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MULTIPLE PARADIGMS AND ORGANISATIONAL RESEARCH:  
AN ANALYSIS OF WORK BEHAVIOUR IN THE FIRE SERVICE

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'Do I really see something different each time, or do I only interpret what I see in a different way? I am inclined to say the former. But why? To interpret is to think, to do something; seeing is a state'.

Ludwig Wittgenstein, 'Philosophical Investigations', p.200

'To translate a theory or worldview into one's own language is not to make it one's own. For that one must go native, discover that one is thinking in, not merely translating out of, a language that was previously foreign'.

Thomas Kuhn, The Structure of Scientific Revolutions  
(Postscript), p.204

**To my Mother and Father.**

I declare that this thesis is the result of my own independent investigation. It has not already been accepted in substance for any degree, and is not being submitted concurrently in candidature for any degree.

Signed

Date

Signed

## Summary

The thesis examines Kuhn's (1962, 1970) concept of paradigm, assesses how it is employed for mapping intellectual terrain in the social sciences, and evaluates its use in research based on multiple theory positions. In so doing it rejects both the theses of total paradigm 'incommensurability' (Kuhn, 1962), and also of liberal 'translation' (Popper, 1970), in favour of a middle ground through the 'language-game of everyday life' (Wittgenstein, 1953). The thesis ultimately argues for the possibility of being 'trained-into' new paradigms, given the premise that 'unorganised experience cannot order perception' (Phillips, 1977). In conducting multiple paradigm research the analysis uses the Burrell and Morgan (1979) model for examining the work organisation of a large provincial Fire Service. This analysis accounts for: firstly, a 'functionalist' assessment of work design, demonstrating *inter alia* the decrease in reported motivation with length of service; secondly, an 'interpretive' portrayal of the daily accomplishment of task routines, highlighting the discretionary and negotiated nature of the day's events; thirdly, a 'radical humanist' analysis of workplace ideology, demonstrating the hegemonic role of officer training practices; and finally, a 'radical structuralist' description of the labour process, focusing on the establishment of a 'normal working day'. Although the argument is made for the possibility of conducting multiple paradigm research, the conclusion stresses the many institutional pressures serving to offset development.

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Abbreviations Used in the Text

C.A.C.F.O.A.	Chief and Assistant Chief Fire Officers Association
C.L.F.	Cardre Leading Fireman
D.O.	Divisional Officer
D.C.	Divisional Commander
F.B.U.	Fire Brigades Union
F.P.	Fire Prevention
G.N.S.	Growth Need Strength
I.C.C.	Internal Command Course
I.C.P.S.	International Colloquium in the Philosophy of Science, 1965
1(I)(d)	Inspections of Premises - Required by the 1947 Fire Services Act
J.D.S.	Job Diagnostic Survey
L.F.	Leading Fireman
M.P.R.	Multiple Paradigm Research
M.P.S.	Motivational Potential Score
N.A.F.O.	National Association of Fire Officers
O.B.	Organisational Behaviour
R.T.A.	Road Traffic Accident
S.O.	Station Officer
S.S.R.	Structure of Scientific Revolutions (Kuhn, 1962, 1970)
Sub.O.	Sub Officer
T.O.	Training Officer
W.M.F.S.	West Midlands County Fire Service

## Introduction

This thesis examines Thomas Kuhn's (1962, 1970) concept of scientific paradigm by way of, firstly, an assesment of it's applicability to the social sciences, and then secondly, an empirical exploration of prescribed paradigm positions in organisational analysis. It finally evaluates the potential for using multiple paradigm research in organisational behaviour. For the empirical work the host organisation has been the West Midlands County Fire Service (W.M.F.S.), and it is their work practices that are the focus for research.

The initial impetus was a desire to examine the research opportunities arising from the Burrell and Morgan (1979) model of paradigm terrain, and especially in terms of the richness of data accruing from alternative paradigm studies. As such, the main aim has subsequently been that of conducting an organisational analysis using the model's various paradigm positions. In realising the studies, the work has explored the theory and methodology of firstly, a mainstream innovation in organisational development (i.e., the Job Characteristic Approach to work redesign: Chapter 3), but followed this by addressing what some would consider the more esoteric orientations of 'alternatives' to the systems/functionalist 'orthodoxy' (i.e., phenomenology, Critical Theory, Marxian Structuralism). The research has attempted to assimilate positions representative of these paradigms by firstly, accepting the metaphysical models they invoke to explain the subject matter, and then secondly, by immersion into literature generated by community members. In sum, the latter paradigms have analysed: 1) the daily accomplishment of work routines (Chapter 4); 2) the role of workplace ideology in officer training (Chapter 5); and a 3) history of the labour process (Chapter 6).

However, while the empirical work seeks to display the variety of insight offered by multiple paradigm strategies, the thesis also considers two logical problems raised by Kuhn's thesis. In arguing that science is characterised by revolutionary changes in which one form of activity gives way to another of an essentially incompatible nature, Kuhn's thesis seems to deny any objective choice between paradigms, and subsequently any real communication. As such, his incommensurability thesis seems not only to deny the possibility of conscious paradigm movement, but suggests that even if this were possible the enterprise would still be open to the charge of relativism. Therefore, before the empirical work is documented an argument is developed for overcoming the incommensurability problem and subsequently for deflecting the charge of relativism (Chapter 1). Here, following a brief overview of the 'Structure and Scientific Revolutions' (1962) thesis, a return to Kuhn is qualified by reference to the 'later' Wittgenstein in developing an argument for logically experiencing the cultures of various paradigm domains.

#### West Midlands County Fire Service

In terms of the host organisation itself, W.M.F.S. was formed in 1974 by the amalgamation of the existing brigades of Birmingham, Coventry, Dudley, Solihull, Walsall, Warley, West Bromwich and Wolverhampton. Also added to the new body were certain stations from adjacent 'shire' county brigades, i.e., Sutton Coldfield from Warwickshire, Aldridge from Staffordshire, and Stourbridge and Halesowen from Worcestershire.

In its present status W.M.F.S. is the largest fire authority outside London providing fire cover for almost three million inhabitants over an area of 902 square kilometres. The fire cover is provided by 41 stations of which 40 are 'whole-time', the exception being the 'retained' station at Sedgley midway between Wolverhampton and Dudley.

DIVISION	METROPOLITAN BOROUGH	NUMBER OF STATIONS
'A' Division	Birmingham (Part) and Sutton Coldfield	7
'B' Division	Birmingham (Part), Solihull and Coventry	7
'C' Division	Birmingham (Part) and Sandwell (Part)	9
'D' Division	Sandwell and Dudley	9
'E' Division	Wolverhampton and Walsall	9

The organisation is divisionalised geographically having five divisions each incorporating one or more Metropolitan Boroughs. Operating within a stable environment the structure is highly centralised and formally bureaucratic, based on paramilitary lines and using conventional integration methods (especially hierarchical referral, paper system, set rules/procedures). The manpower (or 'establishment') is of approximately 2,000 men/officers plus 70 control room staff and 230 administrative staff. Each of the five divisions is headed by a Divisional Commander (D.C.) who is assisted by a Deputy Divisional Commander and operational and Fire Prevention Officers of Divisional Officer rank and below.

The administrative centre of W.M.F.S. is the Service Headquarters at Central Fire Station, Lancaster Circus, Birmingham. Here are located the functions of Staffing, Public Relations, Financial Control, Advanced Training and Fire Prevention, plus Stores, Vehicle Maintenance, Building Maintenance and the Fire Brigade's Union Regional Office.

For the primary work process, the centralised Fire Control section receives all emergency calls for the county and co-ordinates all movement of appliances. At present the call-out rate is approaching 40,000 per annum of which around 20% are termed 'malicious' false alarms. Finally, in terms of firefighting equipment, W.M.F.S. has 86 'pumps' (i.e., basic

fire engines), 8 hydraulic platforms, 4 turntable ladders and 14 'special' appliances (e.g., emergency tenders, mobile control units, foam tenders, etc.).

CHAPTER ONE: KUHNIAN THEORY AND THE  
PROBLEM OF INCOMMENSURABILITY

## 1.1 Kuhnian Theory: An Overview

"the competition between paradigms is not the sort of battle that can be resolved by proofs"

Kuhn, 1962, p.147

The widespread reputation of Kuhn's (1962, 1970) 'Structure of Scientific Revolutions' has resulted from the claim that traditional wisdom in the philosophy of science does not equate with the historical evidence. Kuhn's well known suggestion is that dominant theories of scientific practice - whether inductivist or falsificationist - are incompatible with the facts of how science has actually progressed. Thus, falsificationists, however 'sophisticated' (Lakatos, 1970), are methodologists whose ideals are never met; scientific practice is never realised in Popperian terms, and as such, "no process yet discovered by the historical study of scientific development at all resembles the methodological stereotype of falsification by direct comparison with nature" (1962, p.77). As the main debates in the present thesis relate to Kuhn's S.S.R. analysis, we will overview Kuhnian theory in order to draw out the central points for the study of organisations.

The essence of Kuhn's thesis is that the everyday reality of science is more akin to the life cycle of the political community than to the dictates of formal logic. Here theories portraying science as the linear accretion of verified hypotheses are completely rejected, as Kuhn instead speaks of discontinuous periods of normative and revolutionary activity.

Kuhn's analysis centres on the claim that the history of science has consistently witnessed upheavals in which accepted wisdom is replaced by a new way of seeing, the process serving to fundamentally change the basis of a science's reality concept. Indeed, the degree of change is such that

the standards, concepts and procedures of the post-revolutionary approach are held to be totally incompatible with those of the pre-revolutionary consensus. For scientists, the experience is essentially akin to the appreciation of a new gestalt, the process being similar to religious conversion. In sum, when science changes, a new approach emerges based upon the fresh dictates of an alternative community structure, the new tradition, like the old, being what Kuhn terms a 'paradigm'<sup>1</sup>.

If we examine the thesis in terms of scientific development we find that everyday, or 'normal', science is both perpetuated through, and justified by, this unique domain of paradigm<sup>2</sup>. Here, while initially it is the classic experiment that determines the community's problems (and methods and solutions), in time socialization promotes consolidation, and as such, prevents scientists having to begin every new investigation from scratch - as principles, methods and language are already laid down by paradigm activity (e.g., textbook laws, published results, standardised methods). Thus, young scientists, because of paradigm training, are unaware of displaying paradigm-committed behaviour, as their learned way of doing science is the way<sup>3</sup>.

The reality of science is in fact only questioned when 'crisis' comes to the paradigm. Although the negation of isolated criticism is a characteristic of normal science, over time an ageing paradigm is threatened by the presence of certain 'anomalies' which eventually question the fundamentals on which the paradigm is built. At first such instances are treated like other problems as being merely aberrant occurrences requiring solution. As such, unexpected findings do not act as catalysts to spark the revolution, but represent new challenges to the community. Indeed, it is only the persistent anomaly that gains

attention, with, in time, a proliferation of ad hoc suggestions being made to account for this increasingly central issue for the community.

However, although normal science becomes more ill-defined when a crucial anomaly consumes the paradigm, the paradigm remains intact as no firm alternative has yet presented itself.

For Kuhn, true scientific change can only occur with the formulation of a new alternative paradigm capable of comprehending and accounting for major anomalies. The evolution of such a challenging paradigm must thus occur contemporaneous to the atrophy of the existing one; it being at such a point that while for the majority of scientists there is the recourse to fundamentals (and thus to philosophy), there is for an important minority a reexamination of the paradigms basic scientific tenets. It is this minority to whom the development of the new paradigm is owed, these scientists tending to be amongst younger members of the community whose professional education, on including the centrality of major anomalies, has avoided rigid training in the traditional paradigm. The emerging paradigm has, then, begun to ask qualitatively differing questions employing differing and incomparable standards. For Kuhn this is the sense in which scientists of competing paradigms hold differing world views.

The pedestrian nature of normal science comes to a sudden end with the commencement of 'revolutionary science' and the open challenge of the alternative paradigm. The actual changing of allegiance by individual scientists is, as noted above, like religious conversion or the instant transformation of the gestalt-switch. As Kuhn states, "scientists do not see something as something else; instead, they simply see it" (Kuhn 1970, p.85). What is noticeable here, however, is that the change of paradigm

allegiance is not based on open debate. For Kuhn there are no logical arguments which demonstrate the superiority of one paradigm over another. As the new paradigm is incommensurable with the old, there is no recourse to a mediating third party. Thus, there can be no logical demarcation of the supremacy of one paradigm over another, for the advocates of differing paradigms hold fast to separate sets of standards and metaphysical assumptions. As advocates of different paradigms will not concede to the other's basic foundations, they will not, similarly, accept the other's arguments or findings. For Kuhn, "when paradigms enter, as they must, into a debate about paradigm choice, their role is necessarily circular. Each group uses its own paradigm to argue in that paradigm's defence" (1970, p.94).

At the time of crisis there is no other choice than to either remain true to traditional beliefs, or to throw in one's lot with the new pretenders. Only two frames of reference are possible and 'proof' is inaccessible. Rival paradigms cut up the world with different standards, different assumptions - different language. Thus, "the normal-scientific tradition that emerges from a scientific revolution is not only incompatible but often actually incommensurable with that which has gone before" (1970, p.103).

## 1.2 The Paradigm Concept

From Kuhnian theory three problems emerge for multi-paradigm research in the social sciences. Firstly, the paradigm concept seems to remain, as Giddens (1976) has said, 'notoriously elusive', leaving the question of operational definition moot. Secondly, as paradigms seem incommensurable, Kuhn appears to deny recourse to poly-paradigm understanding: this not only questioning the (logical) possibility of doing multiple paradigm

research, but also leaving Kuhnian approaches open to the charge of relativism. Thirdly, there is the problem of actually identifying paradigm structures in the social sciences, especially as Kuhn has said that the social sciences may be 'immature', and thus pre-paradigmatic, disciplines. First, let us examine the elusive concept of paradigm before relating this to questions of the incommensurability of scientific communities.

Kuhn's position on the definition of paradigm has tended to oscillate and remain ambiguous<sup>4</sup>. Indeed, the vagueness of S.S.R. had made it difficult to identify what is, and what is not, a paradigm. While at the beginning of the first edition of S.S.R. (i.e. 1962) Kuhn defines paradigms as 'universally recognised scientific achievements', throughout the remainder of the work the concept is used multifariously, albeit frequently to imply a community structure sharing certain metaphysical beliefs.

The closest professional scrutiny placed upon Kuhn's thesis remains the 1965 International Colloquium in the Philosophy of Science (see Lakatos and Musgrave, 1970). Of the several papers criticising the paradigm concept the paper by Masterman was signal in noting how "on my counting he uses 'paradigm' in not less than twenty-one different senses" (1970, p.61)<sup>5</sup>. Here, on being faced with such serious charges of conceptual confusion, Kuhn was forced to redeem his position by reworking the paradigm concept. The initial stages of this reconstruction begin in 'Reflections on my Critics' (1970b), and are then later developed in the Postscript to the second edition of S.S.R. (1970), and a subsequent paper aptly entitled 'Second Thoughts on Paradigms' (1974).

In Reflections Kuhn seeks to explicate the relationship between the paradigm concept and the scientific community in order to overcome the circularity whereby, "a paradigm is what the members of a scientific community share, and conversely, a scientific community consists of men who share a paradigm" (1976, p.176, emphasis in original). In attempting this he initially considers abandoning the paradigm rubric altogether, and instead proposing that, "I should now like some other phrase, perhaps 'disciplinary matrix': disciplinary because it is common to the practitioners of a specified discipline; 'matrix' because it consists of ordered events which require individual specification" (1970b, p.271). However, the essence of the concept is not to be totally displaced because, "all of the objects of commitment described in my book (S.S.R.) as paradigms, parts of paradigms, or paradigmatic would find a place in the disciplinary matrix, but they would not be lumped together as paradigms, individually or collectively" (1970b, p.271).

The constituents of the new disciplinary matrix are expanded upon in all the 'later' works, and serve as templates for the main aspects of paradigm structure. Here, Kuhn attempts to outline the ingredients of both the 'community structure' and 'classic theory' emphases in S.S.R., but without recourse to the conflation evident in the original thesis. The elements are most clearly explained in Postscript where Kuhn describes the four main factors - symbolic generalizations, metaphysical models, shared values, and exemplars.

At their most basic the components can be understood as follows. The first element 'symbolic generalizations' refers to expressions or symbols which are employed unquestioningly by group members, these generalizations often taking on the appearance of common sense laws of nature (e.g. in

physics, ' $f = ma$  or  $I = V/R$ '. 1970, p.183). The second component reflects shared commitments to belief in metaphysical models, such models being what Kuhn originally meant by 'metaphysical paradigms' (or metaphysical parts of paradigm) whose major function is to supply the community with adequate analogies for determining what will be accepted as puzzle solutions (e.g., "heat is the kinetic energy of the constituent parts of bodies; all perceptible phenomena are due to the interaction of qualitatively neutral atoms in the void, or, alternatively, to matter and force, or to fields" 1970, p.184)<sup>6</sup>. The third component refers to the 'shared values' which "provide a sense of community to natural scientists as a whole" (1970, p.184), these values, Kuhn notes, being of particular importance during periods of crisis, and especially in the latter stages when members must choose between incompatible ways of practicing to discipline<sup>7</sup>. The final element refers to 'exemplars', or the 'concrete problem solutions' for which Kuhn suggests the term 'paradigm' is 'entirely appropriate' (1970, p.186), this being the aspect of a community's shared commitment which apparently first led Kuhn to coin the term.

While these elements are all developed upon within the 'later' (1970, 1970b, 1974) works, there nevertheless remains ambiguity over both the final taxonomy that will represent the matrix, and the handling of paradigm generally. For example, whereas in Postscript Kuhn relates each of the matrix elements to the paradigm concept, in Second thoughts the role of 'shared values' is omitted. Also, while in Reflections and Second Thoughts Kuhn admits to having lost hold of the concept - and suggests we refrain from using it - in Postscript he talks freely of paradigms inter alia. Here, phrases such as 'having lost control of the word' (1970b,

p.272) or, 'less confusion will result if I replace it with' (1974, p.463) fail to clarify whether the concept is being discarded or merely substituted. Indeed, this equivocality can lead to several forms of interpretation: e.g., that we must relinquish paradigm as an overall concept in favour of using the specific elements of the disciplinary matrix; or that we can invoke the term but only to refer to concrete problem-solutions (exemplars); or even that we can retain a basic conception of overarching paradigm but only along the guidelines of the sociological elements of the matrix (i.e., symbolic generalizations, metaphysical models, shared values)<sup>8</sup>. If we wish to retain a use for the term it would seem that while the second interpretation offers the possibility of empirical clarity, a more encompassing sociological sense such as the latter - although more elusive - appears to reflect a more powerful heuristic, e.g., indicating implicit consensus, hidden agendas, shared values.

As it is this overarching sociological use that is regularly invoked by community analysts, then in the debates below, we adhere to Kuhn's definition in terms of shared "beliefs values (and) techniques" (1970, p.175), i.e., his initial classification of 'disciplinary matrix' in which he separates the sociological components from that of exemplar. Likewise, while our empirical work is based largely on the proposals of one scheme (Burrell and Morgan, 1979), our use of paradigm draws upon the 'shared values' and 'metaphysical models' invoked by this model in specifying analogies for solving community 'puzzles'. Although we speculate as to certain paradigm exemplars (e.g., Marx' Capital: Radical Structuralist paradigm) these are only hypothetical and sociological imperatives are stressed throughout. This approach is in fact not without support for, as

Musgrave (1971) notes, if Kuhn had been willing to settle for the more limited use in terms of exemplars then his work would not have raised half the interest it subsequently generated. Indeed, as Musgrave (1971), Shapere (1971) and Chalmers (1978) suggest, for the concept to retain its more far reaching (sociological) emphasis we may have to accept that, "it is of the nature of a paradigm to belie precise definition" (Chalmers, 1978, p.87)<sup>9</sup>.

Critics such as Musgrave and Shapere feel that in seeking to disentangle the concept Kuhn has only weakened the argument. Although Kuhn never explicitly classified how sociological uses are related to concrete exemplars, and in turn how the ruling paradigm determines the course of research programmes, nevertheless, it was this very positing of the hegemonic unseen unity and controlling status of paradigm that provided the challenging appeal, i.e., that there exists an overarching disciplinary Zeitgeist that specifies the manner by which community scientists view the world, and determines what will count as acceptable problems and solutions. Despite the sociological implications of the disciplinary matrix Shapere accuses that instead of a cohesive and integrated 'paradigm' network, the new divisionalised proposals represent "a loosely associated assemblage, each of whose components has its own separate and separable function" (p.707). Kuhn's attempts at clarification are seen as muting the controlling status of the paradigm, and as such, "abandon(ing) what was, however obscure, one of the most provocative and influential aspects of his earlier view" (p.707). For Musgrave (1971) similarly, the 'retreats' visible in Kuhn's later works make him "but a pale reflection of the old revolutionary Kuhn" (p.296).

However, despite being 'loosely associated' the components of the matrix are still of course linked in their concern with the social dimension of science. Shapere is perhaps too harsh in his critique, for the later Kuhn has still advocated "the need to study the community structure of science", and especially in that, "scientific knowledge, like language, is intrinsically the common property of a group or else nothing at all" (1970, p.210)<sup>10</sup>. While the matrix, in being subject to separate classifications, seems to detract from the image of the overarching Weltanschauung, its constituent parts still highlight the role of metaphysical properties in shaping programme agendas and puzzle solutions.

Therefore, in the present thesis we emphasise these metaphysical properties, and especially those of metaphysical theory (or 'metatheory'), in appreciating the shared scientific images at the root of paradigm commitment<sup>11</sup>. Thus, we hold as our starting point the implicit sociological values held by a theory community rather than a search for its concrete exemplars. The emphasis here is on paradigm hegemony rather than isolating classic laws or the formal kinship ties of 'invisible' (?) colleges. In the debates analysed below, and in the empirical research later - to borrow Masterman's (1970) typology - we seek to understand the 'metaphysical' paradigm to then understand the 'sociological' and the 'artifact' - the 'ways of seeing' underlying the 'achievements' and the 'instrumentation'.

In Chapter 2, we will examine some of the differing images of the subject matter held by social scientists today. However, before this, let us turn to the second of our problems - incommensurability and relativism - concepts acting as barriers to inter-paradigm journeys.

### 1.3 Incommensurability and Relativism: Kuhn and Popper

Kuhn's original position in attacking the proposition of theory-independent 'facts', seems to deny the possibility of objective choice between paradigms. There can be no 'good reasons' for preference of a new paradigm as such reasons will always be paradigm-dependent. For Kuhn, "the competition between paradigms is not the sort of battle that can be resolved by proofs" (1962, p.147). Therefore, in Kuhnian theory the two traditional pillars of science - 'objectivity' and 'progress' - are seemingly lost. Not only are we bereft of means of rationally evaluating competing paradigms, we appear to be deprived of any way of comparing them at all - we see alternative worlds through whichever paradigm we are situated. This position, then, appears a relativist one, as it seems that while scientific theories change, such change cannot signal 'progress'<sup>12</sup>. As Kuhn has said, "like the choice between competing political institutions, that between competing paradigms proves to be a choice between incompatible modes of community life" (1970, p.94).

These problems of relativism, which stem from the incommensurability thesis, are central to the I.C.P.S. (1965) contributions collected by Lakatos and Musgrave (see Popper, Watkins, Lakatos, Toulmin, Pierce-Williams, Feyerabend; all 1970), or the literature forming what has come to be popularly known as the 'Kuhn-Popper debate' (Pierce-Williams, 1970).

