	6
disagree	disagree	disagree	agree	agree	agree
very much	moderately	slightly	slightly	moderately	very much

- 6. Making money is primarily a matter of good fortune**
- | | | | | | |
|-----------|------------|----------|----------|------------|-----------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| disagree | disagree | disagree | agree | agree | agree |
| very much | moderately | slightly | slightly | moderately | very much |
- 7. Most people are capable of doing their jobs if they make the effort**
- | | | | | | |
|-----------|------------|----------|----------|------------|-----------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| disagree | disagree | disagree | agree | agree | agree |
| very much | moderately | slightly | slightly | moderately | very much |
- 8. In order to get a really good job you need to have a family member or friends in high places**
- | | | | | | |
|-----------|------------|----------|----------|------------|-----------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| disagree | disagree | disagree | agree | agree | agree |
| very much | moderately | slightly | slightly | moderately | very much |
- 9. Promotions are usually a matter of good fortune**
- | | | | | | |
|-----------|------------|----------|----------|------------|-----------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| disagree | disagree | disagree | agree | agree | agree |
| very much | moderately | slightly | slightly | moderately | very much |
- 10. When it comes to landing a really good job, who you know is more important than what you know**
- | | | | | | |
|-----------|------------|----------|----------|------------|-----------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| disagree | disagree | disagree | agree | agree | agree |
| very much | moderately | slightly | slightly | moderately | very much |
- 11. Promotions are given to employees who perform well on the job**
- | | | | | | |
|-----------|------------|----------|----------|------------|-----------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| disagree | disagree | disagree | agree | agree | agree |
| very much | moderately | slightly | slightly | moderately | very much |
- 12. To make a lot of money you have to know the right people**
- | | | | | | |
|-----------|------------|----------|----------|------------|-----------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| disagree | disagree | disagree | agree | agree | agree |
| very much | moderately | slightly | slightly | moderately | very much |
- 13. It takes a lot of luck to be an outstanding employee on most jobs**
- | | | | | | |
|-----------|------------|----------|----------|------------|-----------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| disagree | disagree | disagree | agree | agree | agree |
| very much | moderately | slightly | slightly | moderately | very much |
- 14. People who perform well generally get rewarded for it**
- | | | | | | |
|-----------|------------|----------|----------|------------|-----------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| disagree | disagree | disagree | agree | agree | agree |
| very much | moderately | slightly | slightly | moderately | very much |
- 15. Most employees have more influence on their supervisors than they think they do**
- | | | | | | |
|-----------|------------|----------|----------|------------|-----------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| disagree | disagree | disagree | agree | agree | agree |
| very much | moderately | slightly | slightly | moderately | very much |
- 16. The main difference between people who make a lot of money and people who make a little money is luck**
- | | | | | | |
|-----------|------------|----------|----------|------------|-----------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| disagree | disagree | disagree | agree | agree | agree |
| very much | moderately | slightly | slightly | moderately | very much |

APPENDIX 3

Participant information sheet



INFORMATION SHEET

CALL/CONTACT CENTRE ENVIRONMENTS - A SUBJECTIVE PERSPECTIVE

I am sponsored by the United Kingdom's Economic and Social Research Council, to carry out my doctoral studies research into the experiences of those working in the call/contact centre sector. The research is subject to ethical guidelines set out by the British Psychological Society and steps will be taken to preserve the anonymity of all participants and participating organisations.

I am approaching you as a potential research participant on the grounds of your employment within this sector and will be speaking to a range of staff: front line operatives; line managers/team leaders/supervisors; managers, in order to obtain their opinions on a variety of issues.

Participation in the study will involve a maximum of 1.5 hours. During this time, participants will be given a list of items/issues. Anything felt to be unimportant will be disregarded, the idea being to devise a list consisting of only those items which are felt to be important to each participant. We will then go through a series of steps, inputting onto the computer, whereby prompts will be given asking participants to think about the relationships between their chosen list of issues. In other words, does A affect B? Is this an increase or decrease? Is it strong, moderate or slight? Once we have finished this part of the interview, participants will be encouraged to tell me if there are any other important issues which have not been covered and/or to expand more fully on those that have.

The study also requires some supplementary participant background information (basic facts and opinions) in the form of a brief questionnaire.

There will be no alignment to any parties involved in this research but I will present managers with as much information as possible (given the confidential nature of each participant's involvement in this study), which may prove to be helpful to them in making any future decisions pertaining to call/contact centre management and conditions. My final report will be in the form of a PhD thesis but it is envisaged that some of this work from this study will be published, in academic and practitioner journals, or other media where it may be of use. As said, this will, of course, be in a form protecting the anonymity of any participating organisation and any study participant.

I hope the above summary gives you enough information about the study to allow you to make an informed decision about participation. However, if you have any questions or would like to discuss anything with me prior to deciding please do not hesitate to let me know.

Gail P Clarkson
BA(Hons), MA, LicCIPD

E-mail g.clarkson@leeds.ac.uk

APPENDIX 4

Participant consent form

Consent Form

CALL/CONTACT CENTRE ENVIRONMENTS - A SUBJECTIVE PERSPECTIVE

This research is subject to ethical guidelines set out by the British Psychological Society.

These guidelines include principles such as obtaining your informed consent before research starts, notifying you of your right to withdraw, and protection of your anonymity.

Have you had the opportunity to ask questions and discuss the study to your satisfaction?	YES/NO
Do you understand that you are free to end the interview at any time or to choose not to answer a question without giving a reason why?	YES/NO
Do you agree to take part in this study?	YES/NO
Do you grant permission for extracts from the interview, and any other data produced during this interview to be used in reports of the research on the understanding that your anonymity will be maintained?	YES/NO

SIGNED

NAME
(IN BLOCK LETTERS)