#### Communication Problems in Kuhn and Popper

The origin of the Kuhn-Popper debate stems from Popper's attack on Kuhn's use of irrationalist symbols in outlining science history, and especially regarding the latter's descriptions of dogmatic activity. Here while Popper's (1968) well known suggestion (in 'Logic of Scientific Discovery') is that there is a 'necessary' place for dogma - in that we must not

reject theories too easily or their power will never be realised – the essence of the Kuhn-Popper debate is that Popper, later (Popper, 1970), argues that this is a totally different conception of the role of dogma from that in S.S.R. In Kuhn the scientific endeavour is seen as characterised by the proliferation of a ruling dogma which exercises hegemonic control for lengthy periods. Thus, in periods of so-called 'normal' science the (Popperian) tenets of real debate are inaccessible. Here Popper argues that Kuhn's image of 'puzzle' discussions within a common framework, while appealing, does not match up with fundamental, rational principles, and thus, conversely that "the relativistic thesis that the framework cannot be critically discussed is a thesis which can be critically discussed" (Popper 1970, p.56, emphasis in original). Kuhn's restrictiveness is seen as fundamentally misplaced as alternative frameworks are not inconceivable. In Popper's famous statement, "I do admit that at any moment we are prisoners caught in the framework of our theories; our expectations; our past experiences; our language. But we are prisoners in a Pickwickian sense; if we try we can break out of our framework at any time. Admittedly, we shall find ourselves again in a framework, but it will be a better and roomier one; and we can at any moment break out of it again" (1970, p.86). Therefore, a comparison of frameworks, and thus critical discussion, always remains possible. What in Kuhn is regarded as an impossibility should better be regarded as a difficulty<sup>13</sup>.

As its most basic here lies a variant of the theory neutrality/dependence of observation language debate, i.e., the argument that if successive theories are to be compared, we must ask whether a language is available into which the empirical consequences of both can be translated: an ideal

primitive vocabulary of pure sense-datum terms? (See Keat and Urry, 1976; Chalmers, 1978 for introductions<sup>14</sup>.) However, the problems of theory-neutrality/dependence are well known to, and well documented by, both Kuhn and Popper. Indeed, for the Kuhn-Popper debate it is not simply a debate as to the possible recourse to pure translation, but instead to the degrees of translatability - ultimately degrees of understanding.

The major watershed in this debate is in the realisation that the Kuhn of Reflections seems no longer happy with the incommensurability thesis (as similarly he is not keen to be termed an out and out relativist) and indeed begins to talk of the possibility of communication. This is most blatant when, on seeking to distance himself from Feyerabend (1970), he insists, "where he (Feyerabend) talks of incommensurability tout court, I have regularly spoken also of partial communication" (1970b, p.232)<sup>15</sup>.

From Kuhn's remarks it seems that he finds it increasingly difficult to hold onto the incommensurability thesis especially when he chooses to talk of communication - no matter how partial<sup>16</sup>. Whereas Popper has vigorously argued (see especially 1970) that even the most incongruous languages have been made translatable, Kuhn (as with his handling of paradigm) has become increasingly ambivalent. Kuhn finally arrives at the position where he suggests that it is not simply a question of our learning a 'foreign' language (which we can presumably achieve), but that ultimately there are differences in meaning which are inevitably inaccessible. The last line of defence reads that even the most bi-lingual of individuals can only translate up to a certain point before he or she is forced to compromise between incompatible objectives. As Kuhn notes, "Translation ... always involves compromises which alter communication" (1970b, p.268). The final point of retreat is reached when he maintains, "what the existence of

translation suggests is that recourse is available to scientists who hold incommensurable theories. That recourse need not, however, be to a full statement in a neutral language of even the theories consequences. The problem of theory comparison remains (1970b, p.268). Therefore, we now witness a position that is in fact poles asunder from the exclusivist incommensurable 'instant-paradigm' thesis, originally outlined in S.S.R. (1962), albeit that this displaced analysis represents one which many neo-Kuhnians have invoked wholesale even after Kuhn's concessions.

In concert with his reflections on incommensurability, Kuhn's defence against relativism also witnesses a retreat from his original (S.S.R.) thesis. However, this retreat in some respects offers tentative analytical openings for achieving a rationale for multiple paradigm research.

In his defence against relativism Kuhn now seems to argue that there is an objective sense in which a new paradigm can be seen as better than the one it replaces. This is through arguments regarding the original conception of puzzle-solving ability (or what now appears more to resemble 'problem-solving' ability). The crucial factor here is the role Kuhn finds for nature. While Kuhn originally documented how, for example, Einstein's paradigm replaced Newtons because it was able to solve any problem equally as well or better, he also maintained that this paradigm change did not signal a closer approximation to reality - i.e., to truth. This led to cries of relativism as the whole question of progress was brought into question. In Reflections, however, Kuhn attempts to remedy this situation by suggesting that, for the linear paradigm changes witnessed in the natural sciences, scientific problems are not exclusively determined by paradigm forces, but that nature exerts a seemingly paradigm-independent

factual world, bringing forth (progressive?) problems for solution. Kuhn thus argues that, "no part of my argument ... implies that scientists may choose any theory they like so long as they agree in their choice and thereafter enforce it. Most of the puzzles of normal science are directly presented by nature, and all involve nature indirectly. Though different solutions have been received as valid at different times, nature cannot be forced into an arbitrary set of conceptual boxes" (1970b, p.263).

Although it seems that nature can supply the odd good reason or so, and at first sight that we may have been wrong about Kuhn all along, in the final analysis Kuhn is, of course, more guarded, with the position actually suggesting that, "later scientific theories are better than earlier ones for solving puzzles in the often quite different environments to which they are applied" (1970, p.206).

However, despite being rather tenuous, this position is also very much at odds with the essence of S.S.R. (1962) where he took linear incrementalist explanations to task. Indeed, these later reversals signal, as Shapere has noted, "for better or for worse, a long step toward a more conventional position in the philosophy of science" (1971, p.708).

Shapere (1964, 1971) has in fact located several inconsistencies with Kuhn's restatements; but ironically, these in many ways pointing to, "a viewpoint as relativistic, as antirationalistic as possible"<sup>17</sup>. Kuhn is caught in this quandary of seeking to mend his ways while still hoping to hold on to many of his old postulates. While Kuhn seeks to claim that his view does not imply, "either that there are no good reasons for being persuaded [in favour of a new paradigm] or that those reasons are not ultimately divisive for the group" (1970, p.199), he nevertheless maintains, "what it should suggest, however, is that such reasons function

as values and that they can thus be differentially applied, individually and collectively, by men who concur in honoring them" (1970, p.199, emphasis added). This is a puzzling position to argue on the one hand that there are no constraints on what one can purport in the name of values, and on the other that there still remain good reasons (in such circumstances) for paradigm selection. It is a similar paradox to that (necessarily) generated in defence of the charge that his (1962) incommensurability thesis implies the impossibility of communication. Here again one is left unclear about the actual degree to which paradigms are involved in specifying meanings and judgements of nature, such ambiguity finally making it difficult to ascertain to what extent meanings produced in one paradigm can be related in the (foreign) vocabulary of another.

As we have noted Kuhn's later articles herald a notable volte face over the question of incommensurability. Here, instead of arguing for complete paradigm-determination of meanings, he later advocates, not only the seemingly progressive influence of nature, but more concretely, certain overlaps of paradigm meaning (i.e. 'shared everyday vocabularies', 1970, p.202) which serve to isolate 'areas of difficulty in scientific communication' (p.202), and subsequently assist in discovering "what the other would see and say when presented with a stimulus to which his own verbal response would be different" (p.202). Indeed, this process eventually leads to a position whereby competing scientists, "may in time become very good predictors of each other's behaviour. Each will have learned to translate the other's theory and its consequences into his own language and simultaneously to describe in his language the world to which that theory applies" (p.202).

For our present purposes, however, this fails to demonstrate adequately how we may retain the essence of incommensurability while at the same time allowing for some inter-paradigm understanding and movement. Indeed, while in his later works Kuhn erects defences which seek to accommodate 'partial communication', there is unacceptable equivocality in the process, here moving back and forth in emphasis from 'persuasion' to 'conversion', from 'translation' to 'isolation'. In fact, Kuhn's later assertions, although attempting to retain the power of theory-dependence, are in danger of running towards a more traditional position by accepting an almost straightforward translation method as the basis for eventual discourse.

It could be argued then, that the power of the paradigm concept, in the sociological sense, can only be retained by a more sophisticated alternative; one which could retain the rich quality of paradigm specific language but overcome hermetic tendencies through allowing a dissected world to be explored, i.e. retaining 'relativity without relativism' (Giddens, 1976). Such a position may act as an heuristic for the theoretical exploration of disciplines holding multiple paradigm formations. As many commentators, including Kuhn (see below), hold the social sciences to be 'poly-paradigmatic' (Lammers, 1974), the securing of such a position would serve as a theoretical justification for the, albeit separate, task of empirical exploration.

#### 1.4 Wittgenstein

In seeking such a position we turn to the 'later' Wittgenstein and especially the concept of 'language-games'. This concept is in many ways equational with 'metaphysical paradigm'<sup>18</sup>. The 'later' Wittgenstein is commonly regarded as one of the seminal influences not only for the so-

called 'conventionalist' philosophy of, for example, Kuhn, Hanson and Feyerabend, but also for the interpretive sociology (especially linguistic ethnomethodology) of Garfinkel, Blum and McHugh, and Sacks and Schegloff. His work is also seen as having considerable convergence with social philosophers influenced by hermeneutics, such as Gadamer, Apel and Ricoeur. Indeed, as Giddens (1976) notes, it is remarkable how 'language games' has important parallels with conceptions developed in schools with little or no direct connection to the 'Philosophical Investigations' (1953): e.g. Schutz's 'multiple realities', Casterada's 'alternative realities', Whorf's 'language structures', or Althusser's 'problematics'. However, Kuhn's concept of paradigm, in being developed with the concept of 'game' in mind (see S.S.R., 1970, p.44-5), is perhaps less indirect.

While the above have very basic differences, especially in terms of the problems they address, nevertheless, all manifest a movement away from the abstracted empiricism and positivist emphases of logical atomism and Vienna Circle philosophies, and towards a position emphasising discrete and bounded meaning structures. They all, similarly, come face to face with the vicious circle of relativism. The central problem remains of, "how the rules governing one form of life are to be connected to, or expressed in terms of, those governing other forms of life", while still seeking "to sustain a principle of relativity while rejecting relativism" (Giddens, 1976, pp.17 and 18). We have seen how Kuhn's attempts to diffuse relativism have proven disappointing. Nonetheless, in seeking to posit nature as the foundation for good reasons Kuhn was approaching a dialectic of promise. The elucidation of such a dialectic is what the later Wittgenstein sought in order to solve the threats of relativism facing the rule structures of language games, with several writers

following Wittgenstein in his endeavour. While Winch's (1958, 1964) work has remained signal other writers have expressed similar views such as Anscombe, 1963; Kenny, 1963; and Melden, 1961. However, of more importance for us is the fact that some recent writers have linked Kuhn's work to the debate (e.g., Disco, 1976; Giddens, 1976; Phillips, 1977).

Winch's (1964) article on Zande culture employed Wittgenstein's analysis of games to argue (contrary to Evans-Pritchard) that central forces in Zande culture, such as witchcraft and magic, in being so intrinsic to culture have to be understood through a logic quite different from beliefs in our own culture. Therefore, such 'strange' forces can only be deemed 'irrational' or 'mistaken' within the context of our own culture, as to attempt to comprehend such practices using Western logic is to make a mistake similar to attempting to understand the rules of one game using assumptions based on the rules of another. To overcome the obvious relativistic implications Winch sought to employ what he termed certain 'limiting notions' such as birth, death, sexuality etc. which are simply pre-supposed by human life, in being "inescapably involved in the life of all known human societies in a way which gives us a clue where to look, if we are puzzled about the point of an alien system of institutions" (p.322).

Although critiques of Winch are well established (e.g., Giddens, 1976; Louch 1963; Wilson, 1970) the importance here is Winch's advocacy of constraints beyond justification. While critics have claimed this to be a rather makeshift defence, the conception of such a bedrock ('biological universals'), like Kuhn's proposals regarding the non-arbitrariness of nature, are nevertheless illustrative of an argument worth developing,

i.e., Wittgenstein's positing of a language game that is similarly beyond justification - the language game of everyday life<sup>19</sup>.

Giddens (1976) however feels that a position seeking recall to such a bedrock is untenable. He suggests that the ideas relating to the bedrock could themselves be seen to be "imprisoned within the same language-game" (p.50). This may, however, risk the very slide into the relativist's corner that Giddens would wish to avoid. While Giddens condemns approaches such as Winch's because they leave the origin of conventions 'shrouded in mystery' and 'necessarily inexplicable', he also chastises because of the absence of human agency, i.e., "they do not appear as 'negotiated', as themselves the product of human action" (p.51). Perhaps this is the whole point. For the later Wittgenstein such origins are like life itself, just there (here). These are forces prior to 'negotiation', and prior to convention; but, in being nature, are inextricable - the given.

For Giddens the problems of relativism and incommensurability are faced both by Kuhn's paradigms and Wittgenstein's discrete language-games, and should be resolved by recourse to hermeneutics. He feels that a major stumbling block to rescuing relativity (from relativism) lies in the exaggeration of the internal unity of paradigms and language games (especially, for the latter, in Winch's work), with as a result such 'frames of meaning' tending to be treated as closed systems. Of course, we realise that such incommensurability, especially for Watkin's (1970) reading of Kuhn, seems to suggest the impossibility of getting from one enclosed universe, or one meaning-frame, to another. Giddens however offers another avenue. He suggests that such problems arise because of the very premise of the question thus posed - essentially an

insurmountable one. For Giddens it is a matter of reformulating the question. Therefore although "frames of meaning appear as discrete, thus: ( ) ( ) ( ). In lieu of this, we must substitute, as a starting point, that all paradigms (read 'language games' etc.) are mediated by others. This is so both on the level of the successive development of paradigms within science, and of the actor's learning to 'find his way about' within a paradigm" (p.144 emphasis in original).

Giddens offers a solution by suggesting mediation through negation. As day is meaningless without night, so "the process of learning a paradigm or language game as the expression of a form of life is also a process of learning what the paradigm is not: that is, to say, learning to mediate it with other, rejected, alternatives, by contrast to which the claims of the paradigm in question are classified", (p.144) If we accept such a reasoning then, "there is no logical difficulty presented by relativism on the level of meaning, that is to say, that form of relativism, tending to derive from an overemphasis upon the 'closed' character of frames of meaning, in which the translation of meaning from one frame to another appears as logically impossible" (p.144, emphasis in original)

Here Giddens separates relativism on the 'level of meaning' from 'judgemental' relativism, which thus tends to play down the role of meaning-frames as hard distinct 'realities' each of which is logically equivalent, and therefore incomparable, to another. However, both forms can lead epistemologically to vicious circularity, unless, for Giddens, we seek to transcend judgemental relativism through hermeneutics. The sine qua non is respect for the 'authenticity' of mediated forces of meaning, that is, for generating authentic descriptions of forms of life

to be made available to those who have not participated. Therefore in order to generate adequate descriptions of the social conduct demonstrated by meaning-frames, there must be "the immersion of the observer in a form of life, whereby the hermeneutic mediation of language-games can be accomplished" (p.149).

However, while mediation is advocated to help our escape from incommensurability and relativism, we are still left unsure of how such mediations shall be accomplished, i.e. how such accounts will be made adequate to others outside of the paradigm. Giddens suggests that one of the (two) primary tasks for sociological analysis is "the hermeneutic explication and mediation of different forms of life within descriptive metalanguages of social science" (p.162). Here, in the actual process of finding ones way about such alien communities he suggests that the practice of mediating the descriptions is having them "transformed into categories of social-science discourse" (p.161). This is surely an unfortunate phase as it seems to raise again the spectre of theory neutrality, i.e. categories, somehow justified as social science. What would be the justification for such categorisation? One might assume that the strength of hermeneutic method was in experiential understanding, and that if we were to truly move between differing meaning-frames that this would never be directed towards some formal transformation into categories. Therefore let us instead seek another hermeneutic course and return to the 'bedrock', 'shrouded in mystery', that both Kuhn and Winch have seemed drawn towards; the bedrock central to the linguistic philosophy of the later Wittengenstein - that of nature and its dialectic with language.

### 1.5 Language-Game of Everyday Life

Kuhn's (1962) attack on traditional positions in the philosophy of science stressed the failure of positivist propositions to recognize that what we choose to regard as knowledge is essentially inseparable from the time and culture within which such decisions are made. Kuhn argued that such positivist positions are erroneous in that they fail to grasp their own relativity and dependence on cultural values. The point is not that a particular position such as positivism is sociological, but that each gains its separate existence through learning of its own language, or, put simply, the means by which it beholds the 'world', as we call it. As in Stuart Hampshire's (1956) famous phrase, "we cannot step outside the language which we use, and judge it from some ulterior and superior vantage point" (p.192); so for Kuhn, "the proponents of different theories are like members of different language-culture communities" (Postscript, p.205).

For Kuhn then, as for the later Wittgenstein, there is a considerable recognition of ways that language can cut up the world, and thus of the Wittgensteinian notion that the meaning of words is dependent upon the given 'form of life'. In Kuhnian theory the scientific community is largely bound by the presuppositions it holds, such premises, in turn, providing the rules discerning the perceptual limits of problems and solutions etc. Language, therefore, erects the boundary encircling what scientists think and therefore do. Although such a position may seem deterministic, Wittgenstein's position is essentially less so; indeed it approaches a middle ground, between the extremes of relativism and absolutism, which may alleviate some of the difficulties arising from a full blown acceptance of the incommensurability thesis.

As Kenny (1973) notes, a fundamental tenet of Wittgenstein's later work is the very impossibility of separating language from the human milieu of its location. Indeed, as we noted above, Wittgenstein's later work is, for many, levelled against his Tractatus thesis that words in an utterance are in some way mutually related with the objects for which they stand. In the 'later' works language is a social activity expressive of human needs, a means of communication within the world and not merely a reflection of the order of the world. Thus, as Wittgenstein suggests, "the term 'language game' is meant to bring into prominence the fact that the speaking of language is part of an activity, or of a form of life" (1953, p.23).

The concepts of 'language game' and 'form of life' are, however, like paradigm, rather elusive. In the 'Blue and Brown' books, Wittgenstein states, "I shall in the future again and again draw your attention to what I call language games. These are ways of using signs simpler than those in which we use the signs of our highly complicated everyday language. Language games are forms of language with which a child begins to make use of words. The study of language games is the study of primitive forms of language or primitive languages" (1958, p.17). Word language then is an activity and not, merely a static and abstracted sign structure. As Disco (1976) succinctly puts it: "when language is spoken there is a speaker and, usually, a listener ... here we have a language game, language in use, the production of meaning". As such, any other conception of language, "must accede to the charge that it has de-contextualised the symbol system. It has removed from the semiotic structure the behaviour in which it is, ab origine, embedded" (Disco, 1976, p.270, emphasis in original).

The middle ground we mentioned is forged through Wittgenstein's thesis that language is both a product of human activity, but also a producer of meaning; and thus of new forms of human action (Phillips, 1977). Here we witness an essential dialectic between language as a producer of new meanings, and as itself dependent on conditional 'facts of nature'. Thus, Wittgenstein does not wish to propose that facts of nature wholly prescribe language, nor, on the other hand, advocate that 'facts of nature' are entirely the products of our language. Instead, as Phillips (1977) notes, "while he (L.W.) gives many examples of imaginary peoples with different forms of life different from our own, and therefore, with such basically different conceptions of the way things are that they can be said to live in a 'different world'; this is not the case in the world in which we live. Of course, there are different language-games among us, but there are certain facts of nature which have a priority to all language games. In other words, nature has something to say, although it does not determine what we can say" (p.84, emphasis in original).

The relationship of form of life to facts of nature is basically as follows. Our form of life is essentially the set of behaviours, based on organic properties, through which the organism expresses its being alive. For humans through millions of years of evolution such a form of life has come to include linguistic communication, abstraction and complex social inter-relationships. In the work of the later Wittgenstein, human existence unlike other forms of animal existence, is then, "neither pure spirit, language having flown free of its behavioural fetters, nor pure Nature, non-symbolic sequences of instrumental stimulus-response, but a set of inseparable amalgams of sign and instrumental behaviour, language games, based on the possibilities of our form of life" (Disco, p.270

emphasis in original). Wittgenstein then seeks to infer an infrastructure of species-specific possibilities delimiting the conceptions that can emerge, a form of life expressing both the grounds for language and the limits of such possibilities. Nature itself, however, is not limited to our form of life, for there remains another domain of elements with which we interact and which, in so doing, delimit our language i.e., the unanalysed ways in which 'the world is', or within which forms of life move and become part of. Here, such a world is made sensible because the language within which such thought is cast offers no grounds to question its material basis. Any such rejection of the basis of language would be a recourse to a solipsist position.

By analogy this analysis can be linked to the questions of paradigm incommensurability and relativism. It is through this dialectical relationship between language and nature that Wittgenstein seeks to undermine deterministic explanations whereby either one causes us to act. By illuminating such a continuous tension Wittgenstein avoids adherence to the relativism evident in Kuhn's work and, we could argue, much of the sociology of knowledge.

The central feature in this dialectical game relationship is Wittgenstein's chief functioning distinction - in the field of language game - between what he terms the 'everyday language game' and other technical and special language games. The everyday language game is our basic natural language. It is the first language we accommodate; our first years of life being characterized by the quest for assimilating the natural structures of the everyday language game. We learn to speak, to ask questions, to discriminate between waking and dreaming. Thus, such an elementary framework forms the bedrock for our later linguistic

acquisition and for the later accommodation of special language games; it is then the basis for language, and thus of what we can possibly think (Disco, 1976).

As the everyday language game is the very basis of thought then it needs no justification, it is beyond justification - justification is but a special language game, although Wittgenstein gives caution in that, "what we have rather to do is to accept the everyday language game; and to note false accounts of the matter as false. The primitive language game which children are taught needs no justification, attempts at justification need to be rejected" (1953, p.200, emphasis in original). Thus, as Phillips (1977) notes, "the everyday language-game constitutes the very rock bottom of our knowledge and experience. It would simply make no sense to ask whether it is true (or false), for there is no transcendental criterion - which, would have to stand beyond or outside language - by which such a judgement could be made" (p.88). From this argument, therefore, we are left with a position in which, "the everyday language game has ... an epistemological and ontological primacy. It interpenetrates and shapes as well as contextualising all other language games played in a society" (Disco, p.277).

It is this interpenetration of the everyday language game into all other language games that is important for us. Technical language games can be seen as discrete and bounded but for differing purposes. While we have a language-game of science, we also have other language-games cutting up science; like physics, biology, psychology etc; with further interpretations from language-games such as theorising, calculating, testing etc. None of the latter language-games are discipline specific. On the contrary they overlap with many other technical language-games in

seeking to make sense of some bounded portion of everyday life, thereby constructing a language game efficacious for such an endeavour (Phillips, 1977).

Although such special languages can develop there is always interpretation with the bedrock, i.e. a necessary recourse to the language-game of everyday life - which holds primacy. The language game of everyday life is the foundation for all special language and as such we can only learn language games of psychology or sociology (or functionalism, phenomenology, humanism, structuralism) though the use of our ordinary language which is beyond justification (albeit what we say within special language game is not ). As we noted the everyday language game is not based on 'grounds', it is like our life - just 'there' (here).

While metaphysical paradigms, especially the 'shared models' of the disciplinary matrix, can be viewed as equational with community bound language-games, we have also noted how other language games such as calculating and testing, while themselves bounded, nevertheless overlap with other technical language games in making sense of the world; notably, here, the 'scientific' world. Such games, however, are always dependent upon the language game of everyday-life for establishing the limits of their possibilities. Thus, while the language of 'truth' may be ascribed through intra-paradigm and intersubjective consensus, the language games employed in such justification do not necessarily exist in such a relativist vacuum. Language is, after all, employed by humans while partly dependent on certain 'facts of nature', and as such rest on constraints which are prior to the 'conventions' of Kuhn, Hanson and Feyerabend.

Such an account can perhaps be removed from charges of pure relativism. It may also suggest passages of reason by which to undermine incommensurability through a similar recourse to the 'bedrock' of nature and the everyday language game. Therefore, it may offer a more adequate argument for retaining relativity while rejecting relativism.

#### 1.6 Implications and Conclusions

The above analysis of the interpenetration and overlapping of technical language-games helps confront Kuhn's emphasis on incommensurability. We have noted how technical language games have ultimate recourse to the meta-language which underlies them - the everyday language game. This everyday language-game establishes not only the possibilities of what we can think, but, with regard to perception, similarly to what we can see. Here the difference between 'seeing' and 'interpretation' is central. The quotation from Wittgenstein which fronts the thesis denotes such a difference. While many philosophies of science argue (with regard to the theory-dependence of observation debate) that observation is merely seeing plus an interpretation, this, in fact, implies that there exists a 'knowable' absolute. Thus, while a geometric shape may be interpreted as this, then this, then something else, there is nevertheless a pure knowable absolute object. What 'seeing' seems, for Wittgenstein, to imply, is an experiential state from which we can never know the absolute object of what we see. However, what we see is only what we have so far learnt to see through the language-games in which we have been developmentally trained. Although the limits of what we can see are set according to the meta-language of our form of life, within such bounds there may be an almost infinite set of possibilities - the natural limits.

Such a line of analysis underlies the solutions to paradigm communication advocated by Phillips (1977) and also Maruyama (1974), who both reject the grand isolation of Kuhn and Feyerabend, while similarly objecting to arguments such as Popper's (1970) for 'break(ing) out of our frameworks at any time'.

Such a reading of Wittgenstein argues that as our perceptual limitations are in this way empirically established, so the rules and conventions of our 'meta language in use' allow us to deal not only with the present language-game, but also with to explain a new language-game into which we may be trained. Here the emphasis is not on a sudden gestalt switch occurring and allowing us to see the light, but rather, as Watkins (1970) would support, of the perceptual arrangements being previously established allowing for such a transfer of allegiance. Phillips (1977) cites Kohler's faces and goblet drawing to explain the impossibility of appreciating the goblet if one only has knowledge of faces. As Phillips notes, "unorganized experience cannot organize perception" (p.111).

It is, therefore, perhaps mistaken to talk of switches of 'allegiance' as such, and indeed Phillips has argued for a concept of 'seeing as' - the ability to reflect between seeing 'this' and seeing 'that' - as an intermediate step, and foil, for the incommensurability thesis. The Kohler drawing is often cited in support of theory-dependence of observation; notably in Hanson's work (when his conventionalism is often catalogued along with Kuhn and Feyerabend: see Keat and Urry, 1976). However, as Phillips stresses, the Kohler drawing is not so much an argument for incommensurability as such, but represents, instead, an excellent example of how two language-games or paradigms can be straddled at once. The learning of what faces or goblets are, allows not simply a transference

from goblet to faces, but also vice versa. One can see faces, see the goblet, or even see the Kohler drawing - all are experiential states; all transferable and all capable of reflection.

For Kuhn (1962) a scientist working under one particular paradigm cannot entertain another until the conversion experience that changes his whole world view. Watkins (1970) Shapere (1971) and now Phillips (1977), however, have questioned the logic of this 'instant-paradigm' thesis, in that unorganized experience is incapable of organizing perception. If we can be trained so as to comfortably straddle two language-games, then, a la Giddens, 1976, it should not be too difficult to apply the logic to paradigms, especially as scientists sharing a paradigm are, as Kuhn (1962) states, sharing 'language'. As the rules and conventions of 'meta-language in use' serve to explain each special language-game, then in turn the interpenetration of language-games such as theorising and testing can be used as the basis for explaining and teaching other special languages. Practitioners in differing paradigms not only share ordinary language, but are subject to the overlap of intersecting technical languages. Although this is far from complete, it is the basis for training into future possibilities and realising 'seeing as'; that is the understanding of two language-games or two paradigms. This is not, however, through any theory-neutral observation language, but by recourse to the everyday language game holding ontological and epistemological primacy - the dialectic of nature and language.

1. Here the activity that characterises science is not the systematic theory-testing of falsificationism, but rather the solving of 'puzzles' (not 'problems') which are the product of the newly established scientific approach. This process represents, "research firmly based upon one or more past scientific achievements ... that some particular scientific community acknowledges ... as supplying the foundation for its further practice" (1962, p.10).
2. The dynamic of normal science is that the paradigm-reality fit is never seen as complete the discrepancy offering the puzzles for solution. Paradigm commitment assures scientists that if they are resourceful enough the solution will, eventually, be forthcoming. If the pieces will not fit it is the solver who is discredited. The normal scientist needs to be uncritical of the paradigm so as to be able to concentrate on the detailed work of probing the paradigm.
3. See also Polanyi (1958) for a similar discussion of the tacit nature of scientists' knowledge.
4. The problem arises from Kuhn's own insistence that the paradigm can never be expressed (Shapere, 1971).
5. Such uses are not, however, all mutually exclusive. Masterman categorises the twenty-one into three main groupings: first, what she calls 'metaphysical paradigms' or 'meta paradigms', referring to a 'metaphysical notion or entity rather than a scientific one' - such as accepted 'myths', 'new ways of seeing' and 'metaphysical speculation'; second, 'sociological paradigms' including 'concrete scientific achievements', 'universally recognised scientific achievements' or a 'set of political institutions'; and thirdly,

- 'artifact paradigms' or 'construct paradigms' incorporating aspects such as 'an actual textbook or classic work', 'an actual instrumentation', 'an analogy', and a 'gestalt' amongst others.
6. More relevant to the present thesis is the shared commitment to relatively heuristic models, e.g., "the electric circuit may be regarded as a steady-state hydrodynamic system; the molecules of a gas behave like tiny elastic billiard balls in random motion" (1970, p.184).
  7. Values are of central concern to questions of methodology and prediction (e.g, 'quantitative predictions are preferable to qualitative ones', 1970, p.184); to theory judgement (e.g, 'they [theories] must ... permit puzzle formulation and solution ... [be] compatible ... with other theories currently deployed', 1970, p.185); and, to the nature of science itself (e.g., 'science should [or need not] be socially useful', 1970, p.185).
  8. In seeking some continuity, Kuhn demonstrated (in Postscript) the linkage between the paradigm concept in S.S.R. and the new explanation via elements in the disciplinary matrix. Kuhn noted that in S.S.R. (1962), "on the one hand, it stands for the entire constellation of beliefs, values techniques and so on shared by the members of a given community. On the other, it denotes one sort of element in that constellation, the concrete puzzle-solutions which, employed as models or examples, can replace explicit rules as a basis for the remaining puzzles of normal science. The first sense of the term ... (is the) ... sociological ... (the second) is devoted to paradigms as exemplary past achievements" (1970, p.175).

9. This position is reflected in that analysts commonly rely on an accepted sociological understanding of the concept's implications, rather than seek to explicate what is in fact an essence. For example Giddens (1976, p.142 ff) accepts that the concept, while powerful, is nevertheless elusive, and interchanges it with five other concepts equational with his own 'frames of reference'. A recent book entirely devoted to Kuhn only considers the question as a side issue: Barnes (1981) notes how 'difficulties remain' in that the concept is not 'clear and consistent', with his work addressing 'paradigm' only in a short 'authors note' (see Barnes, 1981, p.xiv). Also a recent article by Harvey (1981) which "examines how sociologists have used the term 'paradigm' in a loose and inconsistent manner" (p.85), itself fails to define the concept, offering only an overview of Kuhnian theory.
10. Although this remains an important task, rather narrow empirical investigations have been undertaken in its wake, e.g., seeking to obtain overall community images of a disparate discipline by analysing the contents of one journal (i.e., Wells and Picou, 1981).
11. For paradigms, however, we may even be able to speculate upon some of the main transformational rules used, in that we can infer the working metatheoretical assumptions (or in the social sciences the essential images of the subject) being held.
12. Albeit that to the paradigm community such progress is taken for granted as to deny it would be to negate the community's purpose.
13. Kuhn's reply here appears to contain one of his strongest observations. He points out the paradox by which some philosophers

(i.e., especially Popper, 1970) seem to argue that while neither of an historical pair is true, that nevertheless, there is a sense in which the latter holds a closer approximation to the truth. For Kuhn, the question remains, of how phrases like 'more like' the truth (Popper, 1970) can be applied in an ontological sense as, "comparison of historical theories gives no sense that their ontologies are approaching a limit: in some fundamental ways Einstein's general relativity resembles Aristotle's more than Newtons" (1970b, p.265). However, this argument is, in spirit at least, inconsistent with other statements in his later works, where he suggests that, although not approaching a limit, subsequent theories are still capable of accounting for greater empirical content.

14. Although such debates have largely been abandoned during the 1970's, in the Lakatos and Musgrave readings Kuhn (1970a, 1970b) accuses Popper of still assuming that theories can be compared by recourse to a language; "consisting entirely of words which are attached in nature in ways that are unproblematic and to that extent necessary, independent of theory" (1970b, p.266).
15. Although this retreat is conspicuous it is not altogether surprising, especially in light of Watkins (1970) trenchant attack on the logic of the incommensurability thesis, in which he questioned the very possibility of such a new and exclusive paradigm emerging at the end of a period of normal science. In analysing Kuhn's main theses of paradigm change ('paradigm-monopoly'; 'no-interregnum'; 'incompatibility'; 'gestalt-switch') he illustrated how the 'instant paradigm' argument fails by way of a critique characterised by his simple suggestion that, "since it takes time - a matter of years

rather than hours to develop a potential new paradigm to the point where it may challenge an entrenched paradigm, heretical thinking must have been going on for a long time before paradigm-change can occur. This means that it is not true that a reigning paradigm exercises such a monopolizing sway over scientist's minds that they are unable to consider it critically, or to try with alternatives to it. It means that the scientific community is not, after all, a closed society whose chief characteristic is 'the abandonment of discourse'" (1970, p.37).

16. Note the use of 'also' in the last question.
17. Shapere (1971) shows Kuhn's inconsistency regarding the question of 'stimuli' and their relation to meanings and knowledge. One is left unclear whether stimuli are neutral and paradigm-independent or in fact paradigm-relevant, for in Postscript Kuhn both reads: "people do not see stimuli; our knowledge of them is highly theoretical and abstract" (p.192), while later; in trying to face the problem of incommensurability, that, "the stimuli that impinge upon [the adherents of the different paradigms] are the same" (p.201).
18. The concept of language-game is central to Wittgenstein's 'later' works, and especially 'Philosophical Investigations' (1953), with useful introductions being provided by Kenny (1973) and Pears (1975).
19. In Wittgenstein's famous phrase, "What has to be accepted, the given, is so one could say - forms of life".

CHAPTER TWO

THE STATUS AND COMPOSITION OF SOCIAL SCIENCE PARADIGMS

## 2.1 Introduction

"The 1970's is a decade in which sociology is characterized by attempts to define its paradigmatic status."

Ritzer, 1978, p.1

Let us now turn to questions of the status and composition of 'paradigms' in social science, and especially sociology and organisational behaviour.

Kuhn's thesis has been used widely in the social sciences as a method for assessing the developmental status of constituent disciplines. Nowhere has such interest been as excited as in the 'sociology of sociology' where numerous writers have attempted to plot paradigm schemes. Nevertheless, although Kuhn's work has been so widely embraced, the degree of sophistication with which his central tenets have been handled has proven problematic. Often writers have engaged in discussion of paradigmatic structure, whilst making only passing reference to Kuhn's central concept. As such, the paradigm concept has often tended to deteriorate into a mere catch-all, used indiscriminately to refer to a discipline, theory, school, or perspective. Indeed, writers such as Van Strien (1978), who discusses a 'practical paradigm' but does not wish to "bore the audience with abstract observations about the philosophy of applied science" (p.291), or Parkes et al. (1976) who talk of an 'individual's paradigm', offer easy targets for critics such as Mintzberg (1978), Eckburg and Hill (1979), and Harvey (1982). Although many analysts have attempted to apply Kuhnian theory diligently, (cf Friedrichs, 1970; Ritzer, 1975) considerable ambiguity has still occurred, with articles such as Lammers (1974) reflecting uncertainty over even the basic question of whether sociology is 'mono or poly-paradigmatic'.

This uncertainty is, however, not altogether surprising, for Kuhn's own proposals on the developmental status of the social sciences are ambiguous. Bryant (1975) in particular has noted Kuhn's vacillation and identified three main positions. Here, although Kuhn has consistently advocated that the social sciences (and especially sociology) are immature, he offers differing reasons at different times. Firstly, in S.S.R., 1962, he feels that sociology is 'pre-paradigmatic' and therefore 'immature'; secondly, in Postscript, 1970, that sociology is 'multi-paradigmatic', but also immature because its paradigms lack exemplars; while thirdly, in Reflections, 1972, that sociology is multiparadigmatic with each paradigm holding its own exemplars, but immature because no one paradigm is shared by all the discipline's members.

Such inconsistency has, in turn, spread to the works of those wishing to apply the thesis and again three main positions are identifiable.

Firstly, that sociology is pre-paradigmatic and at best holds only 'partial' paradigms (e.g. Wells and Picou, 1981; Denisoff et.al., 1974; Effrat, 1973); secondly, that sociology is presently and has always been multi-paradigmatic (e.g. Ritzer, 1975; Bottomore, 1975), while thirdly, that although sociology is presently multiparadigmatic, it has in the past witnessed full paradigmatic development (e.g. Friedrichs, 1970; also consider Gouldner, 1970; and Atkinson, 1972).

Let us, therefore, try to make some sense of this confusion by, firstly, examining details of the various proposals on offer; secondly, by noting similarities and differences between the various paradigm schemes; and then finally, by reflecting upon the linkages - strong or otherwise - between themes within this literature and the proposals of Burrell and Morgan (1979) used in our empirical work.

## 2.2 Social Science Paradigms

"There are almost as many views of the paradigmatic status of sociology as there are sociologists attempting such analyses".

Eckburg and Hill, 1979, p.925

Friedrichs (1970) represents the first major attempt to define paradigms in social science. Here, he adopts a position supported by other commentators (cf. Kuklick, 1972; Bottomore, 1975; Gouldner, 1970; Eisenstadt, 1974) in noting the post-W.W.2 dominance of structural-functionalism together with its relative decline from the mid-1960's; American sociology of the late 1960's being seen as in 'crisis' following a period of post-war 'normal' science. Indeed Friedrichs holds this 1950's/early 1960's functionalist dominance to be a full Kuhnian mono-paradigm development, its exemplar being Parsons 'social systems' theory; the position being similar to that argued by Gouldner (1970) although without, in the latter, recourse to such an explicit Kuhnian thesis.

Friedrichs' work is similar to Gouldners (and also Bottomore, 1975) in noting how the political activism of the 1960's illustrated severe weaknesses in the consensus/equilibrium systems approach. This heralded an upsurge of interest (particularly in the U.S.A.) in 'radical' approaches, and especially in the earlier 'humanistic' works of Marx, this activity exposing the failure of the system paradigm to account for social change and conflict. As such, the failure of the system paradigm to respond to such critiques hastened the development of a Kuhnian 'anomaly', with conflict theory emerging as the main paradigm contender. Thus, Friedrichs suggests that by the early/mid 1960's the conflict paradigm was as important as the system paradigm, with thereafter the discipline being involved in a revolutionary struggle between these theory communities.

In documenting this struggle Friedrichs invokes two paradigm levels - first order paradigms (i.e. the images social scientists hold of themselves as academics/scientists) and second order paradigms (i.e. the image of the subject matter held by social scientists). From this Friedrichs elaborates two forms of first order paradigms to which sociologists subscribe - the priestly and the prophetic. The 'sociologist as priest' is committed to value-free analysis of social phenomena, whereas the 'prophet' views his or herself as a social critic and agent of social change. For the former the objective is the scientific development of the discipline, while for the latter the resolution of social problems. Both paradigms, Friedrichs argues, have dominated the discipline, with sociology's second order shifts depending upon which self image is in preponderance. Friedrichs suggests that while the prophetic mode was dominant prior to W.W.2, it still remained pre-paradigmatic at the second order level. However, after W.W.2 the priestly paradigm began to emerge, with thereafter sociology being seen as achieving paradigmatic status on the second order level with the 'system paradigm'.

Thus, the brief paradigm history of sociology is depicted as: 1) pre W.W.II = pre-paradigmatic; 2) c.1946 - 1963 = dominance of system paradigm i.e. sociology's first dominant paradigm; 3) 1964 - 1970 = first period of revolutionary science - with the conflict paradigm being the strongest paradigm candidate.

As noted, Goulder's (1970) 'Coming Crisis in Western Sociology' similarly documents the post W.W.II dominance of structural-functionalism and its subsequent decline. As a result of this regress a plethora of new American theories are seen to emerge, the most notable being, Goffman's dramaturgy, Garfinkel's ethnomethodology, and Homan's and Blau's exchange

theory; with Marxism remaining strong in Europe. Atkinson (1972) also specifies 'alternatives' to the 'orthodox consensus' of which Parsons work is the dominant post-war element. Here Atkinson rejects the 'determinism' evident in Parsons, Weber and the mature Marx in which man is seen as "socialized ... as infinitely manipulable, as being and as playing a role" (p.141). Although Atkinson differs from Gouldner in suggesting that the sociology of the late 1960's/ early 1970's is not so much polarized as convergent, his 'alternatives' are found in much the same literature. Atkinson stresses the need for a more adequate theory of the subject (actor), offering as guidelines the work of, "Gouldner, Garfinkel, Douglas, Laing, Gross, Goffman, Matza and others" (p.287). However, this 'micro' approach (emphasising subjectivity and situational analysis) should, he suggests, be complemented with an alternative 'macro' approach, Atkinson offering concepts such as 'action classes' and 'social kaleidoscopes' instead of social structure. In sum, Atkinson suggests that his 'radical alternative' will develop from a dynamic form of humanistic symbolic interactionism.

The importance of Parsonianism is, therefore, well documented, although the question of whether it ever held full paradigm status remains moot. Similarly, while the timing of its decline at around 1963 is well attested, the list of paradigm candidates is less unanimous. Thus, while both Friedrichs (1970) and Lehmann and Young (1974) suggest that in Parsonian functionalism post-war sociology witnessed a full Kuhnian paradigm, other commentators have remained with Kuhn's S.S.R. (1962) proposals in advocating sociology as pre-paradigmatic; thereby offering a welter of paradigm contenders in explanation (cf. Denisoff et al., 1974; Effrat, 1972).

Here, Denisoff et al. argue that while sociology has not yet held a paradigm, nevertheless, there are 'paradigmatic assumptions' that underlie the sociological enterprise. Through advocating a broad paradigm definition - in terms of a belief matrix - they offer five paradigm candidates, with apart from functionalism and conflict theory, there being challenges from micro-sociology, nominalism/voluntarism and social evolutionism.

Effrat (1973) also suggests that sociology is pre-paradigmatic, here presenting a rather complex argument especially in that he interchanges 'theory', 'perspective' and 'paradigm' at will. Although offering an initial discussion of Kuhnian theory, Effrat finally decides to employ a 'looser and more generous use of the criteria' suggesting that we 'go beyond' Kuhn's thesis as it is 'still too rational, his revolutions still too bloodless' (p.11). Effrat develops a typology of paradigms by the intersection of two dimensions; firstly, the level of analysis ('micro-macro level paradigms'), and, secondly, the 'substantive component emphasized' (i.e. the substantive factors that the paradigm treats as the principal independent variables or explanatory agents - 'material, affective, interactional, and ideal/symbolic'). Effrat thus devises eight paradigms for sociology - 1) Marxists (macro-material); 2) Exchange Theorists, Utilitarians (macro-material); 3) Culture and Personality School (macro-affective); 4) Freudians (micro-affective); 5) Durkheimians or French Social Collectivists (macro-interactional); 6) Symbolic Interactionists, Activities Theory (micro-interactional); 7) Weberians and German Idealists, Parsonians, Cyberneticists (macro-idealist/symbolist); 8) Phenomenologists, Ethnomethodologists (micro-idealist/symbolist).

Despite this list, Effrat maintains that there are other paradigms he has not yet analysed.

More conservative is the scheme of Bottomore (1975), which like Friedrichs offers an historical approach. He similarly cites the relative dominance of functionalism in the post-W.W.2 period, and also its relative decline from the mid-1960's; albeit suggesting that we should not exaggerate the significance of such trends, as the history of sociology shows that it has always been a 'multiple-paradigm science'. Indeed, Bottomore insists that crises such as that of the early 1970's can be witnessed as far back as the 19th century. Bottomore stresses that although functionalism was the dominant creed of American sociology of the 1950's, its influence was never matched either in Western or Eastern Europe. However, increased international communication has left a situation whereby from the mid-1960's a number of, "well articulated and established paradigms have emerged or been reformulated" (p.192).

Like Friedrichs and Gouldner, Bottomore attributes the relative decline of the functionalist paradigm to an overconcentration upon 'the static aspects of society and upon social equilibrium', which served to posit an 'unreal degree of functional unity' and to display indifference to 'historical processes and historical explanations' (p.193). This, in part, accounts for the revival of historical sociology, and especially the works of the early humanistic Marx and an emphasis on 'consciousness'. Notable in the revival has been the works of Lukacs, Gramsci and the 'Critical Theory' of the Frankfurt School. Bottomore notes that in its assault upon positivism Critical Theory holds much affinity with the modern philosophy of language and with phenomenology. Similarly, Critical Theory in being attributed as an attempt to develop a 'radical sociology'

has certain affinities with Marxian proponents of structuralism; although structuralism can be accused of being essentially 'ahistorical'. The main link here is the effect of structuralism on Marxist thought through the work of Althusser, although for Bottomore (like Burrell and Morgan, 1979, later) there is a clear opposition between 'historical' and 'structuralist' accounts in Marxist thought. Bottomore's fourth paradigm refers to phenomenological sociology, here citing the Weberian method of verstehen, and the importance of Schutz application of Husserl's ideas. He concludes by outlining the emergence of ethnomethodology from phenomenology. Bottomore's paradigms have perhaps the closest single similarity with the Burrell and Morgan model employed later, with his four paradigms - functionalist, phenomenological, historical and structuralist - sharing much common ground with the four Burrell and Morgan paradigms - functionalist, interpretive, radical humanist and radical structuralist.

While a major theme in works above is the relative post-war dominance of functionalism, the thesis by Ritzer (1975) offers a different assessment. Ritzer argues that sociology has never been dominated, either completely or relatively, by any single theory community, but has rather, since the 1940's, been characterized by three competing community images - the 'social facts', 'social definition' and 'social behaviour' paradigms.