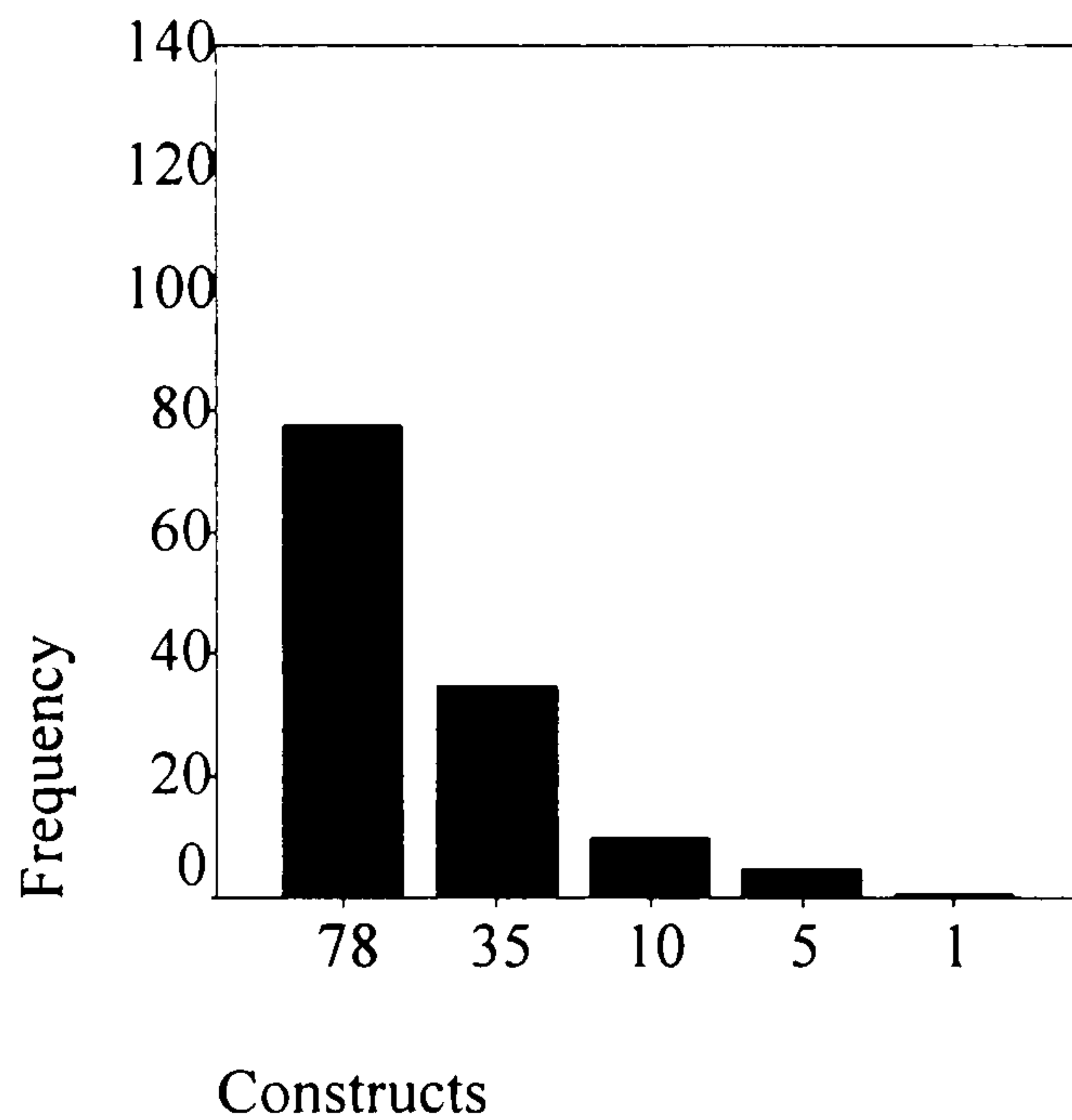
DATE

APPENDIX 5

Full list of chosen constructs

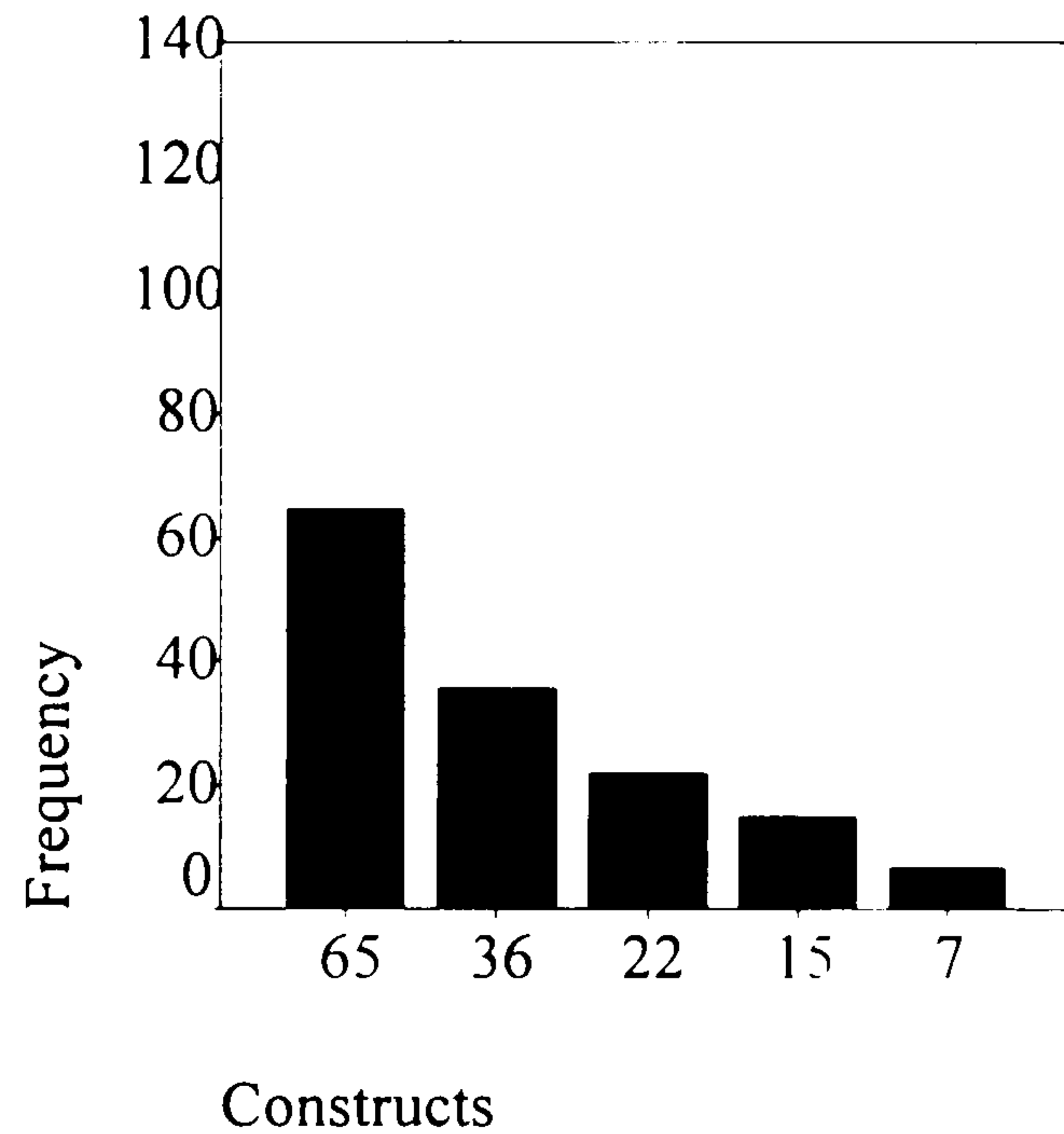
Frequencies of individual construct choice within each of the eleven main categories are depicted in Figures A-K.

Figure A - Economic and Political Drivers (CCAT.01)



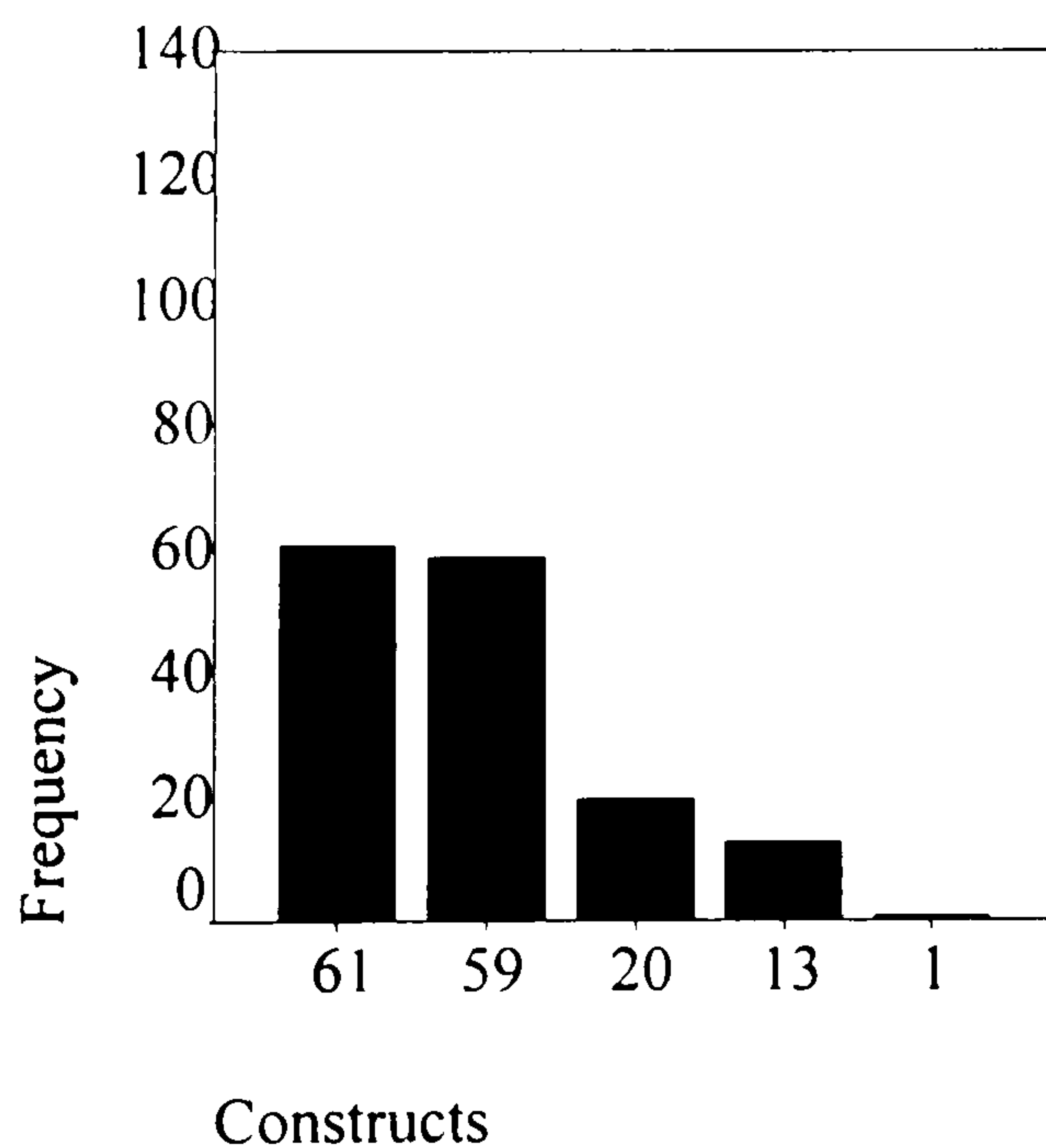
78 = Need for both quality and quantity
 35 = Increasing customer demands
 10 = Growth in market competition
 5 = Government initiatives
 1 = Need to reduce labour costs

Figure B - Physical Environment/ Equipment (CCAT.02)



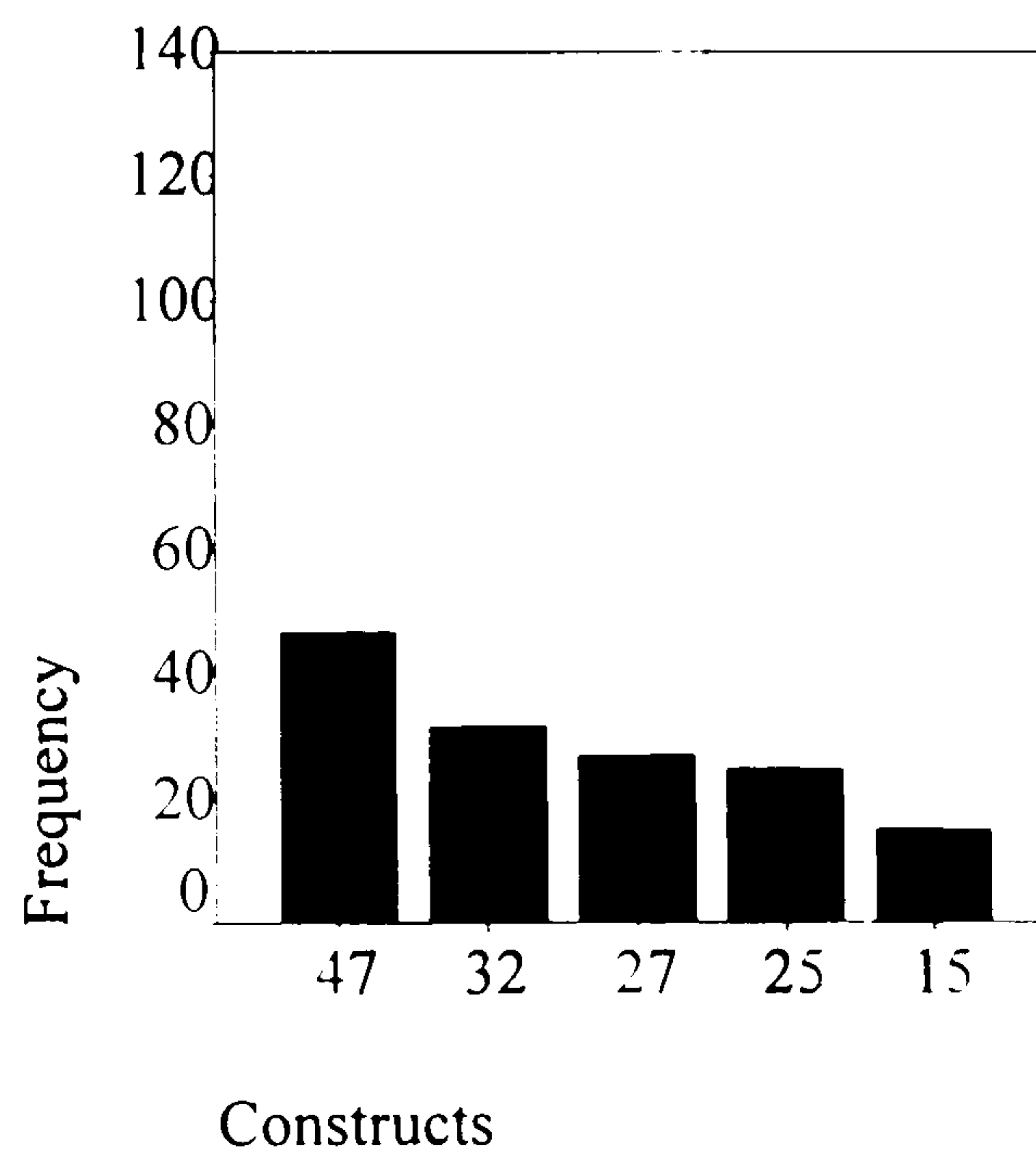
65 = Air quality, temp and lighting
 36 = Noise levels
 22 = Work station and seating design
 15 = Computer software design
 7 = Open office layout

Figure C - Organisational Structure/ Design (CCAT.03)



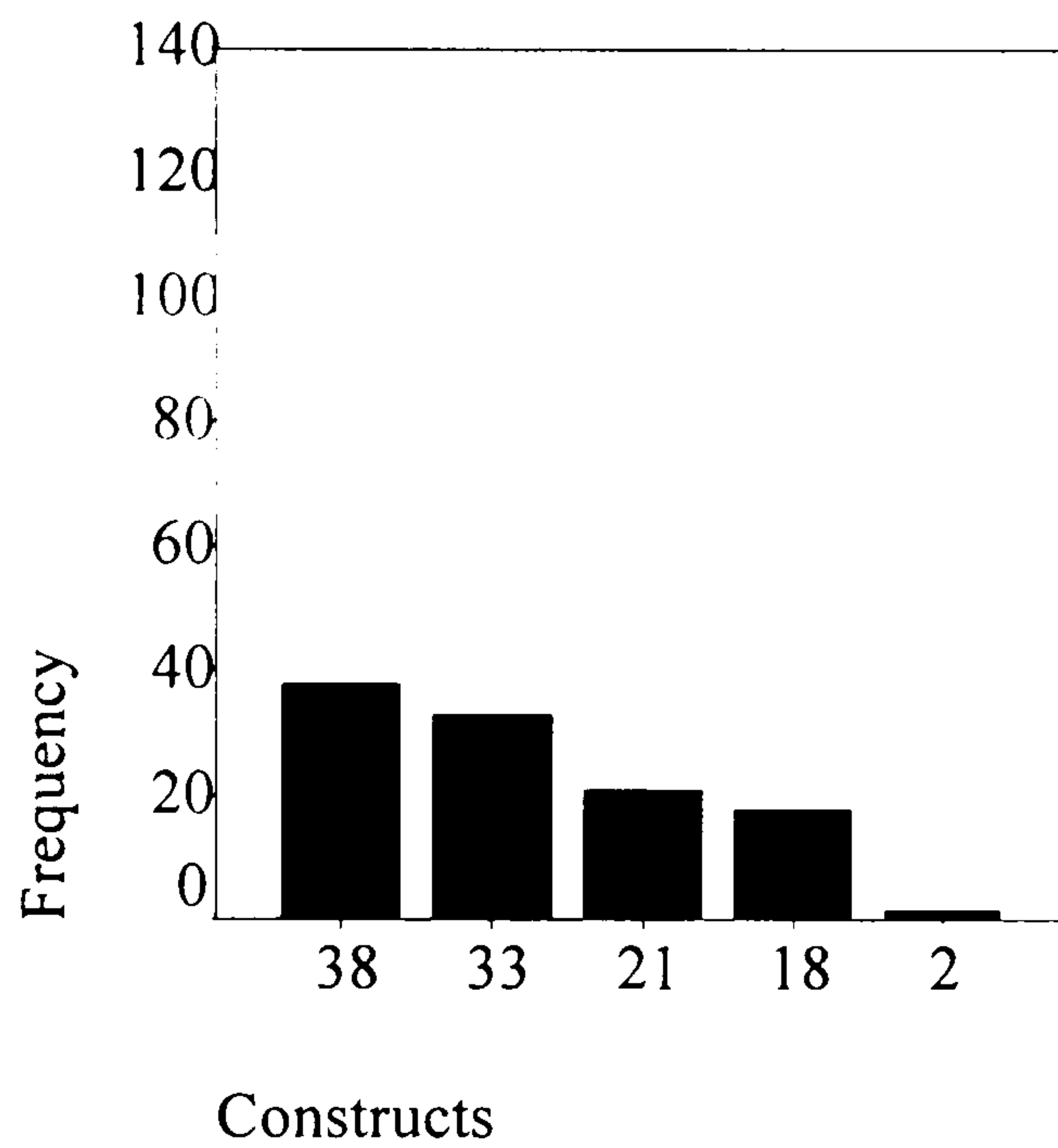
61 = Opportunities for interaction
 59 = Targets
 20 = Team competition
 13 = Organisation of work into teams
 1 = Flat structures (few levels)

Figure D - Tasks and Technology (CCAT.04)



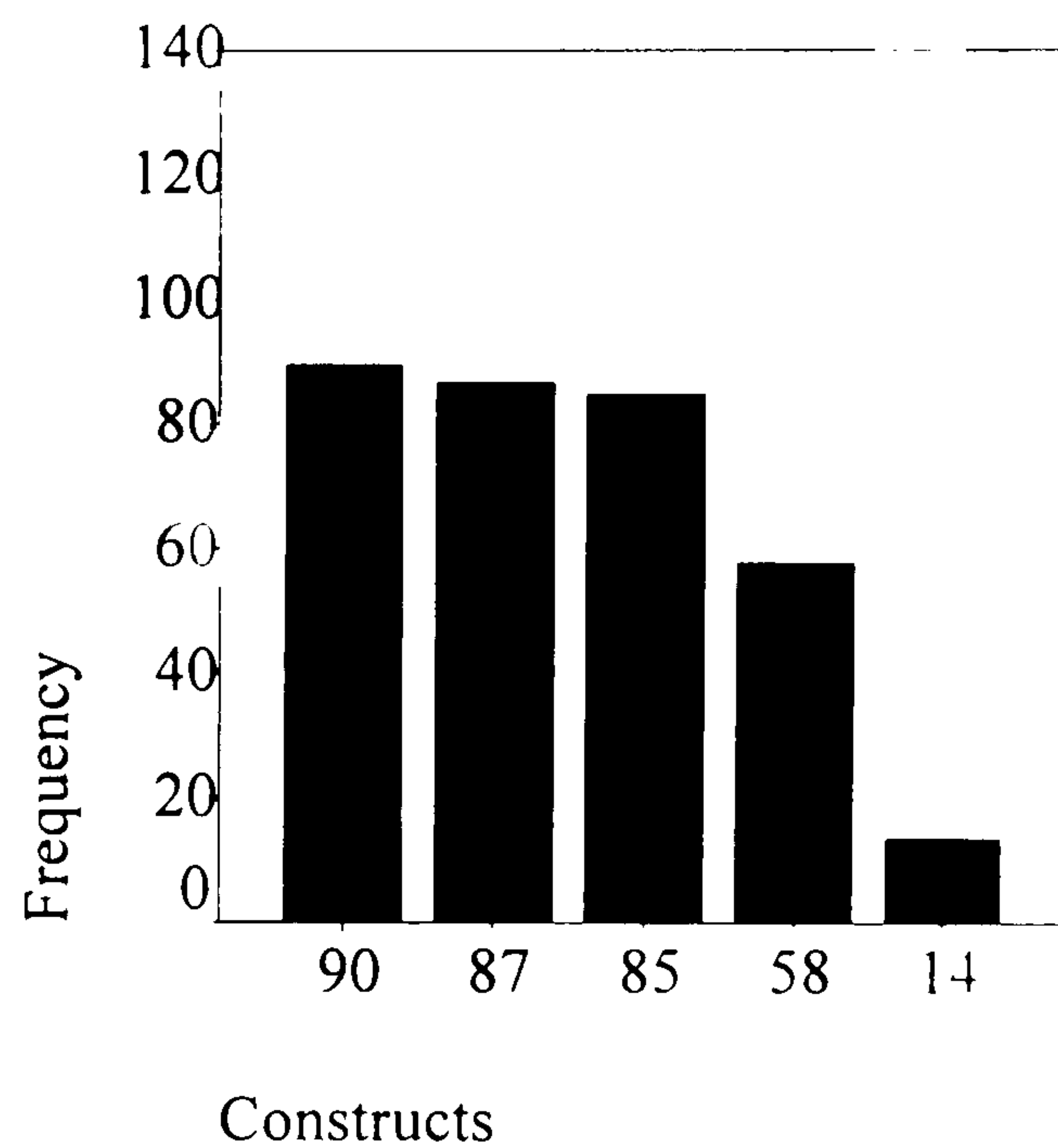
47 = Repetitive and unvaried tasks
 32 = Sales and promotions
 27 = Complex and varied tasks
 25 = The need to adapt
 15 = Advances in technology

Figure E - HR Communication (CCAT.05)



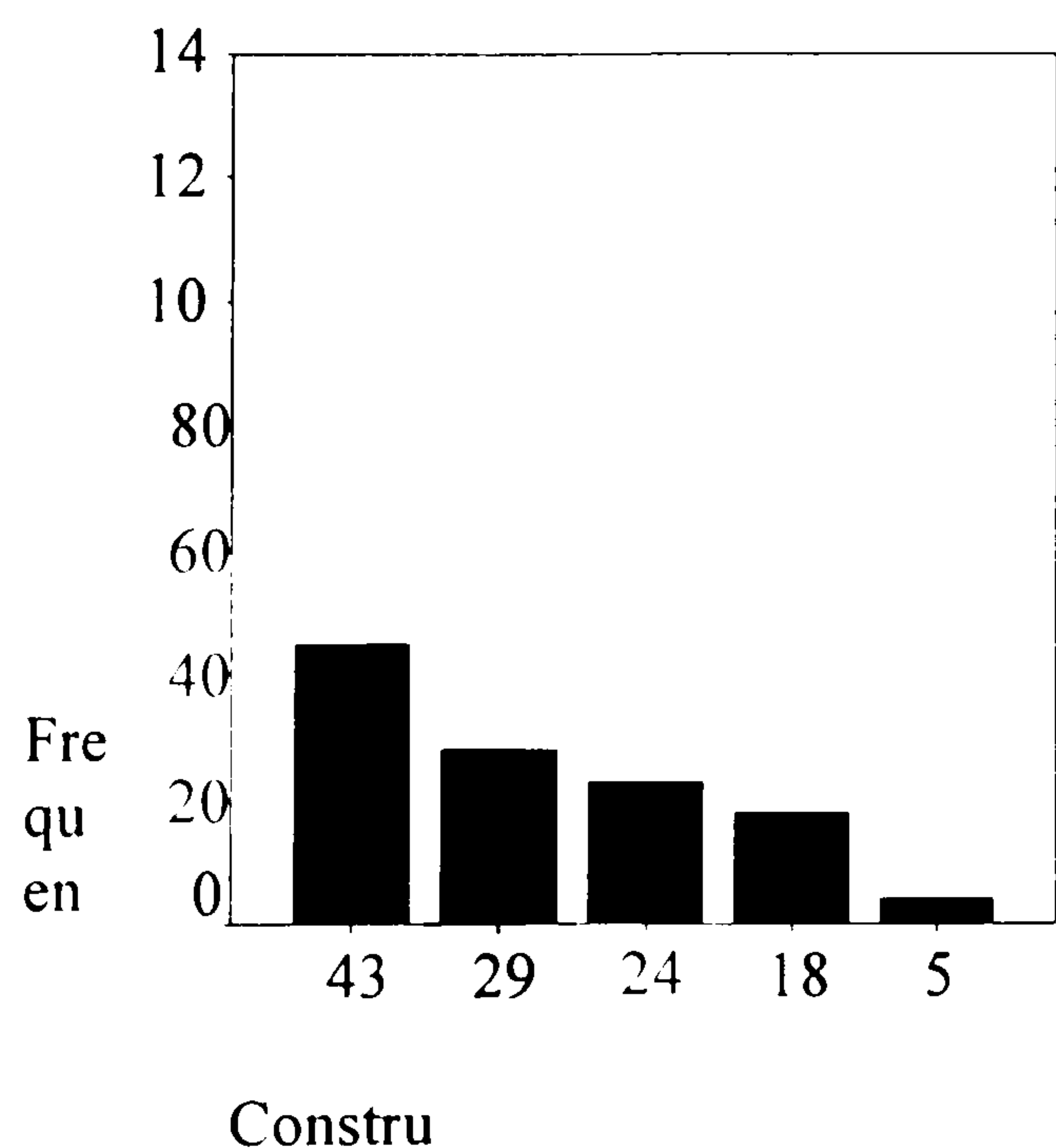
- 38 = Internal communication mechanisms
 33 = Excessive monitoring/surveillance
 21 = A clear understanding (strategy/purpose)
 18 = Representation as sweatshop
 2 = High tech call centre image