Ritzer outlines these paradigms by reference to four main paradigm components: 1) fundamental image of the subject matter; 2) exemplars; 3) theories; 4) methods<sup>1</sup>. Thus, for the social facts paradigm three theories - structural-functionalism, conflict theory and systems analysis - primarily utilise questionnaire and interview methodologies, view the subject matter in terms of macroscopic social structure, and share an exemplar in the work of Durkheim. For the social definitionist paradigm

the theories of symbolic interactionism, action theory, and phenomenology utilise observation methods (particularly participant observation), hold an image of the subject matter in terms of micro-level intra- and inter-subjective phenomena, and have an exemplar in Weber's work on social action and verstehen. Finally, for the 'social behaviour' paradigm, the theories of behaviourism and exchange theory employ field and laboratory experiments, while holding an image of human behaviour in terms of responses controlled by external stimuli or reinforcement. The paradigm exemplar is the work of the psychologist Skinner.

Although Ritzer feels that a dominant paradigm is unlikely to emerge in the short term, he does, towards the end of his analysis, point to the possibility of 'efforts at paradigm reconciliation' and discusses certain 'paradigm bridgers'. Ritzer argues that, "all of the great sociological theorists were able to bridge paradigms. They were capable of moving ... between the two or more paradigms discussed" (pp.212-13). Although Durkheim, Weber and Marx are cited in this respect only Parsons is accredited with reconciling all three paradigms. As a parting shot, Ritzer mentions the possibility that the increasing popularity of the works of the Frankfurt School, under the rubric of Critical Theory, may herald the possibility of a new paradigm.

Ritzer's analysis is, however, in many ways puzzling. Most striking is the rather odd subsumption - under the social facts paradigm - of consensus oriented structural functionalism with an approach often listed as its 'alternative', i.e., conflict theory (see Friedrichs above). Also, the adoption of Skinnerian behaviourism, as an exemplar in sociological theory is, at face value anyway, rather strange. Further, where Ritzer's paradigms have been subject to empirical examination, such as by Snizek

(1976) and Freidheim (1979), the results have not verified Ritzer's differentiation. Far from Ritzer's paradigms being empirically distinct, Freidheim notes, "Factists, behaviouralists and definitionists merge with each other; individual theorists often bear more resemblance to theorists from outside their group than to fellow perspective members" (p.64). Similarly, for Ritzers two central paradigm components, Snizek reports, "there appears to be little in the way of empirical support for each of the intra paradigm linkages proposed ... with respect to the 'images of the subject matter' and 'methods'" (p.219). Wells and Picou (1981) also suggest that Ritzer inadequately addressed the problem of paradigm 'evolution', never extrapolating the relationship between (his) paradigms and normal science, and thus leaving the impression that they are all at the same stage of development. Thus, the question of whether 'a multiple paradigm field is paradigmatic' (p.74) is left open.

#### Organisational Behaviour

Despite such problems, Ritzer's framework has been used to define paradigms in organizational behaviour by Pondy and Boje (1981). Here Pondy and Boje take Ritzer's classification and fit in names from O.B., although as a result there are some uneasy compromises. It is suggested that although the social behaviouralist, and social factist paradigms have dominated this area, that the third paradigm (social definitionist) could provide 'fresh insight' and should be developed to 'parity with the two reigning paradigms' (p.84). Such an assertion is naturally methodologically based, for Pondy and Boje argue that what is required is research based on 'multiple paradigms'. They suggest that if we reject a 'truth-value' function of theory, where only one theory can be most nearly true, and accept the efficacy of multiple embedding paradigms, then under

such multiple paradigm research; "the function of theory shifts from that of truth proving to insight seeking" (p.84). Therefore, when theories are no longer seen to be struggling for the single prize of being most nearly true, the acceptance of several incompatible theories no longer remains problematic. What matters then is, "how much insight and understanding can be extracted from the entire constellation of theories generated from the several paradigms in use" (p.84).

In terms of composition, their social facts paradigm, finds work on 'structural differentiation, contingency theory, organizational role sets, interorganizational relations, socio-technical systems, power structures and organizational design'. Social factists include Perrow, Richard Hall, Etzioni, post-exchange theory Blau, Pugh and the Aston School, Lawrence and Lorsch, Woodward, Aiken and Hage and more recently Schonherr, Pfeffer, and Aldrich. The social behaviour paradigm is supposed to characterize industrial and organisational psychology more than sociology, the major research areas being 'management or leadership style, job design, group pressures, incentive schemes and organizational climate' (p.86). Prominent figures here are Vroom, Lawler, Porter, Fiedler, Hulin and Hackman. Finally, for the less developed social definition paradigm, theorists and researchers are much thinner on the ground and only three works are cited. They offer as an exemplar March and Simon's (1958) 'Organizations', also listing Weick's (1969, 1974) 'processes' of organizing and Silverman's (1971) treatment of action theory.

Their proposals are, however, like Ritzer's, questionable. This is especially so when it comes to 'populating' the paradigms with Pondy and Boje admitting that they may have, "offend(ed) people by omission or improper classification" (p.86)<sup>2</sup>. The classifications are, in fact,

problematic in respect to each of the four paradigm factors they cite. For example in terms of 'method', one of the leading 'factists' conducted his most notable research via methodology characteristic of the 'behaviouralist' paradigm: the 'sociological' Aston Studies employed methods from the psychology of personality structure, with the factor analytic approach being employed due to Pugh's prior training as a psychologist. Similarly many leading 'behaviouralists' have commonly conducted research by the main tool of the 'factists', i.e. the questionnaire. For the second component - 'theories' - proponents of 'contingency' approaches are cited in both major paradigms (cf. Fiedler, Lawrence and Lorsch, Woodward and others), while similarly systems theory is abundant in the research literature of both paradigms (cf. sociotechnical systems, interorganizational relations, management and leadership style etc.). For the third component, 'exemplars', March and Simon's 'Organizations' has commonly been held as a modified form of behaviourism. While March and Simon do allow for an element of subjective rationality arising from an individual's personal frame of reference, human behaviour in general is seen to be shaped by stimuli in the environment. Such stimuli provide the influences to which humans respond in the somewhat mechanistic manner of 'administrative man'; adapted by March and Simon from the earlier work of Simon (1957). Finally, regarding 'basic world views' of the scientific community, there seem as many fundamental similarities as differences. Both factists and behaviouralists reflect an objectivist/positivist orientation to the study of organisations. As such. both reflect the 'priestly' approach of value-neutrality, instead of the conflict orientation of the prophets. Also, while many commentators point to the rise from the mid-1960's of a conflict paradigm, no such position is acknowledged by Pondy and Boje;

even though Ritzer, somewhat speciously, subsumed conflict theory within the factist paradigm<sup>3</sup>.

Pondy and Boje, however, are not alone in either positing multiple paradigms for organisational behaviour, or advocating multiple paradigm research (cf. Evered and Louis, 1981, Driggers, 1977). Although they suggest developing 'insight' via three paradigms, more typically proponents have advocated 'alternatives' through variations on the methodological 'qualitative versus quantitative' debate.

In organisational behaviour a typical example of this methodological dictotomy approach is a paper by Evered and Louis (1981). They adopt Kuhn's 'disciplinary matrix' in arguing for two research 'paradigms' - 'inquiry from the outside' and 'inquiry from the inside' - the purpose being to "increase the ... understanding and appreciation of epistemological issues in organizational inquiry" (p.386). 'Inquiry from the outside' is the 'orthodox' positivist approach. As such, it calls for, "detachment on the part of the researcher" who "gathers data according to a priori analytical categories" in aiming to "uncover knowledge that can be generalized to many situations" (p.385). The alternative paradigm, 'inquiry from the inside', involves "the experiential involvement of the researcher, the absence of a priori analytical categories, and an intent to understand a particular situation" (p.385). Systematic methods for the latter are 'ethnomethodology, anthropology and clinical methods'.

However, having erected their 'insider' alternative and illustrated it's advantages, Evered and Louis finally downgrade the paradigm by implying that it is less expedient than its positivistic counterpart. Insider strategies are (presently) only considered optimal for the experiential

exploration of early research projects, such inquiry being, "useful for generating tentative categories ... (which) ... may subsequently be used as the a priori categories guiding the more deductive hypotheses-testing from the outside" (p.390). Although three possibilities exist for combining the paradigms only the above is deemed feasible, because: firstly, developing a new science ("human action science") capable of synthesizing the paradigms seems distant; and secondly, the aggregation of paradigm results within a research report runs up against publication problems, i.e., "the strong bias toward inquiry from the outside" (p.392). Indeed, inquiry from the inside, "may appear to be so foggy that its findings often have dubious precision, rigour or credibility", albeit that, "these shortcomings can be overcome by inquiry from the outside" (p.392).

Finally, we must note that while epistemological dichotomies such as the latter have been widely proposed as bases for alternating paradigm research (see Martin, 1981; Sanders, 1982), rarely have what one might term the political/ideological frameworks in the Burrell and Morgan model been so invoked; alternative paradigms such as the 'priestly-prophetic' (Friedrichs, 1970) or 'consensus-conflict' (Lehmann and Young, 1974) having been largely overlooked as bases for research programmes. Where papers have displayed these images of the subject matter, this has generally been through interpretations of some existing practice, and not in terms of alternative empirical investigations. Two examples here are Braendgaards (1978) 'Two differing interpretations of recent efforts in work humanization', and Nords (1974) analysis of the 'Modern Human Resources Paradigm', both erecting a priestly/consensus (managerialist)

interpretation and then displaying the superiority of a prophetic/conflict (Marxian) orientation.

### 2.3 Paradigm Themes

In the above, we note how most analysts of paradigm status advocate the social sciences to currently possess a multiplicity of 'paradigms' (or 'sub-paradigms' or 'partial' paradigms). Typically such analyses have described paradigm developments in terms of major theory positions, assuming them to reflect competitive and antagonistic research communities. While our review notes how these schemes are in many ways disparate, there nevertheless, emerge some themes which are not only visible in the Burrell and Morgan model but, moreover, unite many of the analyses on offer. This is most notable with regard to chronologies of theoretical developments.

Firstly, there is the relative dominance of (especially American) sociology by Parsonian functionalism until the early/mid 1960's, this representing the closest approximation to a full Kuhnian paradigm (Bottomore, Friedrichs, Gouldner, Kuklick). Although from the mid-1960's there are seen to emerge a number of influential counter paradigms, the systems metaphor has continued to be influential; taking a notable hold on the sub-field of organisational behaviour. For many, however, despite this hold on North American sociology, the influence of functionalism has not been so embracing in post-war Europe where Marxism has remained a major force (Atkinson, 1972; Bottomore, 1975; Gouldner, 1970).

Secondly, many commentators outline the development of alternatives to the functionalist 'orthodoxy' from around 1964. The main challenges are seen as 'alternative paradigms' in that they address and accommodate

problematics beyond the grasp of functionalist puzzle solving. These alternatives develop in the wake of two linked critiques which claim that - despite Coser's conflict functionalism and Parson's 'subjectivist-idealist' (Rocher, 1974) work on social action - functionalism is both a 'static' and 'consensus' theory, and as such is incapable of accounting for processes of change and conflict. The 'crisis' in Western sociology is, therefore, seen as promoting theoretical positions accounting for conflict and action - both separately and in concert. For the former we witness a revival (during the 1960's) of 'prophetic' theorising (Friedrichs, 1970), notable here being the resurgence of interest in the 'humanistic' works of Marx, and the impact of structuralism upon Marxist thought: especially through the works of Althusser and his followers (Atkinson, 1972; Bottomore, 1975). For the latter, the advance of phenomenological sociology is the most notable force in the existential concern for the subject (actor) from the mid-1960's onwards. The most influential elements to emerge here - in what is essentially the wake of interest in Schutz' (1962, 1964, 1966) works - are methodological developments concentrating on the role of implicit assumptions in everyday experience, and in particular the prominence of Garfinkel's ethno-methodology (Bottomore, Douglas, Lehmann and Young, Walsh)<sup>4</sup>.

Therefore, one of the main strengths of the Burrell and Morgan model is that it offers an epistemological map accounting for the theoretical and methodological dichotomies frequently invoked to account for such developments. (e.g., outsider-insider, hard-soft, qualitative-quantitative, thick-thin, objective-subjective, positivist-anti-positivist; and conflict-consensus, order-conflict, priestly-prophetic, class-organisation). For multiple paradigm research, however, of greater

importance is that they offer guidelines for understanding some of the metatheoretical assumptions which are at the base of these theoretical and methodological images held by differing communities. Here, such a grounding in (many of) the metatheoretical beliefs held by alternative paradigms aids clarification of how differing theory positions are essentially associable or separable.

Let us next, then, outline the model and illustrate the opportunities it offers for multiple paradigm research.

#### 2.4 Burrell and Morgan

Burrell and Morgan identify four paradigms in social science - functionalist, interpretive, radical humanist, radical structuralist. These are developed through intersecting 'subject-object' debates about the 'nature of social science' and 'consensus - conflict' debates on the 'theory of society'. Here, they argue for charting paradigm locations in organisational analysis by use of a framework which also locates major theoretical positions in sociology, social psychology and even areas of experimental psychology. As such the model has been widely adopted as a graduate and undergraduate guide as it illustrates the breadth and location of competing theoretical approaches. In terms of academic response it has been handsomely praised (Salaman, 1981; Clegg, 1983), closely questioned (Pinder and Bourgeoise, 1981), and also harshly attacked (Cox, 1979).

Burrell and Morgan dissect social science notably by reference to the philosophers toolkit of ontology and epistemology. They concentrate upon the meta-theoretical assumptions made by differing schools, and in identifying such assumptions, seek to plot various theoretical positions

on their four-paradigm model. As noted, the model is produced by intersecting debates regarding meta-theoretical assumptions about both the 'nature of social science' and the 'nature of society', with the antinomies of the former representing a horizontal axis, while those of the latter forming the vertical.

For assumptions about the nature of social science it is useful, the authors argue, to "conceptualise social science in terms of four sets of assumptions related to ontology, epistemology, human nature, and methodology" (p.1). They argue that all social scientists, implicitly or explicitly, approach their discipline via assumptions about the nature of the social world and how it should be researched. Here assumptions are made concerning: 'the very essence of the phenomena under investigation (ontology), 'the grounds of knowledge' (epistemology), 'the relationship between human beings' (human nature) and finally 'the way in which one attempts to investigate and obtain 'knowledge' about the real world' (methodology). These sets of assumptions, the authors suggest, provide an 'extremely powerful tool' with which to analyse social theory. Figure 1 outlines these four debates.

For assumptions about the 'nature of society' Burrell and Morgan invoke the attempts by social theorists (e.g. Dahrendorf, 1959; Lockwood, 1956) to distinguish between "those approaches to sociology which concentrate upon explaining the nature of social order and equilibrium ... and those ... concerned with the problems of change, conflict and coercion" (p.10).

FIGURE 1

A SCHEME FOR ANALYSING ASSUMPTIONS ABOUT THE NATURE  
OF SOCIAL SCIENCE (BURRELL AND MORGAN, 1979)



FIGURE 2

FOUR PARADIGM MODEL OF SOCIAL THEORY (BURRELL AND  
MORGAN, 1979)



However, instead of the more usual nomenclature of 'order-conflict' or 'consensus-conflict', they talk of the 'sociology of regulation' and the 'sociology of radical change'. By this method four paradigms are produced (Figure 2).

Through the polarisation of consensus and conflict assumptions, the 'conservative' functionalist and interpretive paradigms are contrasted with the conflict based 'radical' humanist and structuralist paradigms. Conversely, with regard to the nature of social science, radical structuralist and functionalist theories, which accept an objectivist 'scientific' stance towards the study of social reality, are contrasted with the more subjectivist emphasis of phenomenological or existentialist/humanist theory. Thus, Burrell and Morgan feel that their paradigms should be viewed as "contiguous but separate - contiguous because of the shared characteristics, but separate because the differentiation is ... of sufficient importance to warrant treatment of the paradigms as four distinct entities" (p.23). As such the four paradigms "define fundamentally different perspectives for the analysis of social phenomena. They approach this endeavour from contrasting standpoints and generate quite different concepts and analytical tools" (p.23).

In sum, the functionalist paradigm rests largely upon the premise that society has a real concrete existence and a systematic character, and is directed to the production of order and regulation. The social science enterprise is believed to be, as far as possible, objective and value-free in which the scientist is distanced from the objects of study through the rigour of the scientific method. The paradigm thus possesses a pragmatic

orientation concerned with understanding society in a way which produces useful usable knowledge.

In the interpretive paradigm the social world is seen as having a 'precarious ontological status' it being suggested that social reality should not be accorded the status of external concrete existence, but rather be considered the product of intersubjective experience.

Therefore, instead of the social world being comprehended from the standpoint of the observer, it is understood from the position of the participant in action. Here the social theorist seeks to understand the processes through which multiple shared realities are created, sustained and changed. The interpretive paradigm shares with the functionalist the assumption of an underlying regulation and order in human affairs, albeit in contrast holding that purely 'objective' social science is specious.

The radical humanist paradigm shares the assumption with the interpretive that reality is socially created and sustained, although for the radical humanist this assumption is tied to the 'pathology of consciousness' whereby actors are seen as prisoners of the reality they create. Thus, the critique points to the alienating forces of the modes of thought that characterise life in modern industrial societies. Capitalism is particularly subject to attack in the humanist's concern to link thought and action as a means of transcending alienation.

The final paradigm, the radical structuralist, also develops a radical critique of society, but one at odds with the humanist in being tied to a materialist conception of the social world. Here, reality exists independently of the way in which it is perceived and reaffirmed. For the radical structuralist the social world is characterised by intrinsic

tensions and contradictions which eventually result in radical change in the system as a whole.

In terms of social theory Figure 3 illustrates paradigm affiliations. The basic model is also used to accommodate theories in organizational analysis, and Figure 4 outlines the theoretical approaches therein. In trying to fit theories of organization into the framework some of the paradigms are, however, sparsely populated. Conflict or anti-positivist communities have been slow to develop in organisational behaviour and this is vividly illustrated by the scarcity of work outside the 'orthodoxy' of functionalist theory.

There are, however, certain features of the Burrell and Morgan model that require discussion. First, and most obvious, is the use of the term 'paradigm'. The work is more in the spirit of a Kuhnian analysis that an explicit exposition; although as the paradigms are held to represent, "the frame of reference, mode of theorising and modus operandi of the social theorists who operate within them" (p.23); they do equate, albeit loosely, with Masterman's 'metaphysical paradigms', and Kuhn's 'shared models' of the disciplinary matrix. However, discussion of the central concept is lacking, with instead 'paradigm' being used to represent the quadrants produced from the debates invoked<sup>5</sup>.

Secondly, as the four paradigms are self exclusive then such a position raises the questions of incommensurability and relativism discussed earlier. Unfortunately, as with Ritzer and Friedrichs, we are given no firm testament as to how interparadigm movement can take place, other than through pointing to possible epistemological breaks by, for example, Marx and Silverman. In fact, references to inter-paradigm movement,

FIGURE 3

FOUR SOCIOLOGICAL PARADIGMS (BURRELL AND MORGAN (1979))



FIGURE 4

THE MAIN SCHOOLS OF ORGANISATIONAL ANALYSIS (BURRELL AND MORGAN, 1979)



understanding and debate are rather confusing. While initially there is a firm assertion that "the four paradigms are mutually exclusive ... they offer different ways of seeing" (p.25), later there is some oscillation, this starting with Giddens (1976) view that "some inter-paradigm debate is also possible" (p.36, emphasis in original), but finally moving to the equivocal statement that "relations between paradigms are perhaps better described in terms of 'disinterested hostility' rather than 'debate'" (p.36). This position perhaps invites Friedheim's accusation that Ritzer was, "arguing for paradigm blindness and paradigm bridgers at the same time (1979, p.60).

With regard to the debates upon which the model is based Pinder and Bourgeoise (1981) suggest that Burrell and Morgan's application of ontology is misplaced. In a paper on the effectiveness of cross-discipline borrowing, they cite Burrell and Morgan as scientists in the 'borrowing field' (i.e. O.B. borrowing from philosophy) who may, "not be capable of detecting any shortcomings or misinterpretations in what is imported", the net value of the transaction being "negative rather than positive" (p.12). They suggest that Burrell and Morgan have adopted the 'non-standard' use of ontology that has been increasingly popular during the last twenty years; this referring to the set of 'existential presuppositions' of a theory (i.e. the set of assumptions about existence that must be made if one is to accept a certain theory). Although such a usage has become widespread, Pinder and Bourgeoise feel that this has only succeeded in making an accurate use of the term difficult - even for philosophers<sup>6</sup>. As such, if we wish to talk of the 'ontology of organization theory', we would be better advised instead to use the phrase 'existential presuppositions' of organization theory.

A further issue is whether intra-paradigm schools realistically adhere to the same fundamental image of the subject matter, and thus hold similar belief systems or world views. Like Ritzer's combination of conflict theory and structural functionalism, one may feel that placing the action frame of reference in the same paradigm as Skinnerian behaviourism makes for very unlikely bed fellows. The former, one may feel, would be far more acceptable within an interpretive paradigm, despite the arguments the authors raise for its assumptions being "characteristic of the subjectivist region of the (functionalist) paradigm" (p.190).

Finally, whereas Burrell and Morgan essentially separate radical humanism and radical structuralism by way of Alhussers 'epistemological break', the latter thesis is by no means unproblematic as for many there is an underlying unity in Marx's work and not a gestalt-switch from idealism to materialism.

## 2.5 Research Implications

The first two chapters have attempted to lay the foundations for the empirical work of the thesis. Here three important elements for conducting a multiple paradigm research journey have been sought; first, an understanding of the 'elusive' paradigm concept; second, a theoretical argument for unlocking paradigm incommensurability; and, thirdly a detailing of major paradigms in sociology and organizational behaviour. In the above we have argued that; firstly, the essence and power of the paradigm concept lies not in the narrow sense of 'exemplar', but in the more overarching notion of 'metaphysical models' (Kuhn) or 'metaphysical paradigms' (Masterman); secondly, that we can overcome the paradigm exclusivity of the incommensurability thesis by a recourse to Wittgenstein's 'language game of everyday life', and in so doing sustain

relativity while rejecting relativism; and thirdly, while social science paradigm typologies are in many ways disparate, nevertheless many themes recur notably in theory development. Here variants of the regulation - radical change and subject-object dimensions employed by Burrell and Morgan have been regular organising principles in the sociology of sociology, while the major paradigm positions Burrell and Morgan produce - especially functionalism, phenomenology, critical theory and Marxian structuralism - have similarly been widely cited.

The empirical work of the following chapters rests on four separate investigations into aspects of the work organisation of the British Fire Service, and especially of the West Midlands County Brigade. Here positions characteristic of the four Burrell and Morgan paradigms are used to illustrate the richness of data produced from adopting alternative metaphysical assumptions as the basis for research. The studies adopt the meta-theoretical guidelines of the model as initial instructions for becoming familiarised with the culture of a paradigm. As such the approach to paradigm assimilation is one whereby metaphysical assumptions are engaged as initial bases for immersion into the literature of a theory community. Familiarisation with a new paradigm is accomplished by seeking to phenomenologically 'bracket' the assumptions of the learned paradigm and then develop those of the next paradigm through this immersion. Essentially what is adopted is a social anthropological method, the object being to produce 'authentic' paradigm research accounts. It is, thus, an experiential hermeneutic 'process', an exercise in verstehen (Abel, 1948).