Figure F - Employment Conditions (CCAT.06)



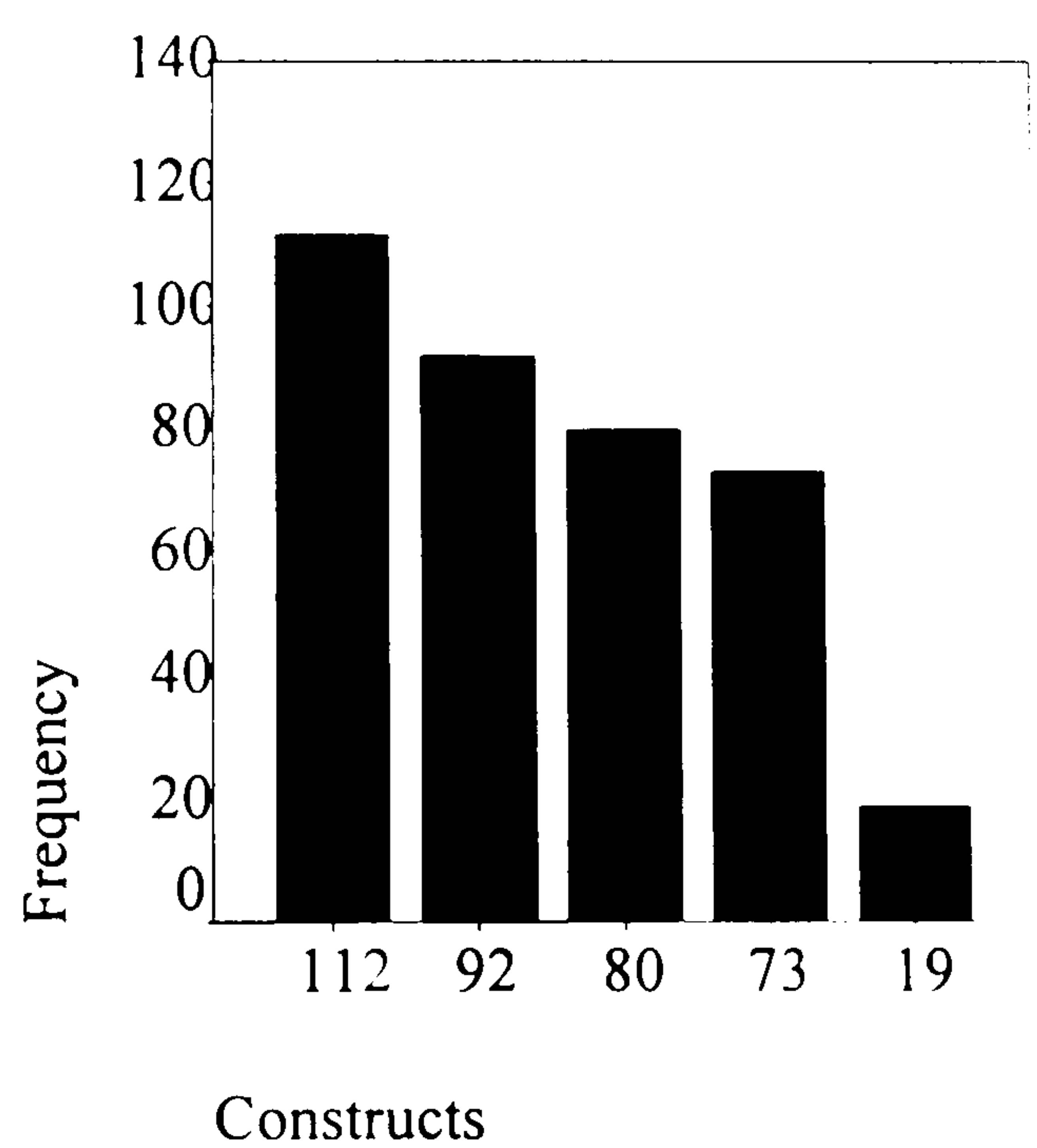
- 90 = Training levels
 87 = Inadequate staffing levels
 85 = Pay levels
 58 = Prospects for promotion
 14 = Electronic performance monitoring

Figure G - Job Design/Work Characteristics (CCAT.07)



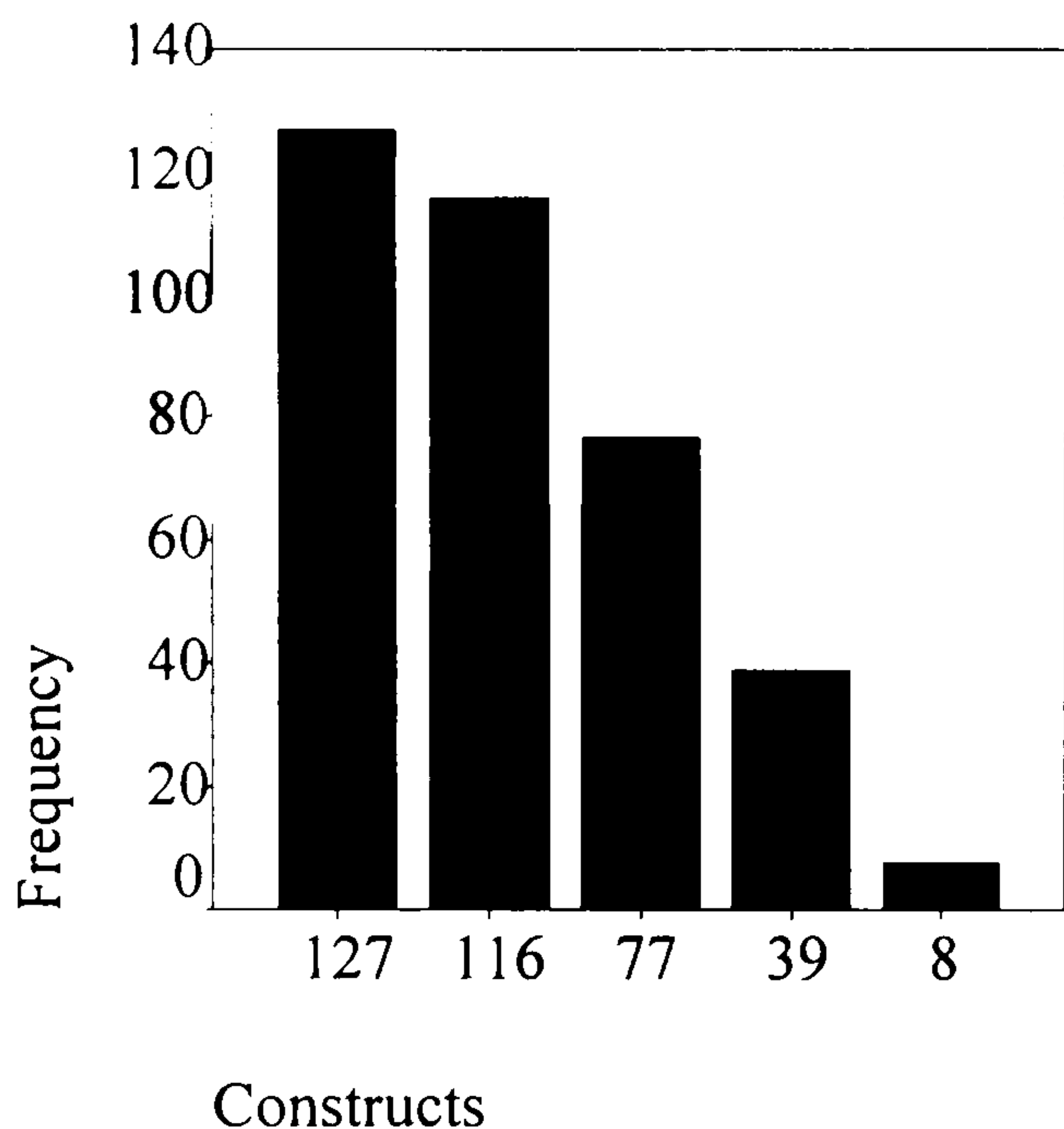
- 43 = Work quantity overload
 29 = Role conflict
 24 = Limited autonomy
 18 = The use of scripts
 5 = Work quality underload

Figure H - Management/ Employee Relationships (CCAT.08)



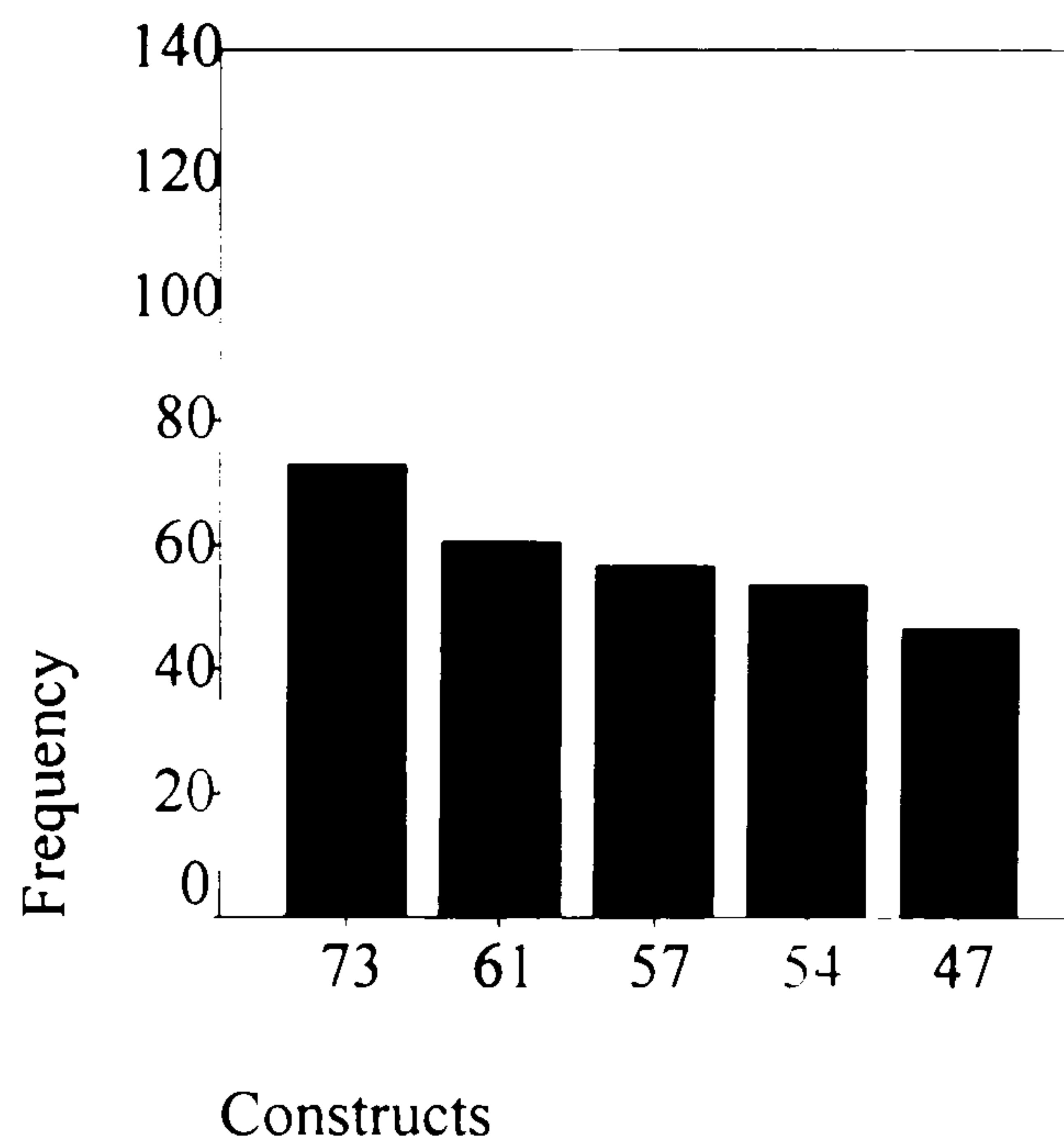
- 112 = Level of support - team leaders
 92 = Managers level of understanding
 80 = Level of support - managers
 73 = Employees attitudes
 9 = Oppressive management

Figure I - Performance and Satisfaction (CCAT.09)



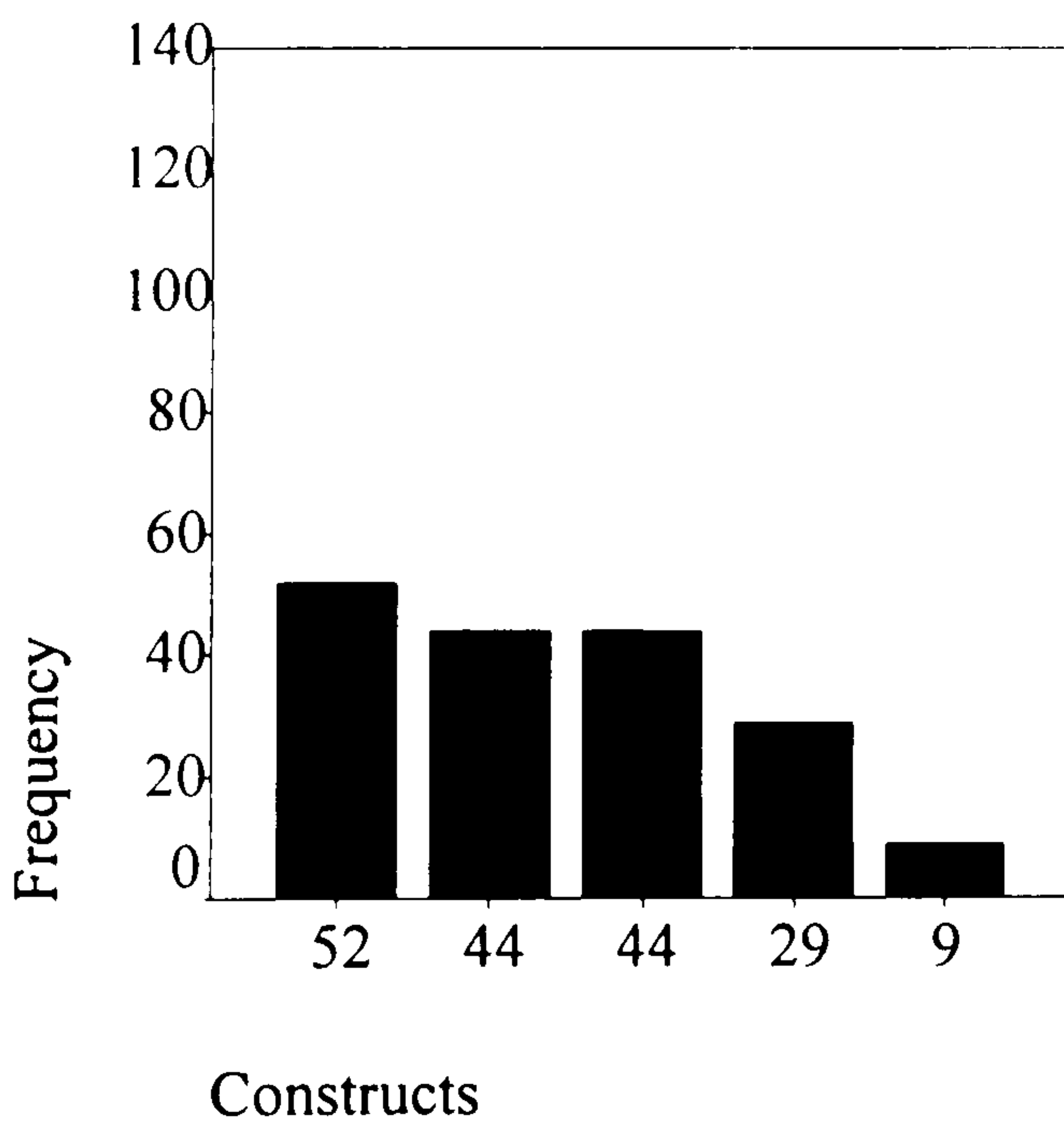
- 127 = My job satisfaction
- 116 = Customer satisfaction
- 77 = How well/carry out my job
- 39 = How well/cc performance
- 8 = Turnover levels (staff)

Figure J - Health and Well-Being (CCAT.10)



- 73 = Call centre stress levels
- 61 = My stress levels
- 57 = My physical health
- 54 = Absence levels
- 47 = Call centre health and well-being

Figure K - Identity (Individual and Social) (CCAT.11)



- 52 = My self-esteem
- 44 = Identification with my team
- 44 = Good name and reputation of the call centre
- 29 = My levels of trust
- 9 = Level of identification with basic call centre values/ethics

APPENDIX 6

Construct salience in terms of direct indegree and outdegree values

Category/Code	Individual Constructs	Indegree values	Outdegree values
		No of constructs influencing (total absolute values)	No of constructs influenced (total absolute values)
Economic and Political Drivers (CCAT.01)	• Growth in market competition	9 (25)	19 (60)
	• Government initiatives	13 (24)	23 (55)
	• Increasing customer demands	20 (95)	35 (216)
	• The need for both a quality and quantity service	40 (345)	40 (386)
	• The need to reduce labour costs	0 (0)	6 (12)
Physical Environment and Equipment (CCAT.02)	• Open office layout	3 (3)	15 (25)
	• Air quality, temperature and lighting levels	11 (33)	28 (257)
	• Noise levels	26 (76)	28 (161)
	• Work station and seating design	5 (9)	19 (71)
	• Computer software design	6 (17)	27 (72)
Organisational Structure and Design (culture and reward systems) (CCAT.03)	• Flat organisational structures	0 (0)	7 (14)
	• The organisation of work into teams	21 (75)	26 (140)
	• Team competition	24 (142)	28 (192)
	• Targets	46 (324)	37 (334)
	• Opportunities for interaction with fellow employees	42 (286)	39 (289)
Tasks and Technology (CCAT.04)	• Advances in technology	18 (61)	32 (131)
	• The need to adapt to new technology and ways of working	32 (127)	34 (174)
	• Sales and promotions	36 (229)	38 (246)
	• Repetitive and unvaried tasks	35 (127)	37 (285)
	• Complex and varied tasks	32 (109)	32 (207)

Communication Processes (CCAT.05)	• The representation of call centres as 'sweatshops'	33 (152)	27 (92)
	• The 'high tech' call centre image	8 (12)	9 (15)
	• Internal communication mechanisms	33 (116)	35 (108)
	• A clear understanding of organisational strategy and purpose	27 (72)	26 (113)
	• Excessive monitoring and surveillance	30 (113)	40 (217)
Employment Conditions (CCAT.06)	• Inadequate staffing levels	43 (502)	40 (851)
	• Pay levels	31 (150)	27 (167)
	• Training levels	45 (352)	41 (400)
	• Prospects for promotion	40 (238)	42 (134)
	• Intensive electronic performance monitoring	17 (45)	23 (84)
Job Design and Work Characteristics (CCAT.07)	• The use of scripts (what to say and how to respond to the public)	17 (37)	24 (76)
	• Role conflict (what/who takes priority?)	28 (137)	34 (171)
	• Limited autonomy (lack of scope to do the job as one would like)	28 (128)	33 (178)
	• Work quantity overload (too much to do)	40 (352)	40 (497)
	• Work quality underload (too easy)	2 (7)	2 (3)
Management and Employee Relationships (CCAT.08)	• Managers level of understanding of working on the front line	45 (206)	44 (319)
	• Oppressive (overly controlling) management	32 (135)	32 (212)
	• Level of support from management	43 (218)	41 (350)
	• Level of support from team leaders and supervisors	45 (455)	40 (666)
	• Employees attitudes	45 (565)	34 (293)

Work Performance and Satisfaction (CCAT.09)	• How well I am able to carry out my job	48 (624)	41 (551)
	• How well the call centre performs	42 (418)	34 (211)
	• Turnover levels	21 (63)	17 (61)
	• My job satisfaction	52 (1200)	41 (605)
	• Customer satisfaction	50 (867)	42 (566)
Health and Well-being (CCAT.10)	• My stress levels	44 (540)	34 (262)
	• My physical health	38 (252)	26 (118)
	• Absence levels	42 (389)	40 (476)
	• Call centre health and well-being	42 (343)	35 (215)
	• Call centre stress levels	50 (732)	38 (515)
Identity (Individual and Social) (CCAT.11)	• My self-esteem	46 (371)	38 (142)
	• My levels of trust	35 (141)	27 (131)
	• The good name and reputation of the call centre	42 (379)	35 (224)
	• The level to which I identify with basic call centre values and ethics	26 (63)	22 (75)
	• Identification with my team (similar values, beliefs and work ethics)	41 (193)	36 (249)

APPENDIX 7

Organisational scores across the eleven categories showing post-hoc multiple comparisons