The thesis projects the adoption of three major positions cited as alternatives to the functionalist systems 'orthodoxy': phenomenology, critical theory and Marxian structuralism. The research investigations

commence with a traditional functionalist investigation (a questionnaire survey) and then continue with investigations consistent with the latter paradigms (see introduction). In terms of the Burrell and Morgan scheme the investigations start in the functionalist paradigm and then are conducted in a clockwise direction.

The functionalist starting point was adopted for two main reasons. First and foremost because at time of commencement the researcher had just completed a M.Sc. course in industrial psychology and statistics and, thus, was working out of the 'orthodox' paradigm. The second reason was that in submitting a research proposal to the host organisation it was felt more politic to highlight issues associated with traditional organisational research (e.g. job design, satisfaction, motivation), than to advocate a 'phenomenological', 'existential' or 'Marxist' investigation.

The final step in preparation for empirical work was the actual choice of research topics. From initial consultations with colleagues, two possibilities were presented, i.e. to either: a) analyse one specific aspect from the four paradigm perspectives; or b) analyse differing aspects with each paradigm focusing on a specific issue. While the former proposal seemed to have merit in allowing easier paradigm comparability, it also raised the problem that what may be admissible in one logic may not be so in another. For example, while organisational psychologists traditionally work happily with the concept of motivation, for other paradigms such a concept may be unnecessary for individuals who are 'thrown into the world alive and kicking'<sup>7</sup>. A more pragmatic objection, however, was that such a plan simply did not cover much research ground.

While as a research exercise it would be methodologically interesting (i.e., in covering the same topic four times), the results would offer only marginal insight into the organisation as a whole. It was decided, therefore, that a compromise would be to invoke a general thesis rubric of 'work organisation' - essentially a more paradigm neutral term - and then permit the individual studies to employ their own language in describing work activity (e.g. 'task accomplishment' - interpretive paradigm; 'labour process' -radical structuralist paradigm).

In sum, the following aspects of the work organisation have been researched: job motivation and satisfaction (functionalist); daily work routines (interpretive); promotion and training (radical humanist); development of the labour process (radical structuralist).

Let us now turn to the first paradigm study - job motivation, satisfaction and design.

1. Unlike Kuhn, however, Ritzer does not propose that exemplar is the main organizing component, but that paradigms in sociology tend primarily to be organized around methodology and image of the subject matter.
2. Discussion of the paradigm concept is left to a footnote. Pondy and Boje simply offer: "the term "paradigm" is used, following Thomas Kuhn, to refer to the methods, theories, exemplars and basic world views of a particular scientific community" (p.83).
3. Friedrichs and Lehmann and Young highlight a neo-Marxian conflict theory as the alternative paradigm challenger to the consensus theorising of functionalism in the same vein as Dawe (1970) spoke of the 'two sociologies'; the above implying that consensus and conflict based theories represent differing belief systems, hold incompatible images of the subject matter and have differing paradigms affiliations to one another.
4. This is especially so in the wake of attempts by the Iowa school of symbolic interactionism to operationalise their approach and move to a position more characteristic of standard American behavioural sociology, and thus to adopt a stance more clearly aligned with sociological positivism (see Meltzer et al., 1975). Norman Denzin, however, has argued that Chicago style symbolic interactionism is largely phenomenologically based, and thus is presently, and has always been, concerned with how individuals encounter describe and explain the world. This is in similar vein to the material of the ethnomethodologists. Denzin thus suggests that a synthesis with

ethnomethodology is totally possible (see Douglas 1970 for Denzin's debate with Zimmerman and Weider).

5. Although Kuhn is only mentioned twice, the authors still feel that their work is 'in keeping' (p.24) with S.S.R. especially as 'interparadigmatic journeys seem rare' - this supporting the 'gestalt switch' thesis.
6. They argue that for the past three centuries ontology has a relatively stable meaning in being, "the study of qua being, i.e. the study of existence in general, independent of any particular existing things". So therefore in the 'strictest' sense of the term, "it is not a question of ontology to ask whether organizations exist ... whether organizations exist is a matter for science to deal with because it concerns the existence of particular things, not the nature of existence" (p.13, emphasis original).
7. As the researcher wished to make job motivation and job design major inputs into the thesis, problems of inter-paradigm admissability were apparent.

CHAPTER THREE: WORK DIAGNOSIS AND  
JOB CHARACTERISTICS

### 3.1 Introduction

This chapter analyses attitudes to work from a theoretical and methodological perspective consistent with the paradigm of functionalist organisation theory. The main object is to assess levels of job motivation for firemen with differing lengths of service, here ranging from probationers to men with twenty-five years experience. This attitudinal analysis forms a backcloth for the observational research of chapters 4 and 5.

For this functionalist study the writer wished to focus on the job motivation, satisfaction and design interface, as this area had traditionally dominated the literature in 'orthodox' organisational behaviour. Here, a review of the recent literature found variations on the job characteristics approach to be the most prominent developments in the job motivation/job design field<sup>1</sup>. Most notable here was work by Hackman and Oldham (1975, 1976) on the Job Diagnostic Survey. The job characteristics approach was subsequently chosen as the theoretical base for the study, with the Job Diagnostic Survey employed as the chief research instrument. This instrument seemed to offer a well documented diagnostic technique, backed up by the dominant work motivation theory available.

Access to the organisation was obtained after submitting a request to W.M.F.S. to analyse levels of motivation through a questionnaire survey. Permission for the study was granted, but with a reciprocal agreement that - in return for access - the research would involve analysis of subject groups of interest to the host organisation.



### 3.2 Job Characteristics Approach

The job characteristics model as developed by Hackman and Oldham (1975, 1976) is the theoretical basis for the main research instrument used in this chapter. Figure 5 outlines the basic structure of the model.

The central thesis is that; "five "core" job dimensions are seen as prompting three psychological states which, in turn, lead to a number of beneficial personal and work outcomes" (1976, p.255).

If we first examine the three psychological states, we find the elements of this 'casual core' defined as:

1. Experienced Meaningfulness of the Work

The degree to which the employee experiences the job as one which is generally meaningful, valuable and worthwhile.

2. Experienced Responsibility for Work Outcomes

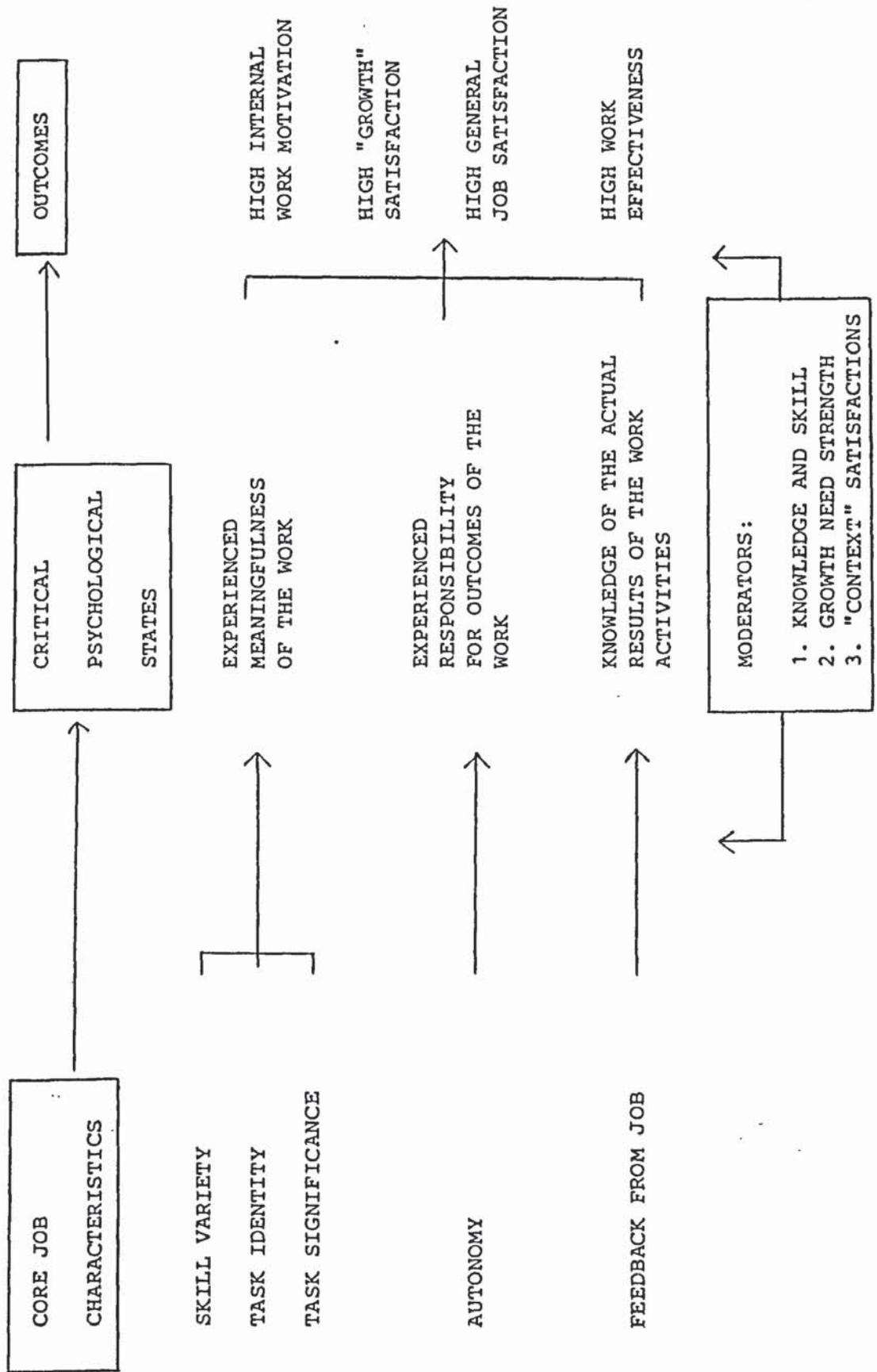
The degree to which the employee feels personally accountable and responsible for the results of his work.

3. Knowledge of Results

The degree to which the employee knows and understands how effectively he performs the job.

Hackman and Oldham outline the relation between these psychological states as follows: "the model postulates that an individual experiences positive affect to the extent that he learns (knowledge of results) that he personally (experienced responsibility) has performed well on a task he cares about (experienced meaningfulness)" (pp.255-6, emphasis in original). The authors suggest that this 'positive affect' has a reinforcing influence upon the employee which acts as an incentive for increased future performance. It follows logically that poor performance

FIGURE 5: HACKMAN AND OLDHAM'S (1980) JOB CHARACTERISTICS MODEL OF WORK MOTIVATION



denies the reinforcement of intrinsic rewards. However, Hackman and Oldham feel that the job incumbent may well decide to try to regain such intrinsic benefits by future increased performance, this fostering as a result, "a self perpetuating cycle of positive work motivation powered by self generated rewards, that is predicted to continue until one or more of the three psychological states is no longer present" (p.256).

As noted earlier, five 'core job dimensions' foster the emergence of the psychological states. The first critical psychological state, that of 'experienced meaningfulness', is anticipated by the three core dimensions of 'skill variety', 'task identity', and 'task significance'.

The first dimension, skill variety, is defined by Hackman and Oldham as "the degree to which a job requires a variety of different activities in carrying out the work, which involve the use of a number of different skills and talents of the employee" (p.257). Here we have an amalgamation of Turner and Lawrence's (1965) 'variety' and 'knowledge and skill' requisite task attributes, the former being regarded as an activity while the latter a mental state. In a recent manual on work design, Hackman and Oldham (1980) suggest that the link between skill variety and experienced meaningfulness can be regarded as "wired in", noting how Kagan (1972), and White (1959), have shown that at all development stages people search for opportunities to 'explore and manipulate' their environments and test their skills.

The second core dimension, that of 'task identity', is defined as "the degree to which the job requires completion of a "whole" and identifiable piece of work; that is, doing a job from beginning to end with a visible outcome" (p.257). This dimension is again a descendent from Turner and

Lawrence who regarded this as an associated task attribute. The rationale, which stems back to the earlier experimental work of Osviankina (1928) and Zeigarnik (1927), is that employees care more about what they are doing, when they are allowed to complete a 'whole' job. Thus, an employee is more likely to feel that a job is meaningful if he is providing a full unit of service instead of a fragmented part.

The final core dimension linked to 'experienced meaningfulness', is that of 'task significance', or; "the degree to which the job has a substantial impact on the lives or work of other people, whether in the immediate organization or in the external environment" (p.257). Here it is proposed that if a job is seen as being crucial to the lives of others, then the employee will experience greater meaningfulness in the job. Hackman and Oldham (1980) give the example that a worker tightening the nuts on a decorative mirror will not experience as much task significance as a worker tightening the nuts on an aircraft engine, as with the latter lives may be at stake.

The second psychological state of 'experienced responsibility' is fostered by the core dimension of 'autonomy', defined by Hackman and Oldham (1976) as, "the degree to which the job provides substantial freedom, independence, and discretion to the individual in scheduling the work and in determining the procedures to be used in carrying it out" (p.258). Thus, if a job is to be high on autonomy the results of the job must depend essentially upon the efforts of the job incumbent. The rationale is that greater autonomy gives the employee a greater feeling of personal responsibility with the employee becoming more personally accountable.

The final psychological state is linked to the core dimension of 'job feedback', i.e. "the degree to which carrying out the work activities required by the job provides the individual with direct and clear information about the effectiveness of his or her performance" (p.258). Hackman and Oldham refer to two forms of 'feedback'. The above 'job feedback' refers to that gained 'directly from the job', i.e., a form that can be designed into a job. A second form, that of 'feedback from agents', refers to feedback from, e.g., a supervisor who first may collect data before informing the employee of his performance.

Before analysing the 'outcomes' section of the model it is important to note that the five core job dimensions are combined to give the 'overall "motivational potential" of a job'. The result is a calculated score to show if the job is one containing highly motivating characteristics. Two methods have been devised to arrive at the 'Motivational Potential Score' (M.P.S.), one multiplicative the other additive. The two methods are as follows:

1. Multiplicative M.P.S.

$$\text{M.P.S.} = \frac{\text{Skill Variety} + \text{Task Identity} + \text{Task Significance}}{3} \times \text{Autonomy} \times \text{Feedback}$$

2. Additive M.P.S.

$$\text{M.P.S.} = \text{Skill Variety} + \text{Task Identity} + \text{Task Significance} + \text{Autonomy} + \text{Feedback}$$

Although the multiplicative method has been the most widely employed, and forms the basis for the American norms, there has been increasing speculation regarding its validity.

The rationale of M.P.S. is that if a job incumbent reports a high score for the five job dimensions, then a number of positive personal and work outcomes will ensue. These outcomes are listed as; 'high internal work motivation', 'high quality work performance', 'high satisfaction with the work', and 'low absenteeism and turnover'.

There is, however, a fourth section to the model. This is an input influenced both by 'individual differences' psychology, and previous findings by Turner and Lawrence (1961) and Hulin and Blood (1968) on subcultural differences in work orientations - the argument that not all employees want enriched jobs. Hackman and Oldham, therefore, include a variable for 'individual growth need strength' to account for such differences, suggesting that, "some people have strong needs for personal accomplishment, for learning, and for developing themselves beyond where they are now. These people are said to have strong "growth needs" and are predicted to develop high internal motivation when working on a complex challenging job" (1980, p.85). It is proposed that "growth need strength" can affect an employee's reactions to his job at two levels of the model. Firstly, it can intervene at the link between core job dimensions and critical psychological states, while secondly between the psychological states and personal and work outcomes. The model stresses that employees with strong growth needs will react positively to enriched work, while those with low growth needs may not value such opportunities, or even perceive their existence.

### 3.3 Job Diagnostic Survey

Hackman and Oldham (1975) have derived an instrument for measuring job redesign needs of based on the job characteristics model - the 'Job Diagnostic Survey' (J.D.S.) (See Appendix 1).

The J.D.S. takes the form of an 11 page questionnaire used to gain measures of individual responses in terms of the differing variables presented in the theory. The questionnaire takes a measure of each variable in at least two of its seven sections. Each section uses a differing response layout in order to improve reliability, while in essence seven point scales are used throughout, the one exception being converted to seven points on analysis. Variables are measured from responses given to at least three questions, the score for analysis being that of the mean of these responses. The problem of 'response sets' is offset by some questions being scored in reverse scale order.

### 3.4 Method

#### 3.4.1 Subjects

A total of 110 J.D.S. questionnaires were distributed to subjects chosen from four categories: trainees, probationers, 5-7 years service, 15-25 years service. Whereas trainees have no divisional membership, the other sample groups were chosen from 'A', 'C', 'D' and 'E' Divisions of the West Midlands Fire Service. For reasons unknown to the writer, 'B' Division decided not to participate in the study. Table 1 represents the sample distribution in terms of target grouping and Fire Service Division: For each 'cell' three figures are presented. The first figure represents the total number of questionnaires given to a particular sample group in a particular division. The second figure (in parantheses) is the number of questionnaires returned, while the third figure represents the number of completed questionnaires as a percentage of those distributed.

Sample categories were devised through discussion with W.M.F.S. officers. In the research agreement it was concurred that length of service would be the main independent variable, and that the investigation would highlight

TABLE 1: J.D.S. SAMPLE DISTRIBUTION

Sample Group

	Trainees	Probationers	5-7 Years	15-25 Years
Training School	10 (10) 100%	N/A	N/A	N/A
A	N/A	8 (6) 75%	21 (17) 81%	13 (11) 85%
B	N/A	2 (2) 100%	11 (10) 91%	9 (7) 78%
C	N/A	2 (2) 100%	10 (10) 100%	10 (9) 90%
E	N/A	2 (1) 50%	6 (4) 67%	6 (4) 67%

TABLE 2: RESPONSE RATES

A) DIVISIONAL

Division	Questionnaire		Response Rate
	Issued	Returned	
Training School	10	10	100%
A	42	34	81%
C	22	19	86%
D	22	21	95%
E	14	9	64%

B) SAMPLE GROUP

Sample Group	Questionnaire		Response Rate
	Issued	Returned	
Trainees	10	10	100%
Probationers	14	11	79%
5-7 Years	48	41	85%
15-25 Years	38	31	82%

C) TOTAL RESPONSE RATE

Total Sample	Questionnaires Returned	Response Rate
110	93	85%

the response of two groups of firemen in particular. These were samples of men with 'medium' and 'long' term service records; the groups of specific interest (to W.M.F.S.) being: 1) firemen with 5-7 years service; 2) firemen with 15-25 years service. To balance the design it was decided to include firemen with 'short' service records, i.e. probationers (from 3 months to 2 years). At the request of W.M.F.S. Training School a sample of trainees (recruits) also completed the J.D.S.

Respondents subsequently comprised 10 trainees, 11 probationers, 41 firemen with between 5-7 years service, and 31 firemen with between 15-25 years service. In the case of trainees and the 15-25 years range, the subjects represent almost total populations in the W.M.F.S Divisions. The samples of probationers and the 5-7 years group were selected at random.

#### 3.4.2 Pilot Study

As the J.D.S is an 'off the shelf' instrument, no initial questionnaire development was necessary. However, to assess the instrument's suitability for use with firemen, a pilot study was conducted.

The questionnaire was piloted with 15 firemen from A.I. Central (Birmingham) Fire Station. Subjects were told to complete the J.D.S. and then remark on any difficulties or problems, or on any sections they considered inapplicable to their job. Respondents almost invariably reported no trouble in comprehending and completing the instrument. Indeed, only two points of substance emerged. One respondent noted that the J.D.S was suitable except for question 6, section 1. He stated that the use of the term 'manager' gave the feeling that it was a 'factory' questionnaire, and thus that the J.D.S. was 'not really for the fireman'.

The writer pointed out that the term 'supervisor' was used in in every other instance, and asked if this was also incongruent. This latter term was felt to be fairly neutral, and so following discussion it was decided to replace 'manager' in question 6, section 1, with the term 'supervisor'.

Another respondent noted that some of the terms, such as 'autonomy', were not words used in the everyday vocabulary of firemen. Although it was acknowledged that an explanation of such terms was given after their use, the writer nevertheless decided to highlight the inclusion of such clauses in a frontpiece later attached to the instrument.

### 3.4.3 Data Collection

Data was collected differently for the trainees than for the other three sample groups. For the trainees the writer visited the 10 men then engaged on the Recruits Intitial Training Course at B.3 Fire Station, Coventry, one month after their acceptance into the Service. The writer sat with the trainees as they filled-in the questionnaire.

For the remaining three groups, the writer was not able to be with the men as they completed the instrument, due to subjects working at stations all over the West Midlands. The questionnaires were instead given to four supervising Officers (one from each division), who after being briefed on the instrument, directed the distribution, collection, and the answering of queries. The writer later collected the questionnaires for analysis.

## 3.5 Results

### 3.5.1 Data Analysis

J.D.S. scores were calculated by use of the Hackman and Oldham (1980) scoring key. An 'additive' M.P.S. score, was also calculated. The scores

for each scale were obtained by producing the mean average for respondents.

Analysis of J.D.S. data creates certain problems with regard to statistical assumptions. While the instrument itself can be regarded as a split-plot repeated measures design, the data collected cannot be regarded as anything better than ordinal. Problems therefore arise regarding the use of either parametric or non-parametric statistical significance tests.

There are basically three assumptions that underlie the use of parametric techniques: firstly, that the population distribution is normal; secondly, that there is homogeneity of variance, and thirdly, that the data is at least interval. Frequently research carried out using the J.D.S. (especially by Hackman and Oldham), in employing parametric techniques, has violated one or more of these assumptions. Although the issue of violation of assumptions is a controversial one (see Boneau, 1960; Norton, 1953) if one wishes to be secure the possession of ordinal data necessitates the use of a non-parametric test of significance.

The J.D.S. is essentially a repeated measures design and in the present research gives data involving two factors - sample groups, and J.D.S. dimensions. Therefore a non-parametric 2-way Analysis of Variance is required, available only in the form of the Friedman test. Friedman provides a 2-way Anova for equal cell sizes. As the condition of equal cell sizes could not be met as an alternative method, a set of Kruskal-Wallis 1-way Analyses of Variance were computed, one test being carried out for each J.D.S. dimension. The Kruskal-Wallis test is analogous to a parametric one-way analysis of variance but for ranked data. The formula

for assessing the differences between groups is straightforward using the H statistic:

$$H = \left( \frac{12}{N(N+1)} \right) \left( \frac{(\sum X_i)^2}{n_i} \right) - 3(N+1)$$

Here, N is the total number of ranks; n, the number of ranks in one group; and R, the sum of the ranks in any one column. If a large number of tied ranks occur, H may be corrected by dividing it by  $1 - T/(N^3 - N)$ , where T equals  $(t^3 - t)$  and t is the number of observations tied at a given rank. This correction gives the effect of increasing the value of H, and the effect is negligible unless the number of ties is very great.

The significance tests themselves were not computed by hand, but, as with the later Pearson and Spearman correlations, were completed on the Statistical Package for the Social Sciences (Nie et al., 1970). However, the internal consistency reliabilities produced later were computed manually by the researcher. For the Kruskal-Wallis A.O.V.'s, S.P.S.S. gives both the primary significance figures and those corrected for ties. Sample frequency data in the form of means and standard deviations were also computed for the J.D.S. dimensions. Table 3 illustrates means and standard deviations, Tables 4-11 and Appendix 2 a) - 1) give details of the Kruskal-Wallis 1-way Anovas, and Figure 6-15 profiles for J.D.S. dimensions.