	Organisation	Organisation	Mean Diff (I-J)	Std. Error	Exact p
Cat. Code	(I) V.001*	(J) V.001			
CCAT.01	Distribution	Emergency Services	.1264	.13351	.878
		Public Services	.4333	.19936	.194
		Finance	.4185	.13291	.016
		Outsourcing	.5429	.15984	.007
	Emergency Services	Public Services	.3069	.19806	.532
		Finance	.2921	.13094	.173
		Outsourcing	.4164	.15821	.069
	Public Services	Finance	-.0148	.19765	1.000
		Outsourcing	.1095	.21668	.987
	Finance	Outsourcing	.1243	.15771	.934
CCAT.02	Distribution	Emergency Services	-.5619	.15592	.004
		Public Services	.2067	.23282	.901
		Finance	.5178	.15521	.009
		Outsourcing	.0614	.18667	.997
	Emergency Services	Public Services	.7686	.23130	.009
		Finance	1.0797	.15292	.000
		Outsourcing	.233	.18477	.008
	Public Services	Finance	.3111	.23082	.662
		Outsourcing	-.1452	.25305	.979
	Finance	Outsourcing	-.4563	.18417	.100
CCAT.03	Distribution	Emergency Services	.1004	.14728	.960
		Public Services	.1733	.21993	.934
		Finance	-.8378	.14662	.000
		Outsourcing	-1.1314	.17634	.000
	Emergency Services	Public Services	.0730	.21849	.997
		Finance	-.9382	.14445	.000
		Outsourcing	-1.2318	.17454	.000
	Public Services	Finance	-1.0111	.21804	.000
		Outsourcing	-1.3048	.23904	.000
	Finance	Outsourcing	-.2937	.17398	.444
CCAT.04	Distribution	Emergency Services	.2672	.13538	.283
		Public Services	-.0133	.20216	1.000
		Finance	-.2059	.13477	.546
		Outsourcing	-.1014	.16209	.971
	Emergency Services	Public Services	-.2805	.20084	.631
		Finance	-.4731	.13278	.004
		Outsourcing	-.3686	.16043	.150
	Public Services	Finance	-.1926	.20043	.872
		Outsourcing	-.0881	.21973	.995
	Finance	Outsourcing	.1045	.15992	.966

CCAT.05	Distribution	Emergency Services	.1906	.13612	.628
		Public Services	.3667	.20326	.374
		Finance	.1259	.13551	.885
	Emergency Services	Outsourcing	.0929	.16297	.979
		Public Services	.1761	.20193	.907
		Finance	-.0646	.13350	.989
	Public Services	Outsourcing	-.0977	.16131	.974
		Finance	-.2407	.20152	.754
		Outsourcing	-.2738	.22092	.728
	Finance	Outsourcing	-.0331	.16079	1.000
CCAT.06	Distribution	Emergency Services	-.0358	.19543	1.000
		Public Services	-.2333	.29183	.930
		Finance	.1259	.19455	.967
	Emergency Services	Outsourcing	.3071	.23398	.684
		Public Services	-.1975	.28992	.960
		Finance	.1618	.19167	.916
	Public Services	Outsourcing	.3430	.23159	.576
		Finance	.3593	.28932	.727
		Outsourcing	.5405	.31718	.434
	Finance	Outsourcing	.1812	.23085	.935
CCAT.07	Distribution	Emergency Services	.3506	.13548	.077
		Public Services	.1267	.20231	.971
		Finance	.4526	.13487	.008
	Emergency Services	Outsourcing	.2886	.16221	.389
		Public Services	-.2239	.20099	.799
		Finance	.1020	.13288	.940
	Public Services	Outsourcing	-.0620	.16055	.995
		Finance	.3259	.20058	.483
		Outsourcing	.1619	.21989	.948
	Finance	Outsourcing	-.1640	.16004	.844
CCAT.08	Distribution	Emergency Services	.1532	.20792	.948
		Public Services	.3733	.31047	.750
		Finance	.4104	.20698	.278
	Emergency Services	Outsourcing	-.2457	.24893	.861
		Public Services	.2201	.30844	.953
		Finance	.2572	.20392	.715
	Public Services	Outsourcing	-.3989	.24639	.487
		Finance	.0370	.30780	1.000
		Outsourcing	-.6190	.33744	.357
	Finance	Outsourcing	-.6561	.24560	.062
CCAT.09	Distribution	Emergency Services	.0264	.20793	1.000
		Public Services	.0667	.31049	1.000
		Finance	-.2185	.20699	.829
	Emergency Services	Outsourcing	.0857	.24895	.997
		Public Services	.0403	.30846	1.000
		Finance	-.2449	.20393	.751
	Public Services	Outsourcing	.0593	.24641	.999
		Finance	-.2852	.30783	.886
		Outsourcing	.0190	.33747	1.000

	Finance	Outsourcing	.3042	.24562	.729
CCAT.10	Distribution	Emergency Services	-.3800	.19223	.281
		Public Services	-.4467	.28705	.527
	Emergency Services	Finance	.6200	.19137	.012
		Outsourcing	1.0129	.23015	.000
		Public Services	-.0667	.28517	.999
	Public Services	Finance	1.0000	.18853	.000
		Outsourcing	1.3929	.22780	.000
		Distribution	.4467	.28705	.527
		Emergency Services	.0667	.28517	.999
		Finance	1.0667	.28458	.002
		Outsourcing	1.4595	.31199	.000
	Finance	Outsourcing	.3929	.22707	.418
CCAT.11	Distribution	Emergency Services	-.4423	.16981	.073
		Public Services	-.6800	.25356	.060
	Emergency Services	Finance	-.4800	.16904	.040
		Outsourcing	-.5514	.20330	.056
		Public Services	-.2377	.25190	.879
	Public Services	Finance	-.0377	.16654	.999
		Outsourcing	-.1092	.20123	.983
		Finance	.2000	.25139	.932
		Outsourcing	.1286	.27559	.990
		Finance	-.0714	.20058	.997

APPENDIX 8

Tests of association between the 11 categories

CCAT.No.	MEAN (SD)	CCAT.01	CCAT.02	CCAT.03	CCAT.04	CCAT.05	CCAT.06	CCAT.07	CCAT.08	CCAT.09	CCAT.10	CCAT.11
CCAT.01	M = .65 (.70)	1.000	-.147	-.169	-.124	.058	-.137	.029	-.171	.078	.052	.045
		Correlation Coefficient 2-tailed										
		Exact p	.038	.016	.080	.412	.053	.681	.015	.271	.464	.525
CCAT.02	M = .73 (.88)	-.147	1.000	-.237	-.164	.004	-.039	-.057	.003	-.253	.223	-.127
		Exact p		.001	.020	.956	.584	.427	.966	.000	.001	.073
CCAT.03	M = .79 (.90)	.038	-.237	1.000	.074	.093	-.199	-.247	-.065	.076	-.354	-.039
		Exact p	.016		.301	.188	.005	.000	.361	.287	.000	.585
CCAT.04	M = .72 (.70)	-.124	-.164	.074	1.000	.021	-.063	-.110	-.211	-.138	-.055	.048
		Exact p	.020	.301		.768	.378	.122	.003	.052	.437	.498
CCAT.05	M = .58 (.69)	.058	.004	.093	.021	1.000	-.119	-.019	-.073	-.217	-.076	-.191
		Exact p	.956	.188	.768		.094	.791	.302	.002	.284	.007
CCAT.06	M = 1.65 (.99)	-.137	-.039	-.199	-.063	-.119	1.000	-.033	-.036	-.047	-.065	-.200
		Exact p	.584	.005	.378	.094		.644	.609	.508	.363	.004
CCAT.07	M = .60 (.70)	.029	-.057	-.247	-.110	-.019	-.033	1.000	-.016	-.151	.061	-.132
		Exact p	.427	.000	.122	.791	.644		.820	.033	.393	.062
CCAT.08	M = 1.9 (1.1)	-.171	.003	-.065	-.211	-.073	-.036	-.016	1.000	-.146	-.259	-.014
		Exact p	.966	.361	.003	.302	.609	.820		.040	.000	.848
CCAT.09	M = 1.84 (1.05)	.078	-.253	.076	-.138	-.217	-.047	-.151	-.146	1.000	-.231	-.080
		Exact p	.000	.287	.052	.002	.508	.033	.040		.001	.261
CCAT.10	M = 1.45 (1.10)	.052	.223	-.354	-.055	-.076	-.065	.061	-.259	-.231	1.000	-.174
		Exact p	.001	.000	.437	.284	.363	.393	.000	.001		.014
CCAT.11	M = .90 (.88)	.045	-.127	-.039	.048	-.191	-.200	-.132	-.014	-.080	-.174	1.000
		Exact p	.073	.585	.498	.007	.004	.062	.848	.261	.014	

APPENDIX 9

Summary of the tests of association between the 55 individual constructs

Individual Constructs (Construct ID)	Mean (SD)	Correlation p<.01	Correlation p<.05
Growth in market competition (C.001)	.05 (.22)	C.020	C.007 -ve C.029 -ve C.053
Government initiatives (C.002)	.03 (.17)	C.009 C.022 C.054	C.008 -ve C.013 C.020 C.026 C.054
Increasing customer demands (C.003)	.18 (.38)	C.032 C.047 -ve	C.008 -ve C.013 -ve C.020 -ve C.026 -ve C.039 -ve
The need for both a quality and quantity service (C.004)	.39 (.49)		C.019 -ve C.027 -ve
The need to reduce labour costs (C.005)	.01 (.07)	C.017 C.021	
Open office layout (C.006)	.04 (.20)		
Air quality, temperature and lighting levels (C.007)	.33 (.47)	C.008 C.020 -ve C.048	C.010 C.029 C.030 -ve C.047 -ve C.049 C.053 -ve C.054 -ve
Noise levels (C.008)	.18 (.39)	C.030 -ve C.048 C.055 -ve	
Computer software design (C.009)	.08 (.26)		C.017 C.022 C.041 -ve C.047 -ve C.048
Work station and seating design (C.010)	.11 (.31)		C.032 -ve C.047 -ve
Flat organisational structures (few levels between agents and managers) (C.011)	.01 (.07)	C.024	C.032
The organisation of work into teams (C.012)	.07 (.25)	C.015 -ve C.024	C.032

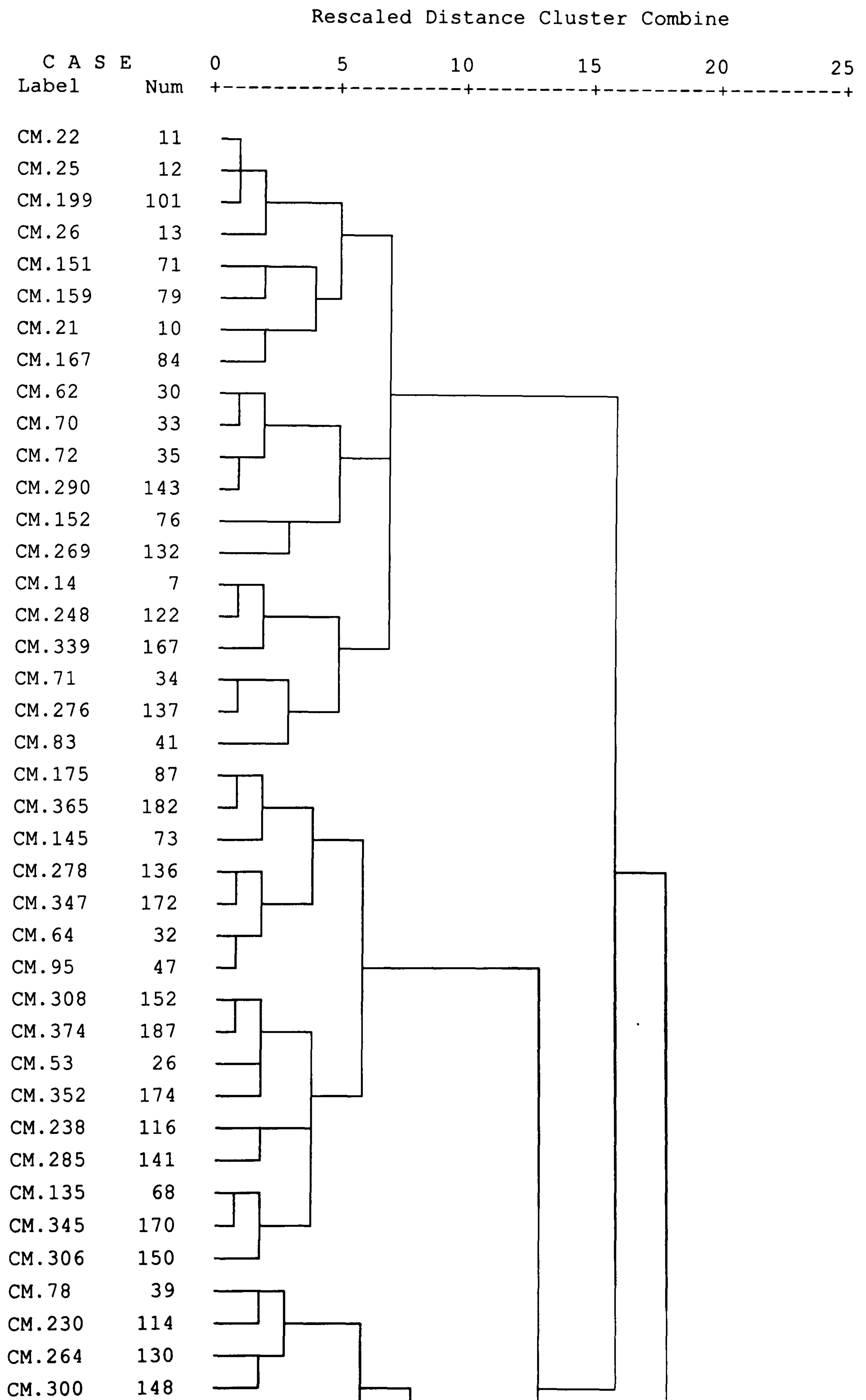
Team competition (C.013)	.11 (.31)	C.027 C.028	C.032 -ve C.034 -ve
Opportunities for interaction with fellow employees (C.014)	.32 (.47)	C.015 -ve C.034 -ve C.050 -ve	C.019 C.048 -ve
Inadequate staffing levels (C.015)	.42 (.50)	C.020 -ve C.031 -ve C.046 C.047 -ve C.050 C.051 -ve	C.024 -ve C.034 C.044 C.045 -ve C.054 -ve
Advances in technology (C.016)	.08 (.27)		C.019 -ve C.022 C.040 -ve
The need to adapt to new technology and ways of working (C.017)	.12 (.33)	C.050	
Intensive electronic performance monitoring (C.018)	.08 (.27)		C.025 C.028 C.039 -ve C.053 -ve C.055
Repetitive and unvaried tasks (C.019)	.23 (.42)	C.053 -ve	C.029 -ve C.037 C.045 -ve
Complex and varied tasks (C.020)	.14 (.34)	C.040 -ve	C.025 -ve C.050 -ve C.053
The representation of call centres as 'sweatshops' (C.021)	.09 (.29)		C.022 C.042 -ve C.043
The 'high tech' call centre image (C.022)	.01 (.10)	C.043 C.054	
Internal communication mechanisms (C.023)	.19 (.39)	C.026 -ve C.046 -ve	C.041 -ve
A clear understanding of organisational strategy/purpose (C.024)	.11 (.31)		C.053 -ve
Excessive monitoring and surveillance (C.025)	.18 (.39)	C.026 -ve C.028 C.053 -ve	
Pay levels (C.026)	.42 (.49)		C.027 -ve C.030 C.044 -ve C.049 -ve
Targets (C.027)	.30 (.46)	C.028 C.034 -ve C.048 -ve	C.046 -ve C.049 -ve
Sales and promotions (C.028)	.16 (.37)		
Training levels (C.029)	.45 (.50)	C.039	C.053 -ve

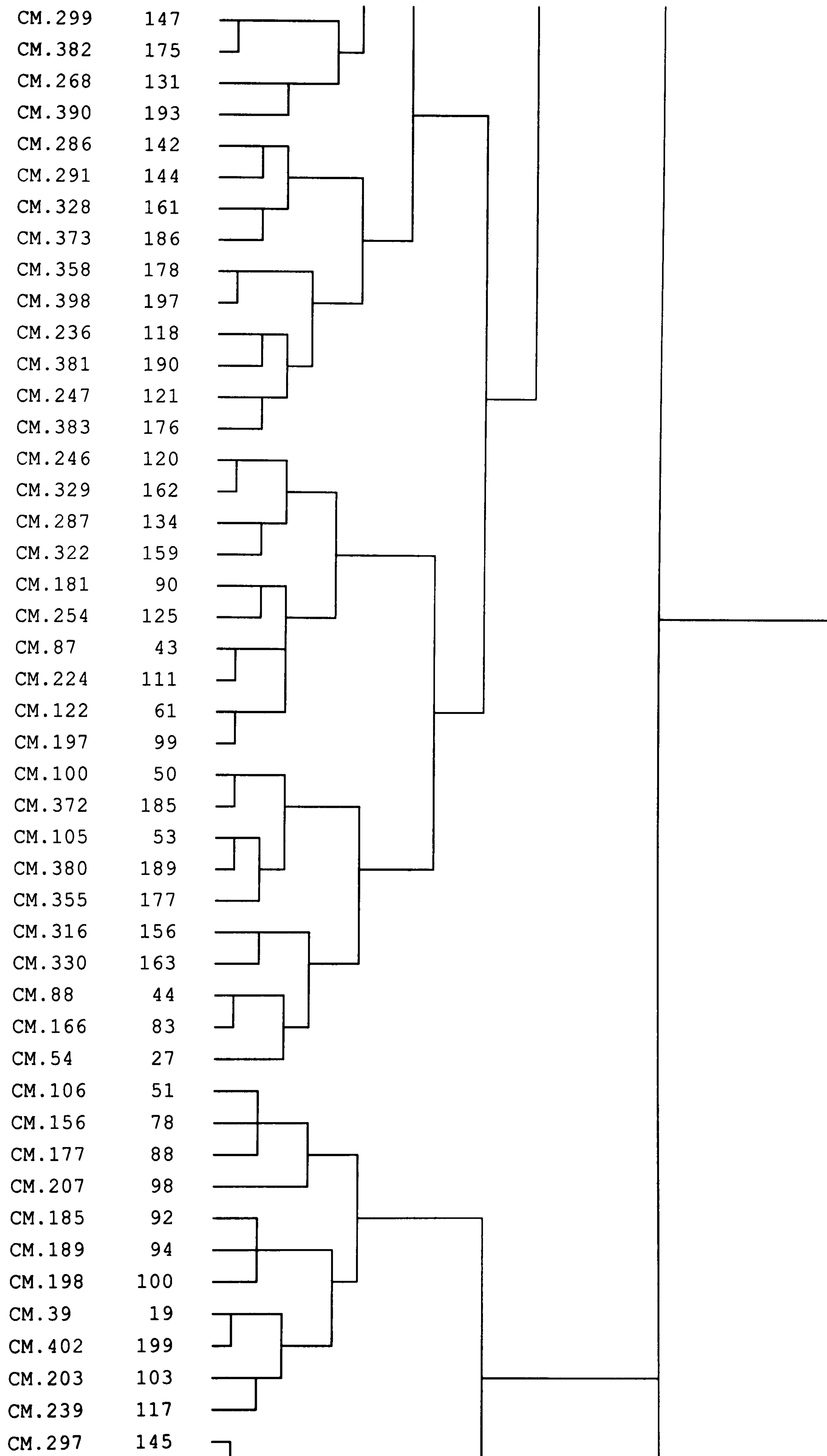
Prospects for promotion (C.030)	.28 (.45)		C.044 -ve C.048 -ve C.055 -ve
The use of scripts (C.031)	.09 (.29)	C.045 -ve	C.034 -ve
Role conflict (C.032)	.14 (.35)		C.038 -ve C.053 -ve
Limited autonomy (C.033)	.12 (.33)	C.037	C.042 -ve
Work quantity overload (C.034)	.22 (.41)		C.050
Work quality underload (C.035)	.03 (.16)		C.041
Managers level of understanding of working on the front line (C.036)	.46 (.50)		C.047 -ve
Oppressive (overly controlling) management (C.037)	.10 (.30)	C.041 -ve	C.042 C.052
Level of support from management (C.038)	.41 (.50)		C.039 C.044 -ve C.054 -ve
Level of support from team leaders/supervisors (C.039)	.56 (.50)		C.043 -ve C.044 -ve C.050 -ve
Employees attitudes (C.040)	.38 (.49)		C.049 -ve
How well I am able to carry out my job (C.041)	.37 (.48)		C.050 -ve
How well the call centre performs (C.042)	.20 (.40)	C.053	
Turnover levels (C.043)	.05 (.21)		
Absence levels (C.044)	.28 (.45)	C.045	
Customer satisfaction (C.045)	.59 (.49)	C.047	C.048 -ve
My stress levels (C.046)	.30 (.46)	C.053 -ve	C.050
My job satisfaction (C.047)	.64 (.48)		C.050 -ve
My physical health (C.048)	.27 (.44)		C.049 C.050 -ve
Call centre health and well-being (C.049)	.25 (.43)	C.052 -ve	
Call centre stress levels (C.050)	.36 (.48)		C.053 -ve
My self-esteem (C.051)	.26 (.44)		
My levels of trust (C.052)	.14 (.35)		
The good name and reputation of the call centre (C.053)	.22 (.42)		C.050 -ve C.055
The level to which I identify with basic call centre values and ethics (C.054)	.05 (.22)		
Identification with my team (similar values, beliefs and work ethics) (C.055)	.23 (.42)		