For Figures 7, 9, 11, 13 and 15, the writer acknowledges that the 'U.S. - All Jobs' and U.S. - Service Industries', categories may be question-begging in two respects. Firstly, U.S. - All Jobs norms are not of course strictly comparable to British jobs. Secondly, the job of firemen may not equate with Hackman and Oldham's service industry category, this normative

TABLE 3: J.D.S. MEANS AND STANDARD DEVIATIONS

	TRAINEES		PROBATIONERS		5-7 YEARS		15-25 YEARS		ALL FIRE GROUPS		U.S. NORM		U.S. NORM SERVICE INDS.	
	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.
Skill Variety	6.7	0.26	6.0	0.69	6.0	0.95	5.5	1.34	5.9	1.08	4.7	1.08	5.0	1.4
Task Identity	4.3	1.43	4.4	1.09	4.1	1.09	3.5	1.10	3.9	1.16	4.7	1.16	4.7	1.2
Task Significance	6.7	0.61	6.6	0.41	6.5	0.70	6.2	0.97	6.4	0.78	5.5	0.78	5.7	1.0
Autonomy	3.6	0.82	4.0	0.86	4.4	1.05	3.7	1.21	4.0	1.10	4.9	1.10	5.0	1.2
Feedback from Job	5.1	1.11	5.5	1.00	5.0	0.86	4.2	1.14	4.8	1.09	4.9	1.09	5.1	1.2
Dealing with Others	6.7	0.52	6.5	0.82	6.4	0.57	6.0	0.99	6.3	0.78	5.6	0.78	6.0	1.0
M.P.S. Additive	26.3	1.75	26.6	2.86	26.0	2.89	23.0	3.86	25.1	3.44	N/A	3.44	N/A	N/A
M.P.S. Multiplicative	107.	33.4	128.	49.9	123.	41.3	84.	47.8	109.	47.0	128.	47.0	152.	70.
Expd. Meaningfulness	6.1	0.36	6.2	0.80	5.7	0.90	5.5	0.88	5.7	0.87	5.2	0.87	5.2	1.1
Expd. Responsibility	5.4	0.59	5.5	0.65	5.2	0.79	5.2	0.96	5.3	0.81	5.5	0.81	5.6	0.86
Knowledge of Results	5.3	0.66	5.3	0.67	5.3	0.86	5.3	1.21	5.3	0.94	5.0	0.94	5.0	1.1
General Satisfaction	5.8	0.65	5.8	0.96	6.0	0.58	5.4	1.18	5.8	0.90	4.7	0.90	4.6	1.2
Internal Motivation	6.1	0.51	5.9	0.58	5.8	0.59	5.7	0.75	5.8	0.65	5.6	0.65	5.7	0.76
Growth Satisfaction	6.0	0.49	5.9	0.50	5.5	0.86	5.2	1.07	5.5	0.91	4.8	0.91	4.9	1.4
Job Security	5.5	0.98	5.3	1.05	5.6	0.89	5.5	1.21	5.5	1.02	4.8	1.02	4.9	1.3
Pay Satisfaction	5.6	0.57	5.7	0.40	4.3	1.49	4.4	1.87	4.6	1.57	4.3	1.57	4.1	1.5
Social Satisfaction	6.3	0.50	6.1	0.48	6.0	0.64	5.7	0.89	6.0	0.73	5.3	0.73	5.4	1.0
Supervisory Satisfaction	5.6	0.70	5.7	0.54	5.5	1.21	5.2	1.42	5.4	1.19	4.8	1.19	4.7	1.6
'Would Like' G.N.S.	5.8	0.54	5.2	0.93	5.6	1.14	5.3	1.06	5.5	1.04	5.7	1.04	6.1	0.96
Job Choice G.N.S.	4.2	0.67	3.8	0.63	3.9	0.52	3.5	0.56	3.8	0.60	4.4	0.60	4.6	0.74
Total G.N.S.	5.0	0.44	4.5	0.67	4.7	0.68	4.4	0.61	4.6	0.66	5.1	0.66	5.4	0.68

category being too indistinct for purposes of analysis. However, with no British norms being available the writer has included these categories as simply the best alternatives on offer. One point in their favour is their extensiveness, the overall data being obtained from 6930 employees on 876 jobs in 56 organizations (Hackman and Oldham, 1980). For present analysis only groups of 'operational' firemen are compared, i.e. Probationers, 5-7 years and 15-25 years categories<sup>2</sup>.

### 3.5.2 Core Job Dimensions

Results for core dimensions can be seen in Tables 3, 4, 5, 6 and 12, Figures 6 and 7, and Appendix 2, a, b, and c. Significant results were found for four of the seven dimensions these being Task Identity, Autonomy, Feedback from Job, and Feedback from Agents.

TABLE 4: KRUSKAL-WALLIS 1-WAY ANOVA: TASK IDENTITY

Group	Probationers	5-7 years	15-25 years
Number	11	41	31
Mean Rank	50.8	46.1	33.5
Chi-Square	Significance	Chi-Square	Corrected for ties Significance
6.4829	0.3991	6.5624	.0376

For Task Identity a Kruskal-Wallis 1-Way Anova gave a significance figure of .0376. Table 4 illustrates a large difference in Mean Rank scores for the 15-25 years group (33.5), and the other two groups of Probationers (50.8), and 5-7 years (46.1).

TABLE 5: KRUSKAL-WALLIS 1-WAY ANOVA: AUTONOMY

Group	Probationers	5-7 years	15-25 years
Number	11	41	31
Mean Rank	37.5	48.5	35.0
Chi-Square	Significance	Chi-Square	Corrected for ties Significance
5.9983	.0498	6.0592	.0483

Significance, again at the .05 level, occurred for the Autonomy dimension. Table 5 shows difference occurring between the Mean Rank score of 48.5 (5-7 years), and the lower scores of 37.5 and 35.0 for Probationers and 15-25 years respectively.

TABLE 6: KRUSKAL-WALLIS 1-WAY ANOVA: FEEDBACK FROM JOB

Group	Probationers	5-7 years	15-25 years
Number	11	41	31
Mean Rank	37.5	48.5	35.0
Chi-Square	Significance	Chi-Square	Corrected for ties Significance
15.9057	0.004	16.0485	.0003

The most significant results from the research occurred on the Feedback from Job dimension (Table 6). Here the 15-25 years group (29.4) scored far below the 5-7 years (46.9) and Probationer (59.4) groups, the significance figure being .0003.

TABLE 7: KRUSKAL-WALLIS 1-WAY ANOVA: FEEDBACK FROM AGENTS

Group	Probationers	5-7 years	15-25 years
Number	11	41	31
Mean Rank	52.5	47.0	31.7
Chi-Square	Significance	Chi-Square	Corrected for ties Significance
9.4926	.0087	9.5478	.0084

FIGURE 6: CORE JOB DIMENSION PROFILES FOR PROBATIONERS, 5-7 YEARS, 15-25 YEARS

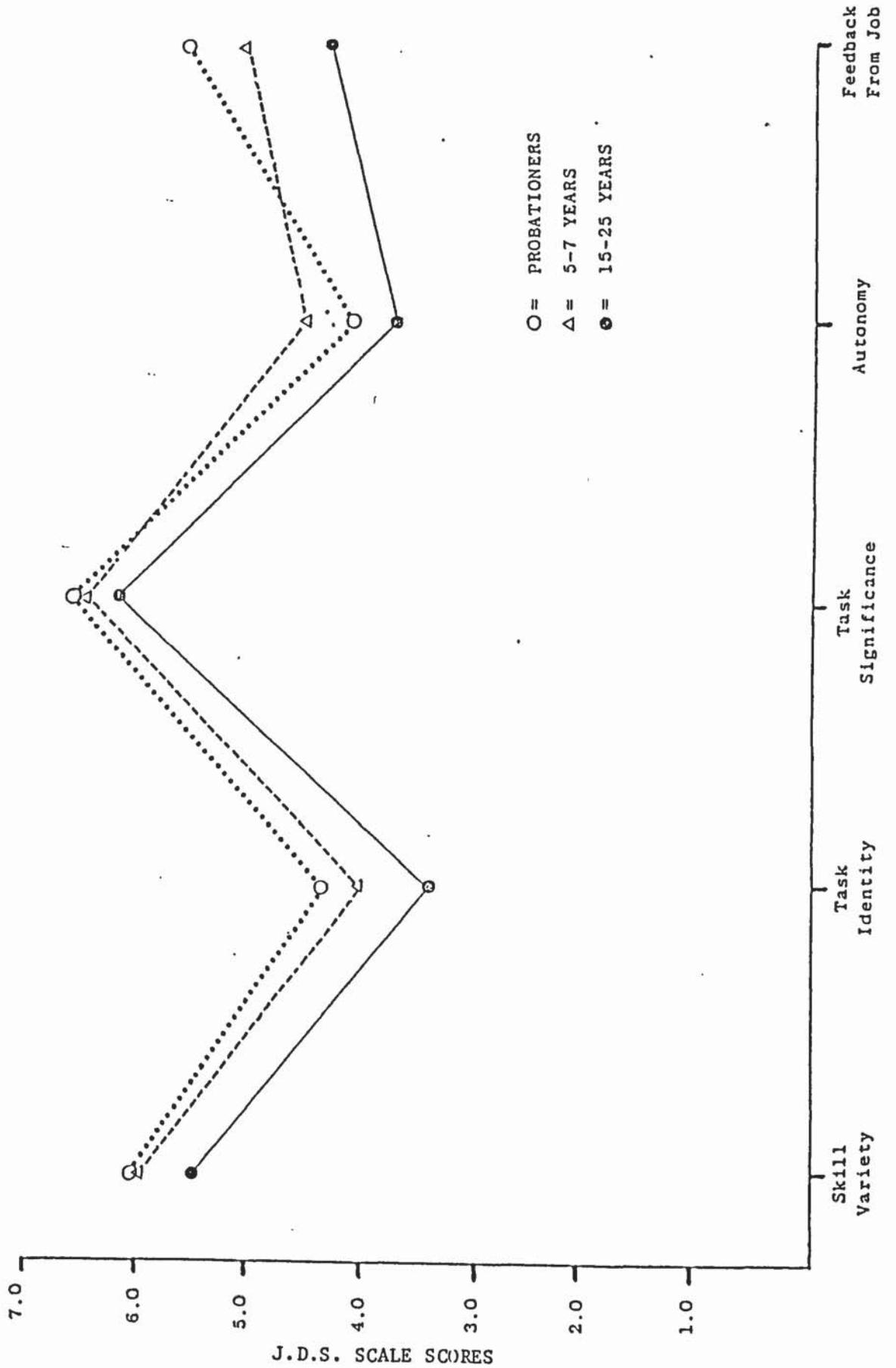
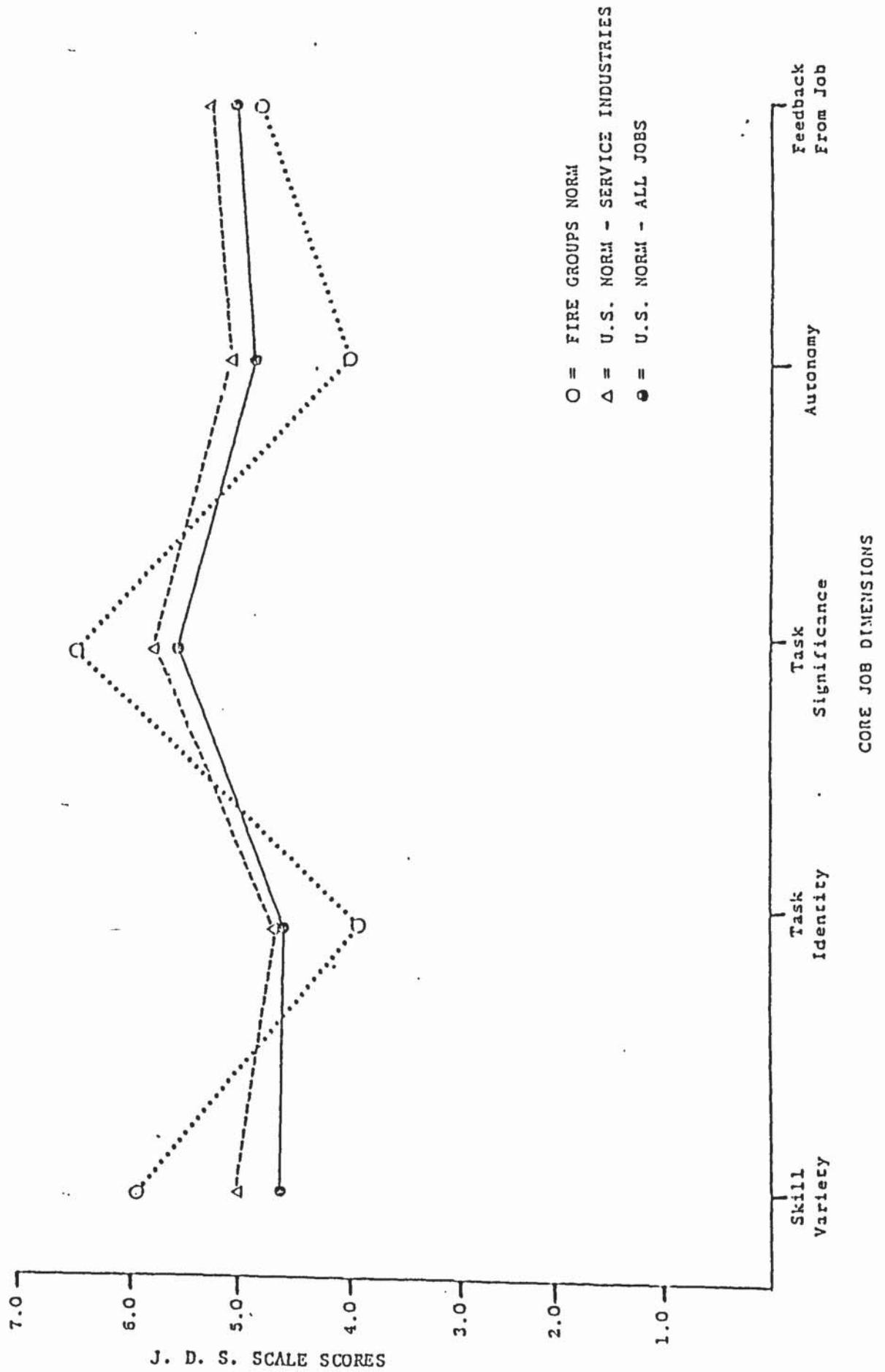


FIGURE 7: CORE JOB DIMENSION NORM PROFILES FOR FIRE GROUPS,  
 U.S. SERVICE INDUSTRIES, U.S. ALL JOBS



The other feedback dimension that for 'Agents' also proved significant, this time at the .01 level. Table 7 shows again that the 15-25 years group (31.7) scored substantially below the Probationers (52.5) and the 5-7 years group (47.0).

Figure 6 outlines the trend of results for the dimensions combining to make the Motivation Potential Score. The first noticeable feature is the overall relationship between the groups on the differing job dimensions. Although differing in magnitude, the overall 'W' pattern is the same. While research has found (see Figure 7) that the 'W' pattern is normative, the trend for the Fire Groups was to greatly exaggerate this profile.

Motivational Potential Scores (M.P.S.) reflected the trend of the 15-25 years group to consistently score lower than other groups. While the multiplicative M.P.S. scores of the Probationers (128), and the 5-7 years group (123), were in the former exactly the same, and in the latter close to, the Hackman and Oldham (1980) all jobs norm of 128; the 15-25 years group averaged an extremely low 84.

Table 3 shows how the 15-25 years group scored lower than Probationers and the 5-7 years group on all core job dimensions.

Figure 7 illustrates that Fire Groups came out higher on Skill Variety and Task Significance, but lower on Task Identity, Autonomy and Feedback from Job, when compared with U.S. norms for 'All Jobs' and the Hackman and Oldham (1980) comparison category of 'Service Industries'. Moreover, while U.S. - Service Industries averaged a multiplicative M.P.S. norm of 152, and the U.S. - All Jobs M.P.S. norm was 128, the M.P.S. norm for the sample of 93 Firemen was only 109.

### 3.5.3 Critical Psychological States

Results for Critical Psychological States can be seen in Tables 3, 8 and 12, Figures 8 and 9, and Appendix 2 d and e.

TABLE 8: KRUSKAL-WALLIS 1-WAY ANOVA: EXPERIENCED MEANINGFULNESS

Group	Probationers	5-7 years	15-25 years
Number	11	41	31
Mean Rank	58.4	42.8	35.2
Chi-Square	Significance	Chi-Square	Corrected for ties Significance
7.5819	0.2226	7.6488	.0218

A significant difference was found for Experienced Meaningfulness. Table 8 shows a 1-way Anova significance figure of .0218. The Mean Rank scores again show the Probationers with a relatively high average of 58.4, the 5-7 years group with the middle score of 42.8, and the 15-25 years group with the lowest score of 35.2.

Figure 8 shows the profile analysis, with the trend for the Probationers to score highest while the 15-25 years group lowest being continued.

The normative profile in Figure 9 shows an inverse pattern for the Fire Groups in comparison with the two U.S. norm scores. Here the Fire Groups scored highest on Experienced Meaningfulness and Knowledge of Results, while lowest on Experienced Responsibility.

### 3.5.4 Affective Outcomes

Results for Affective Outcomes can be seen in Tables 3, 9 and 12, Figures 10, and 11, and Appendix 2 f and g.

FIGURE 8: CRITICAL PSYCHOLOGICAL STATES PROFILES FOR PROBATIONERS,  
5-7 YEARS, 15-25 YEARS

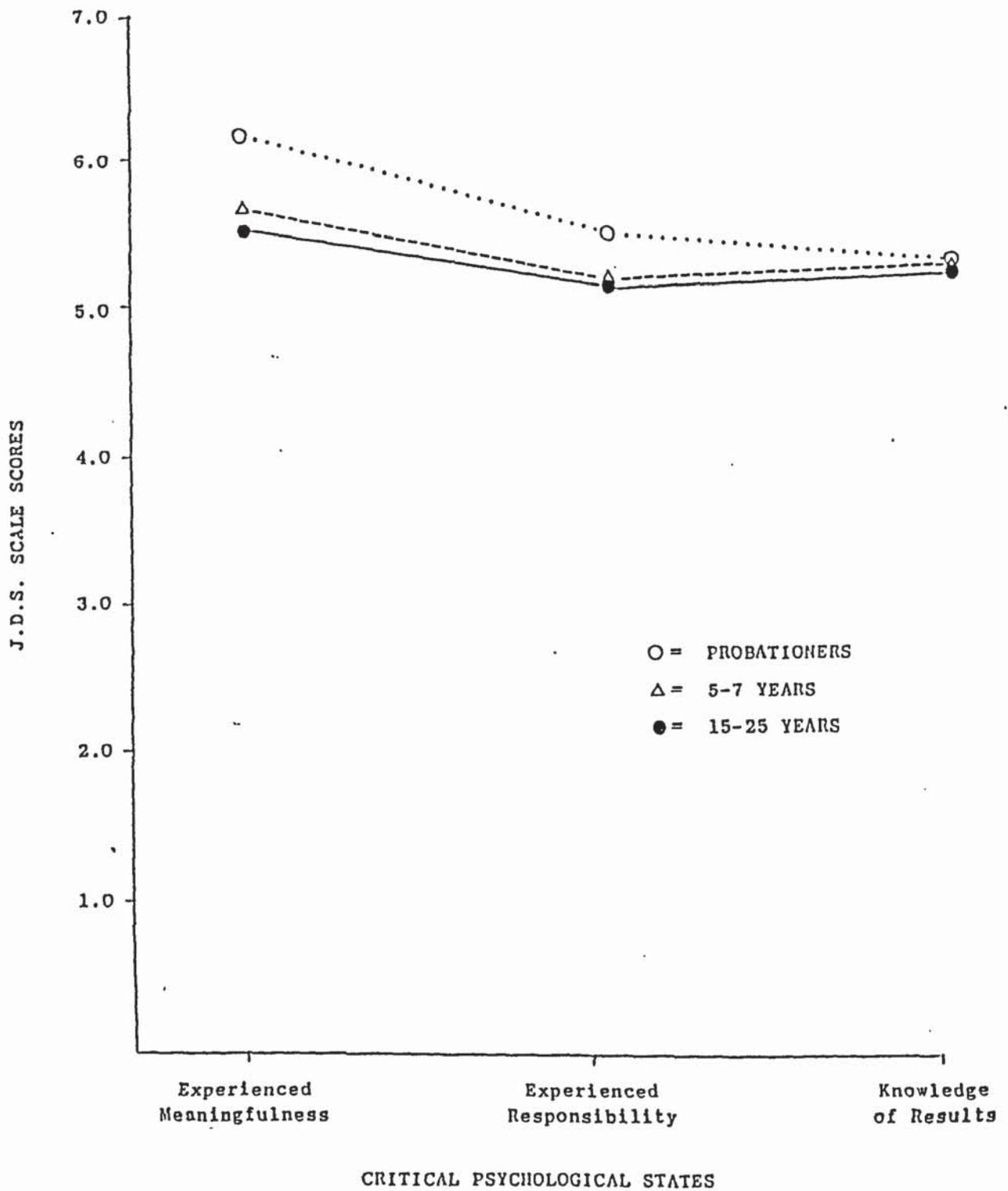


FIGURE 9: CRITICAL PSYCHOLOGICAL STATES NORM PROFILES FOR FIRE GROUPS, U.S. SERVICE INDUSTRIES, U.S. ALL JOBS

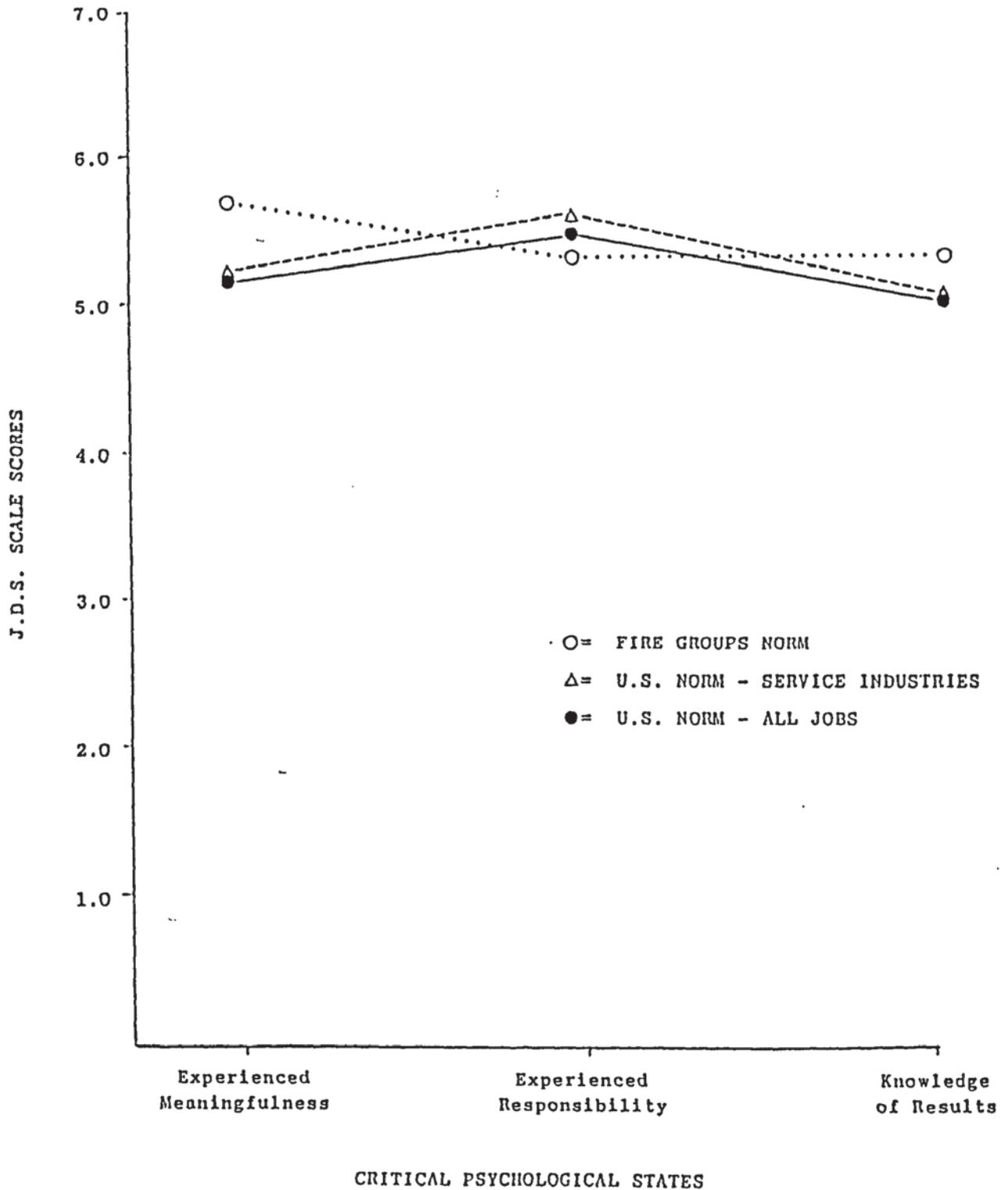


TABLE 9: KRUSKAL-WALLIS 1-WAY ANOVA: GROWTH SATISFACTION

Group	Probationers	5-7 years	15-25 years
Number	11	41	31
Mean Rank	57.2	42.4	36.0
Chi-Square	Significance	Chi-Square	Corrected for ties Significance
6.2666	.0436	6.3511	.0418

Of these categories a significant difference between groups was found for Growth Satisfaction, where the Analysis of Variance produced a significant result at the .05 level. Table 9 shows how the Probationers produced a high Mean Rank score of 57.2 as compared with the relatively low 36.0 scored by the 15-25 years group. The 5-7 years group occupied the middle ground with a Mean Rank score of 42.4.

The profile analysis in Figure 10 outlines how the 15-25 years group were again the lowest scorers on each factor. Although the Probationers averaged the highest score for Growth Satisfaction and Internal Work Motivation, they yielded the highest average on General Satisfaction to the 5-7 years group. For the normative profile presented in Figure 11, the Fire Groups averaged higher than the U.S. norms on every factor.

### 3.5.5 Context Satisfactions

Results for Context Satisfactions are presented in Tables 3, 10 and 12, Figures 12 and 13, and Appendix 2 h, i, and j.

TABLE 10: KRUSKAL-WALLIS 1-WAY ANOVA: PAY SATISFACTION

Group	Probationers	5-7 years	15-25 years
Number	11	41	31
Mean Rank	59.2	37.4	41.9
Chi-Square	Significance	Chi-Square	Corrected for ties Significance
7.0950	.0288	7.3251	.0257

FIGURE 10: AFFECTIVE OUTCOMES PROFILES FOR PROBATIONERS,  
5-7 YEARS, 15-25 YEARS

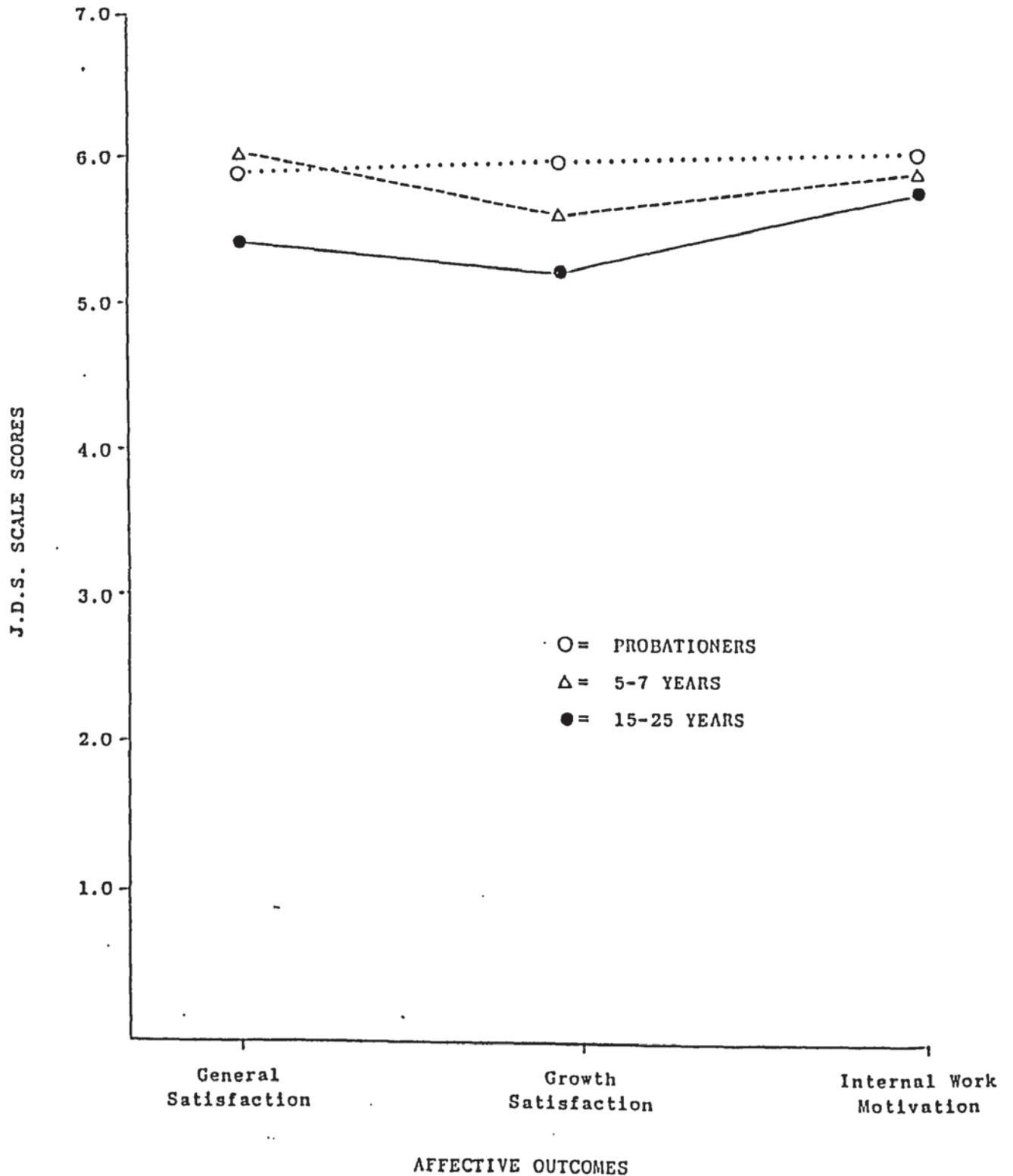


FIGURE 11: AFFECTIVE OUTCOMES NORM PROFILES FOR FIRE GROUPS, U.S.  
SERVICE INDUSTRIES, U.S. ALL JOBS

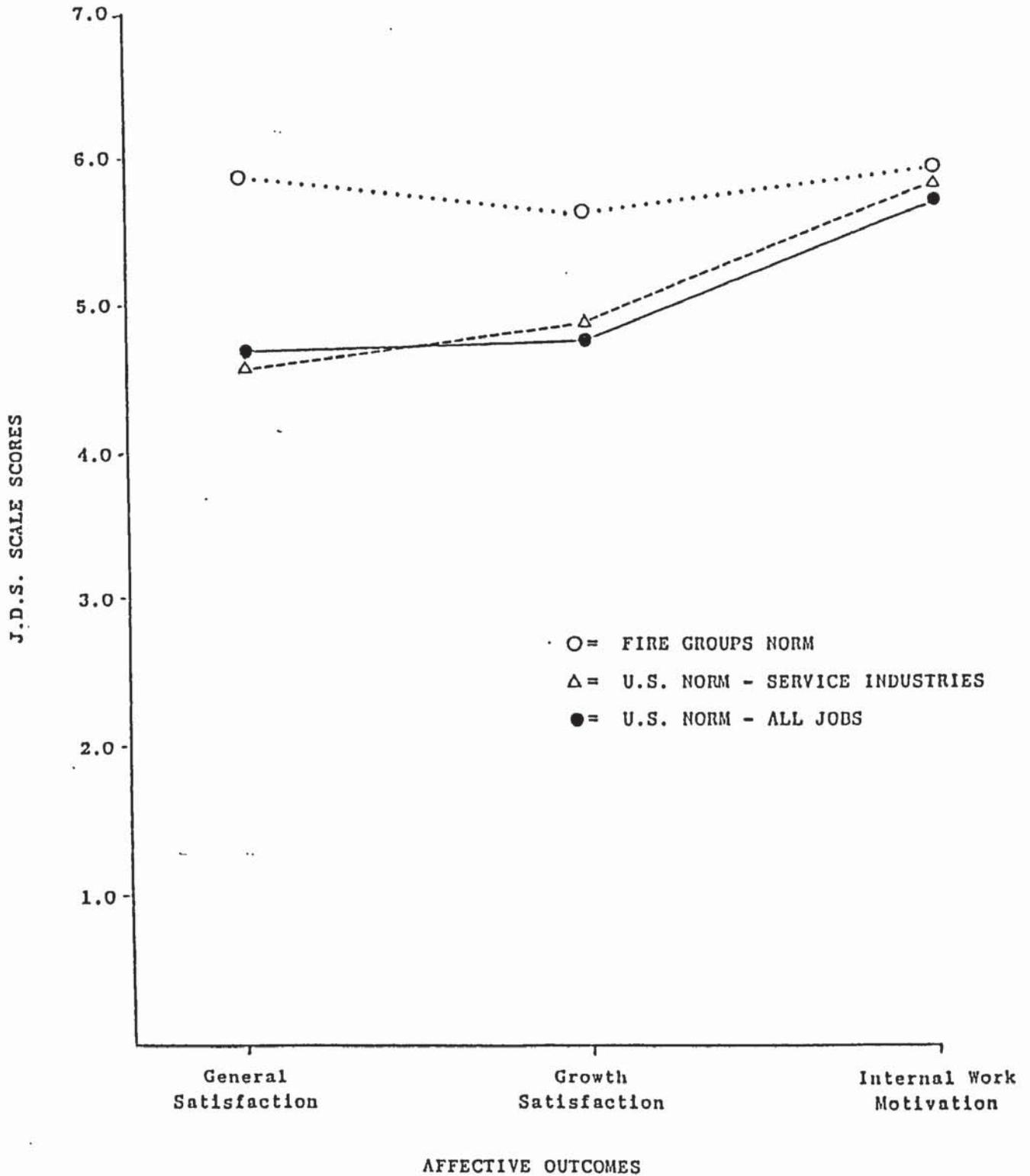


Table 12 shows that of the four Context Satisfactions only that of Pay Satisfaction showed a significant group difference, with a significance figure of .0257 (Table 10). On examination of the Mean Rank scores, Probationers (59.9) reported a substantially higher mark than either the 5-7 years group (37.4) or the 15-25 years group (41.9).

The profile in Figure 12 shows the Probationers recording the highest average scores for Pay, Social, and Supervisory satisfaction, but the lowest for Job Security.

For the norm profiles Figure 13 illustrates that Fire Groups scored higher than the U.S. Norms on every factor, and substantially so for Job Security, Social Satisfaction and Supervisory Satisfaction.

### 3.5.6 Growth Need Strength

Results for Growth Need Strength are presented in Tables 3, 11 and 12, Figures 14 and 15, and Appendix 2 k and l.

TABLE 11: KRUSKAL-WALLIS 1-WAY ANOVA: 'JOB CHOICE' G.N.S.

Group Number	Probationers 11	5-7 years 41	15-25 years 31
Mean Rank	41.9	49.5	32.3
Chi-Square	Significance	Chi-Square	Corrected for ties Significance
9.0791	.0107	9.1316	.0104

Of the three 1-Way Anovas, a significant group difference was found for Job Choice G.N.S. (Table 11). Here a large Mean Rank difference between the 5-7 years group (49.5) and the 15-25 years group (32.2), resulted in a significance figure of .0104. Unlike previous profiles where the Probationer group had scored consistently the highest, Figure 14 portrays the 5-7 years group as having the greatest Growth Need Strength. Figure

FIGURE 12. CONTEXT SATISFACTION PROFILE FOR  
PROBATIONERS, 5-7 YEARS, 15-25 YEARS

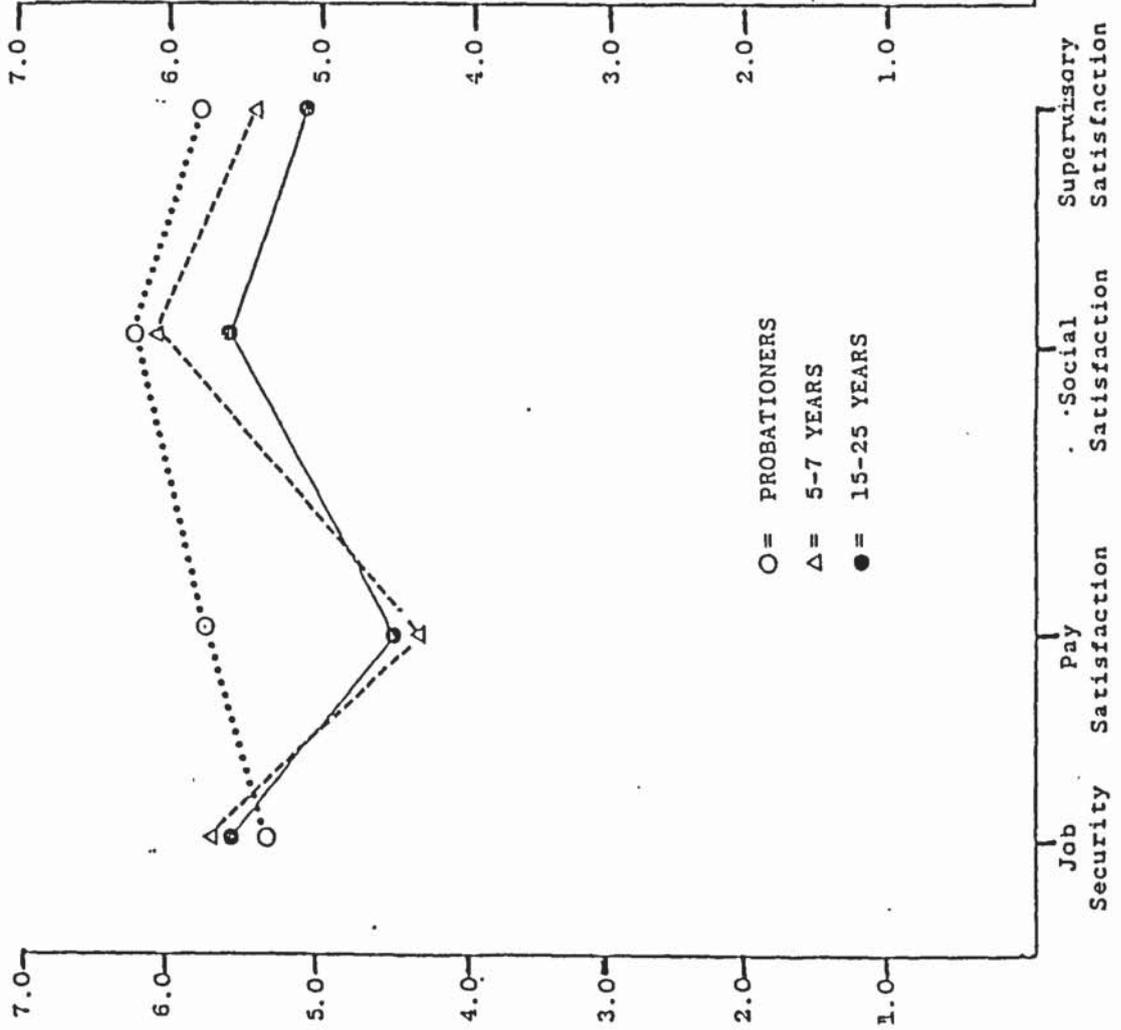
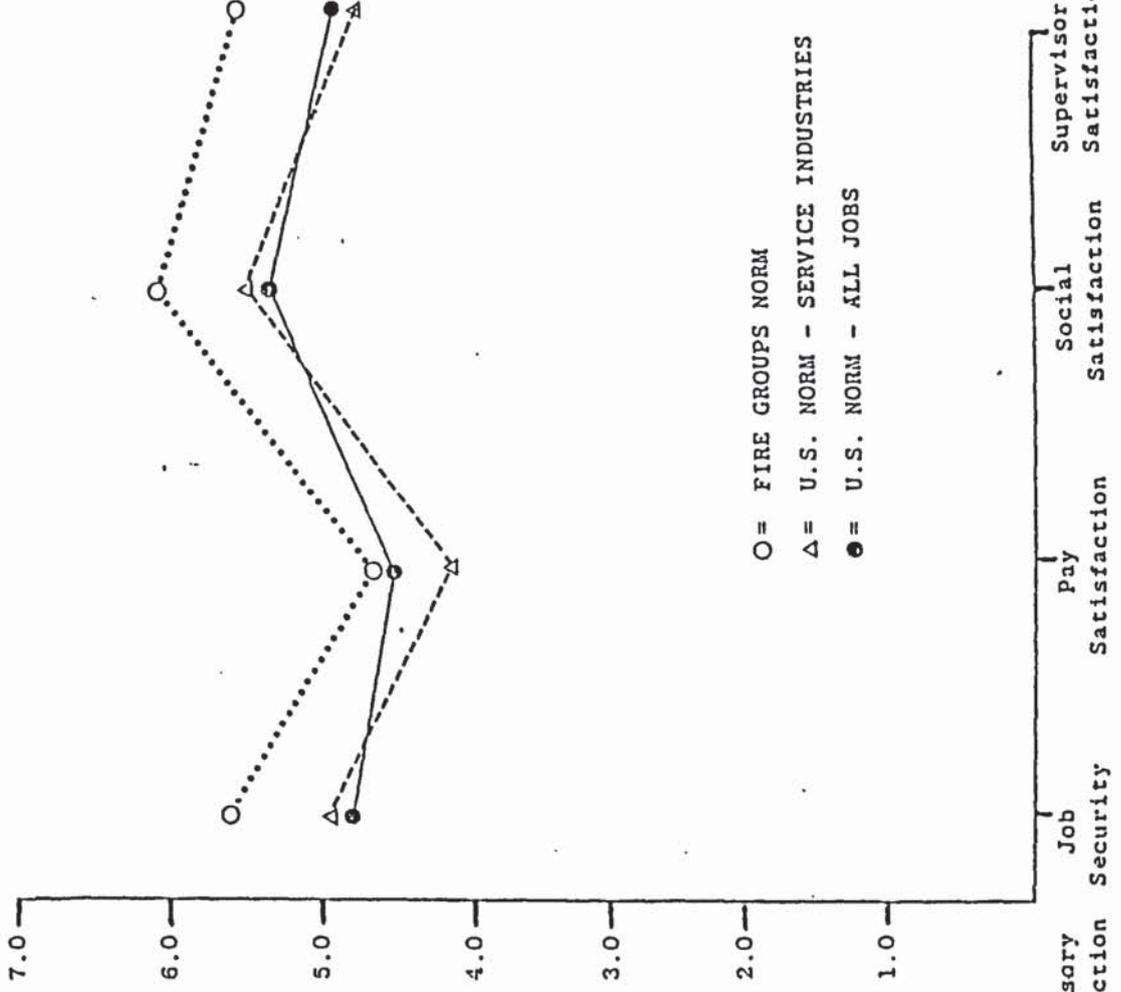


FIGURE 13: CONTEXT SATISFACTION NORM PROFILES FOR  
FIRE GROUPS, U.S. SERVICE INDUSTRIES, U.S. ALL JOBS



J.D.S. SCALE SCORES

15 shows that Fire Groups scored consistently lower than the norms for U.S. - All Jobs and U.S. - Service Industries, this being especially so for 'Job Choice' G.N.S.

### 3.5.7 J.D.S. Scale Intercorrelations

Intercorrelations were computed using both Pearson Product Moment and Spearman Rank Order correlation methods. The product moment correlation coefficients are presented in Table 13 at the lower left hand side of the matrix. In the upper part of the matrix are presented the coefficients obtained by Oldham, Hackman and Stepina (1978) from a sample of 6930 employees in various occupations. Table 14 presents non-parametric Spearman correlations, which in general seem less positive than the Pearson parametric correlations.

In terms of relationships between the core job dimensions and their corresponding critical psychological states, no substantial correlation differences were discovered between the present research and those of Oldham et al. However, certain points can be noted. The coefficients from this research proved encouraging in terms of the relationships between Skill Variety, Task Identity and their corresponding psychological state of Experienced Meaningfulness. Correlations proved more positive in the present study albeit that the Oldham et al. coefficient for Task Identity - Experienced Meaningfulness is not itself terribly substantial.

In contrast the relationships between the other two psychological states (i.e. Experienced Responsibility, Knowledge of Results) and their corresponding core job dimensions (i.e. Autonomy, Feedback from Job) were less favourable this being more noticeable in the Job Feedback - K.R. relationship.