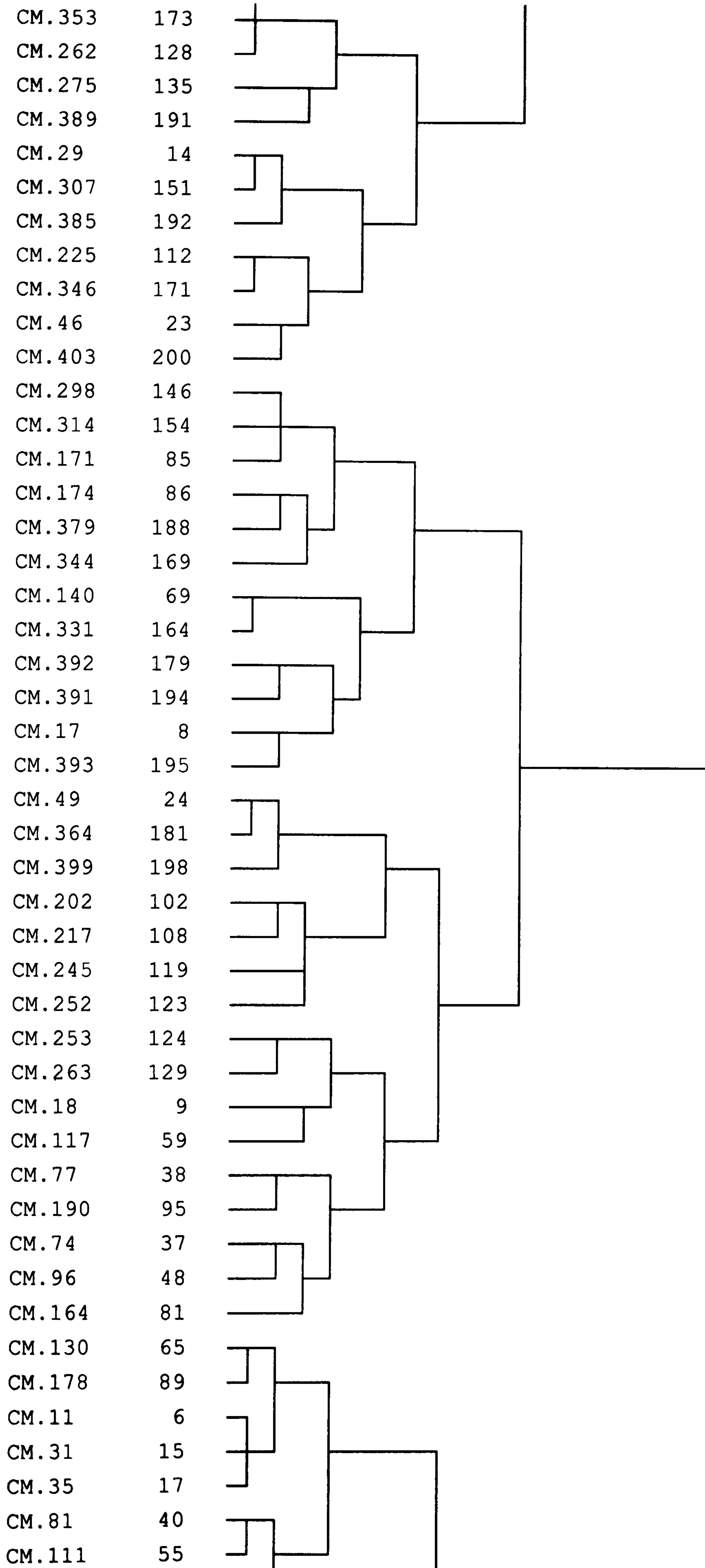
APPENDIX 10

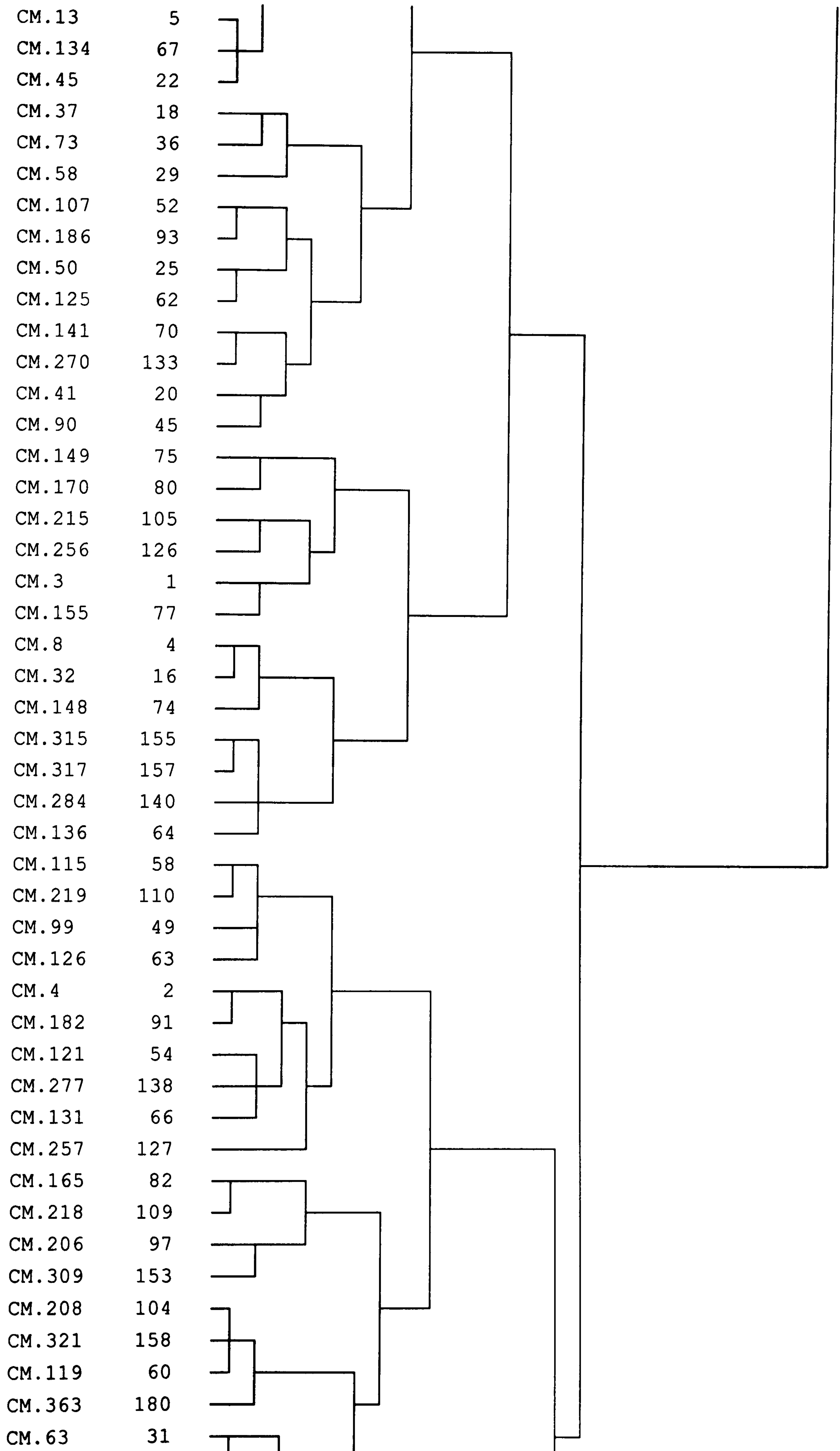
Dendogram

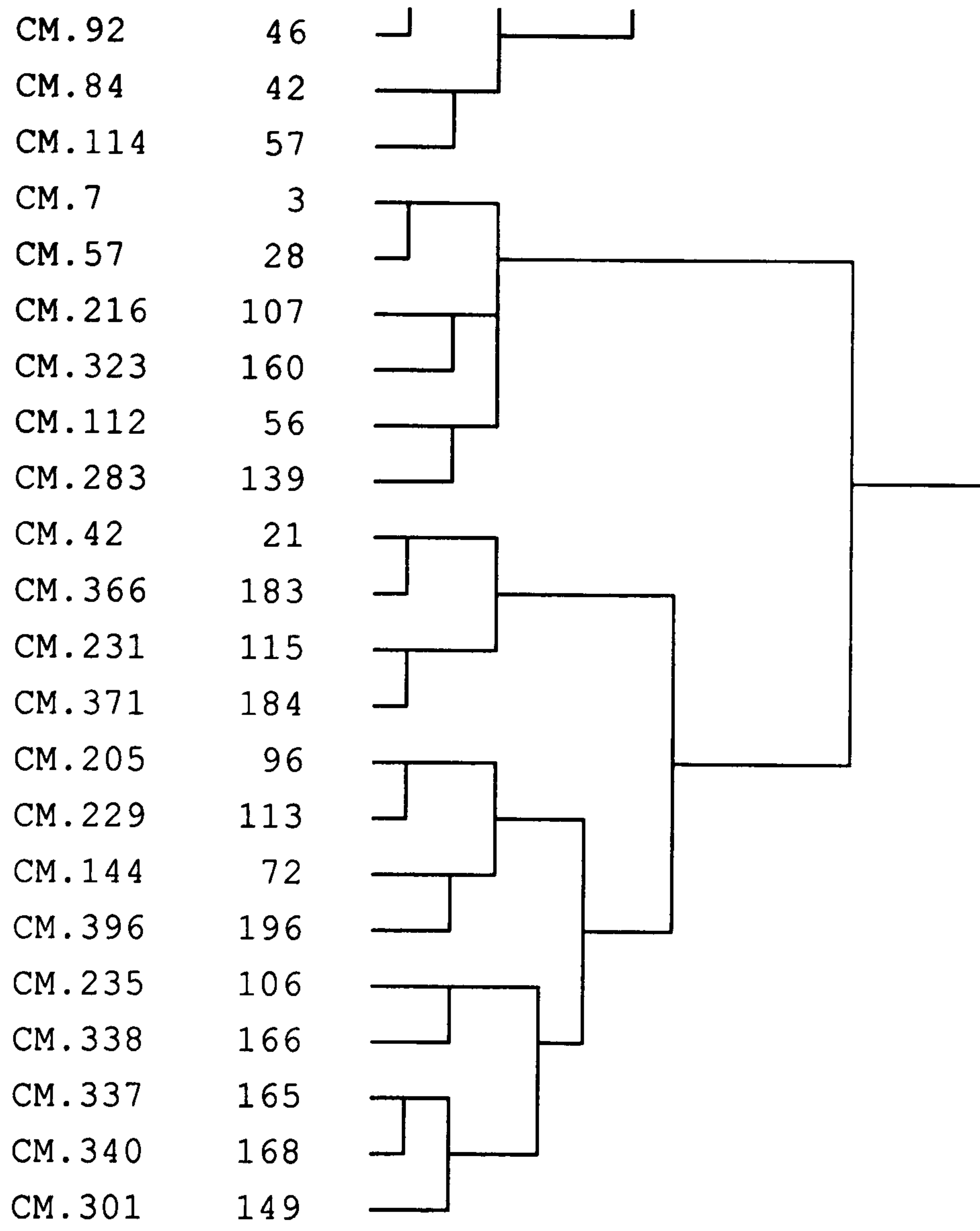
Dendrogram using Ward Method











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