FIGURE 14: GROWTH NEED STRENGTH PROFILES FROM PROBATIONERS, 5-7 YEARS, 15-25 YEARS

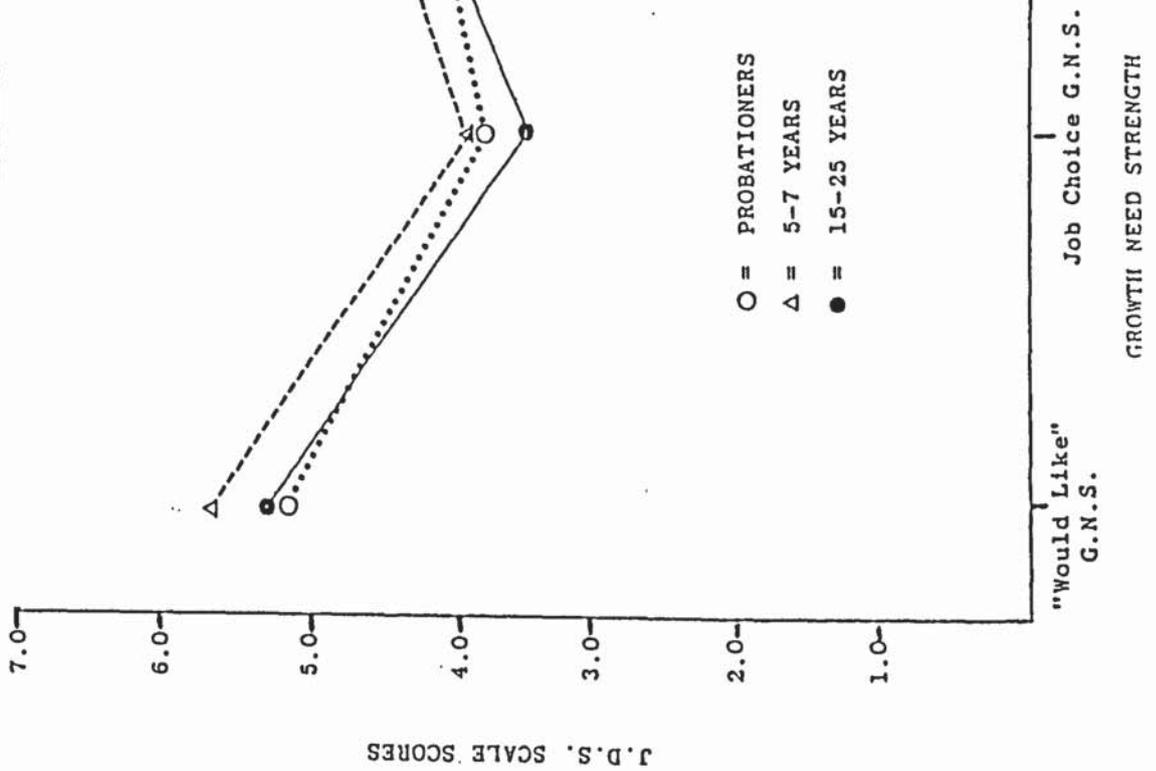


FIGURE 15: GROWTH NEED STRENGTH PROFILES FOR FIRE GROUPS U.S. SERVICE INDUSTRIES, U.S. ALL JOBS

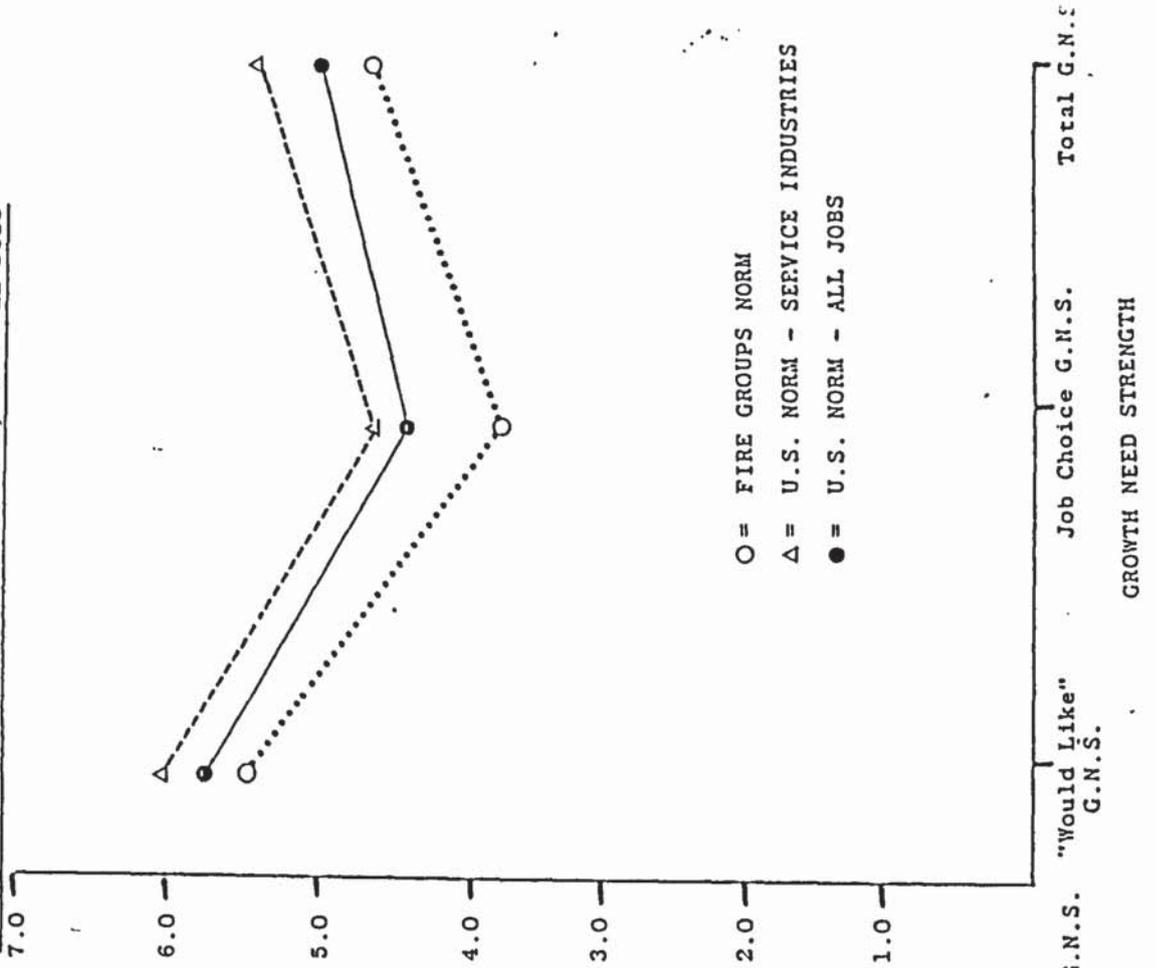


TABLE 12: SUMMARY OF KRUSKAL-WALLIS 1-WAY ANALYSES OF VARIANCE

	$\chi^2$	SIGNIFICANCE FIGURE	SIGNIFICANCE LEVEL
Skill Variety	3.0358	.2192	N.S.
Task Identity	6.5624	.0376	.05
Task Significance	3.0697	.2155	N.S.
Autonomy	6.0592	.0483	.05
Feedback from Job	16.0485	.0003	.001
Feedback from Agents	9.5478	.0084	.01
Dealing with Others	2.5247	.2830	N.S.
Experienced Meaningfulness	7.6488	.0218	.05
Experienced Responsibility	.4880	.7835	N.S.
Knowledge of Results	.3233	.8507	N.S.
General Satisfaction	3.2342	.1985	N.S.
Growth Satisfaction	6.3511	.0418	.05
Internal Motivation	1.0706	.5855	N.S.
Pay Satisfaction	7.3251	.0257	.05
Security Satisfaction	.7283	.6948	N.S.
Social Satisfaction	1.8747	.3917	N.S.
Supervisory Satisfaction	1.3281	.5148	N.S.
'Would Like' G.N.S.	2.3855	.3034	N.S.
Job Choice G.N.S.	9.1316	.0104	.05
Total G.N.S.	5.9648	.0507	N.S.

Certain unhypothesised relationships emerged, such as Skill Variety having a stronger correlation with Experienced Responsibility than its own core job dimension, Autonomy. Indeed, Autonomy had a stronger correlation with both Experienced Meaningfulness and Knowledge of Results, than its own psychological state of Experienced Responsibility. This was perhaps the most striking of the correlational results.

If we turn to the intercorrelations between the five core job dimensions we find moderate relationships, essentially consistent with the results of Oldham et al. (1978), Dunham (1976), Hackman and Lawler (1971), and Hackman and Oldham (1974). The two non-M.P.S. job dimensions of Feedback From Agents and Dealing with Others gave results consistent with Oldham et al. in showing generally lower correlations with other J.D.S. scales, while giving moderate correlations with Skill Variety and Task Significance.

Growth Need Strength correlations were seen to be independent of core job dimension measures, critical psychological states, and personal work outcomes, although modest correlations emerged for Internal Motivation and Skill Variety.

### 3.5.8 Internal Consistency Reliabilities

Table 15 lists the internal consistency reliabilities for all J.D.S. dimensions. The results range from a high of .82 to a low of .12.

Of the core job dimensions only Skill Variety (.52) has a substantial internal consistency measure (cf. Task Identity, .20; Task Significance, .24; Autonomy, .21). For the non-M.P.S. job dimensions, Dealing with Others has an extremely low internal consistency score of .16. For the critical psychological states, while Knowledge of Results obtained a

TABLE 13: INTERCORRELATIONS OF J.D.S. SCALES

(a) Pearson correlation coefficients (bottom left matrix = present study, Top right matrix = Oldham et.al. 1978)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
1. SKILL VARIETY																							
2. TASK IDENTIFIYTY	.33																						
3. TASK SIGNIFICANCE	.55	.05																					
4. AUTONOMY	.46	.35	.39																				
5. FEEDBACK FROM JOB	.28	.09	.20	.24																			
6. FEEDBACK FROM AGENTS	.26	.29	.22	.19	.45																		
7. DEALING WITH OTHERS	.32	.05	.47	.24	.29	.35																	
8. M.P.S. ADDITIVE	.79	.59	.60	.75	.56	.43	.39																
9. M.P.S. MULTIPLICATIVE	.54	.41	.42	.81	.70	.37	.34	.89															
10. EXPERIENCED MEANINGULNESS	.54	.33	.44	.40	.24	.36	.21	.59	.44														
11. EXPERIENCED RESPONSIBILITY	.41	.25	.27	.31	.23	.17	.12	.45	.38	.47													
12. KNOWLEDGE OF RESULTS	.26	.29	.17	.35	.32	.38	-.02	.43	.41	.37	.24												
13. GENERAL SATISFACTION	.40	.24	.37	.44	.16	.21	.04	.48	.37	.52	.49	.40											
14. INTERNAL MOTIVATION	.21	.27	.06	.14	.25	.13	-.02	.29	.27	.20	.26	.23	.24										
15. GROWTH SATISFACTION	.59	.33	.40	.47	.37	.38	.19	.65	.53	.62	.48	.40	.62	.30									
16. JOB SECURITY	.19	.20	.13	.31	.16	.13	.13	.30	.31	.12	.20	.20	.34	.24	.31								
17. PAY SATISFACTION	.11	.01	.11	.09	.34	.26	.17	.20	.25	.33	.14	.24	.20	.10	.35	.34							
18. SOCIAL SATISFACTION	.40	.34	.28	.33	.26	.24	.22	.49	.38	.41	.44	.34	.60	.30	.65	.41	.37						
19. SUPERVISORY SATISFACTION	.25	.14	.23	.32	.32	.45	.02	.38	.32	.27	.26	.35	.42	.21	.63	.30	.17	.44					
20. 'WOULD LIKE' G.N.S.	.11	.15	-.10	.03	-.15	-.03	-.01	.02	-.01	.02	-.08	.04	-.05	.21	-.02	.04	-.00	.04	-.00	-.07	-.20	-.02	.00
21. 'JOB CHOICE' G.N.S.	.23	-.06	.08	.05	.23	.12	.05	.15	.16	.05	.05	.01	.05	.14	.05	.09	.00	-.06	.05	.23	-.42	.90	
22. TOTAL G.N.S.	.19	.08	-.04	.05	-.02	.03	.01	.09	.07	.05	-.04	.04	-.02	.21	.01	.07	-.00	-.00	-.13	.89	.64		

TABLE 14: INTERCORRELATIONS OF J.D.S. SCALES

(b) Spearman nonparametric correlation coefficients.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
1. SKILL VARIETY	-																						
2. TASK IDENTITY	.31	-																					
3. TASK SIGNIFICANCE	.33	.03	-																				
4. AUTONOMY	.27	.35	.26	-																			
5. FEEDBACK FROM JOB	.28	.09	.20	.20	-																		
6. FEEDBACK FROM AGENTS	.30	.25	.21	.11	.44	-																	
7. DEALING WITH OTHERS	.24	.05	.46	.10	.35	.36	-																
8. M.P.S. ADDITIVE	.63	.63	.46	.67	.58	.40	.33	-															
9. M.P.S. MULTIPLICATIVE	.46	.42	.36	.79	.69	.33	.28	.91	-														
10. EXPERIENCED MEANINGFULNESS	.42	.30	.32	.27	.26	.31	.18	.47	.41	-													
11. EXPERIENCED RESPONSIBILITY	.28	.23	.23	.24	.19	.11	.10	.36	.33	.36	-												
12. KNOWLEDGE OF RESULTS	.25	.26	.20	.29	.28	.33	.07	.42	.36	.27	.19	-											
13. GENERAL SATISFACTION	.31	.27	.18	.17	.08	.11	.04	.36	.32	.46	.41	.38	-										
14. INTERNAL MOTIVATION	.25	.21	.12	.10	.19	.06	.04	.30	.25	.23	.29	.23	.29	-									
15. GROWTH SATISFACTION	.46	.27	.16	.25	.36	.29	.17	.45	.43	.48	.31	.36	.52	.34	-								
16. JOB SECURITY	.21	.21	.15	.31	.11	.10	.15	.31	.30	.12	.14	.22	.40	.26	.34	-							
17. PAY SATISFACTION	.10	.01	.04	.07	.26	.29	.16	.14	.18	.27	.09	.19	.16	.07	.41	.36	-						
18. SOCIAL SATISFACTION	.32	.32	.23	.23	.18	.16	.25	.35	.28	.35	.28	.23	.51	.28	.65	.44	.27	-					
19. SUPERVISORY SATISFACTION	.14	.11	.10	.24	.23	.32	.01	.24	.27	.20	.15	.35	.30	.19	.43	.29	.18	.33	-				
20. 'WOULD LIKE' G.N.S.	.20	.16	-.03	.05	-.13	-.02	.03	.09	.01	.04	-.04	.04	.11	.22	.05	.06	.03	.03	-.02	-.17	-		
21. 'JOB CHOICE' G.N.S.	.27	-.07	.14	.05	.24	.10	.05	.18	.17	.11	.05	-.01	.11	.15	.09	-.01	.02	-.09	.02	.24	-		
22. TOTAL G.N.S.	.24	.09	.04	.05	-.00	.03	.05	.14	.07	.07	-.01	.01	.14	.23	.06	.04	.04	-.07	-.13	.89	.63	-	

reliability coefficient of .41, those for Experienced Meaningfulness (.26) and Experienced Responsibility (.20) were again rather moderate. Of the three outcome factors the internal consistency for Internal Work Motivation proved least reliable with a correlation of only .20. The results for the four context satisfactions were more encouraging especially Pay Satisfaction (.82) and Supervisory Satisfaction (.64). The lowest reliability correlation occurred for Job Choice G.N.S. with a coefficient of .12.

Analysis of the interim correlations reveals certain anomalies concerning the questionnaire items that comprise each scale. The low internal consistency for the Autonomy scale is in part due to the low correlation in section 2 of item 9 with item 13, a correlation of only .03. For Dealing With Others, item 6 section 2, has low correlation with the other items in this scale, i.e. .07 with item 2 section 2, and .11 with item 1 section 1. Of the critical psychological states, the correlation of item 6 section 5, with item 4 section 3, on the Experienced Meaningfulness scale scored only a correlation of .13. Even lower interim correlations were found in the Experienced Responsibility scale. Here item 12 section 3, had low correlations with both item 1 section 3 (.05) and item 4 section 5 (.11).

The low internal consistency result for Internal Work Motivation was partly due to several poor interim correlations in this scale. Notably item 2 section 3, correlated lowly with item 1 section 5 (.08), item 9 section 5 (-.02), and item 14 section 3 (.12). This last item also has a low correlation with item 10 section 3. The large Job Choice G.N.S. scale

TABLE 15: INTERNAL CONSISTENCY RELIABILITIES OF J.D.S. SCALES

<u>J.D.S. Scale</u>	<u>Reliability Coefficient</u>
Skill Variety	.52
Task Identity	.20
Task Significance	.24
Autonomy	.21
Feedback from Job	.33
Feedback from Agents	.43
Dealing with Others	.16
Experienced Meaningfulness	.26
Experienced Responsibility	.20
Knowledge of Results	.41
General Satisfaction	.41
Internal Motivation	.20
Growth Satisfaction	.46
Job Security	.41
Job Satisfaction	.82
Social Satisfaction	.31
Supervisory Satisfaction	.64
Would Like G.N.S.	.40
Job Choice G.N.S.	.12

gave many low interim correlations, thus giving further backing to doubts about reliability expressed by previous researchers.

### 3.6 Discussion

#### 3.6.1 The Job: General Themes

In terms of overall M.P.S. we find a mean average of 109 for the 93 respondents in comparison to the U.S. - All Jobs norm (128), and the U.S. - Service Industries norm (152), therefore indicating relatively low motivational potential. However this low M.P.S. is incongruous with firemen scores for critical psychological states, affective outcomes and context satisfactions, which are above U.S. normative levels.

If we wish to defend the job characteristics model a reason for the above may be the multiplicative method of calculating M.P.S. The use of this method has been recently questioned by Crawley (1981), who in the wake of other critics stresses a preference for developing the additive M.P.S. method. Figure 7 shows the low M.P.S. as stemming from the multiplicative influence of the autonomy and feedback from job scores. If the U.S. norms had been additive, then the high firemen scores for skill variety and task significance (well above U.S. norms) would have been instrumental in producing a much greater motivational score. In view of the above it is probably advisable to minimize the importance of this M.P.S. score, and instead to evaluate the sections of the model individually.

The high score for skill variety suggests that firemen see their job as offering varying work activities. Results reflect the wide range of duties firemen undertake at both operational and station levels, this being consistent with the alleviation of boredom through job rotation. A second high score in job characteristics emerged for task significance.

This response reflects the fireman's view that his job has a 'substantial impact on the lives of other people'. Although several station activities identified by a Task Description questionnaire (such as 'Checking Appliances' and 'Inspection') seem monotonous (see Chapter 4) they may offer psychological significance in similar vein to Hackman and Oldham's 'aircraft mechanic' example<sup>3</sup>.

The Feedback from Job dimension scored slightly below the U.S. norms for All Jobs and Service Industries. This is perhaps surprising as the primary task of firefighting would seemingly offer immediate knowledge of operational effectiveness. Scores more notably below U.S. norms were those for task identity and autonomy. A lack of autonomy in actual fire fighting is perhaps predictable when considering the requisite efficiency centred nature of task execution. Here, as in other emergency services, specific operational procedures largely preclude discretion in the scheduling of activities for the primary task. However, opportunities for greater discretion could be built into decisions concerning non-primary task activities such as inspections and maintenance.

A low score for task identity is perhaps accordant with the low autonomy score. Here specific group differentiation in primary-task activity prevents the completion of a 'whole' and identifiable piece of work. However, some confusion over this concept is encountered in the literature. Whereas job enlargement and job characteristics proponents would stress the advantage of completing all activities involved in a task, socio-technicists (cf. Rice, 1958) have suggested that for 'closure' it is enough to be an integral member of a group completing a task. If the latter is accepted then presumably the primary-task of fire fighting contains great potential for task identity - although this is not

reflected in results obtained by the present study. Secondary tasks such as hydrant inspections and 1.(I)(d)'s (see Chapter 4) would seem to possess task identity although being activities of lower status.

If we turn to the critical psychological states we find, as noted, that the multiplicative M.P.S. does not appear to reflect the motivational scores given for these factors. Indeed, firemen report relatively high experienced meaningfulness and knowledge of results compared with U.S. norms. The high average score for experienced meaningfulness is perhaps a reflection of the considerable degrees of skill and significance offered by the job.

A relatively high score for the knowledge of results factor is problematic in comparison to the earlier result for feedback from job. Whereas firemen had reported a figure lower than U.S. norms on the latter, they gave a higher average for the former. The score for K.R. is perhaps more congruent with ones intuitive view of the fireman's job.

With regard to the remaining psychological state, that of experienced responsibility, the data seems fairly consistent with its association to the low score for autonomy. In relative terms firemen can be seen as experiencing less responsibility, this again a reflection of the highly centralised decision making structure, and highly specific primary-task operational procedures.

Hackman and Oldham (1980) propose that certain affective outcomes are linked to the motivating potential of the job, i.e. general satisfaction, growth satisfaction and internal work motivation. Figure 11 has shown that the norms for firemen are greater than those for U.S. - All Jobs, and U.S. - Service Industries on every factor. Again we see that the reported

personal satisfactions, like the critical psychological states, are suggestive of motivating work. The figure for the general satisfaction of firemen is particularly high as seen previously with scores for skill variety, task significance and in turn experienced meaningfulness. This pattern suggests that the variety of skill offered by the job, and the substantial impact it is seen as having on the lives of others, promotes a feeling that in the broader system of values the job 'counts'. Thus, the job on being perceived as important sustains positive feelings of satisfaction and internal motivation.

As noted above the Hackman and Oldham (1980) model accounts for certain 'moderators' of the relationship between job characteristics and internal motivation. The J.D.S. incorporates measures for 'context satisfactions' and 'growth need strength'. Hackman and Oldham (1980) state that context factors can affect employees willingness to take advantage of potentially motivating jobs. The argument is that although a job may be potentially motivating, dissatisfaction with contextual aspects can foster negative responses leading to alienation. Firemen, however, reported higher scores on all four contextual factors of job security, pay, social and supervisory satisfactions, than were listed for U.S. - All Jobs and U.S. - Service Industries. Substantially higher scores emerged for job security, social satisfaction and supervisory satisfaction. Here, in working within a public emergency service firemen are relatively immune to the threats of redundancy even during periods of recession, while as regards supervisory and social satisfaction working in teams (watches) may promote esprit de corps.

Results for growth need strength were below the U.S. norms for All Jobs and Service Industries. The data suggests that firemen have lower needs for personal accomplishment, although as noted previously, research into growth need strength suggests that the dimension remains problematic.

### 3.6.2 Probationers, 5-7 years, 15-25 years

The striking feature of the results was the consistency with which groups scored the differing factors. Figures 6, 8, 10, 12 and 14, show how for each set of variables (except G.N.S.) the Probationers scored highest, the 15-25 years group lowest, while the 5-7 years group occupied the middle position.

Figure 6 sets the pattern for nearly all the remaining scales, the only irregularity being the greater feeling of autonomy expressed by 5-7 years group than by the Probationers. Here the essentially pre-qualified Probationers may feel less able to make decisions when not possessing full fireman status. However, for the Probationers and the 5-7 years group, the job appears to hold far greater skill variety, task identity, task significance, autonomy and job feedback than it does for the 15-25 years group. For these dimensions results reached statistical significance for task identity (.05), autonomy (.05), feedback from job (.001), and for one of the additional dimensions in the model; feedback from agents (.01).

Profiles for the critical psychological states again reflect the established pattern, although not to such a marked degree. Whereas the associations of skill variety, task identity and task significance to experienced meaningfulness, and autonomy to experienced responsibility, are consistent, the job feedback to K.R. dimension again appears problematic. As with the normative categories above, the relationship is

questionable between the large group score differences for job feedback and the three-way tied score for knowledge of results. Also notable is that all the Fire Groups held up well against the U.S. - All Jobs and U.S. - Service Industries norms, with the 15-25 year group scoring higher than their low M.P.S. would predict.

The regular pattern again emerges for affective outcomes. However, although the Probationers' score for general satisfaction is a relatively high one, it is not as positive as one would expect from the means for skill variety, task significance and experienced meaningfulness. While the 15-25 years group again fared worst, their multiplicative M.P.S. again considerably underrated their personal outcomes from the job. Indeed, Figure 10 shows how their scores are better than U.S. - All Jobs norms on every occasion, and superior to U.S. - Service Industries except for internal work motivation where the scores are tied<sup>4</sup>.

Probationers maintained their high motivation profile for context satisfactions, although the pattern was slightly displaced for job security, where they scored lowest. This is again probably a reflection of their Probationer status, being as yet not fully qualified. The most notable dimension here is pay satisfaction, the profile showing the large difference between the high Probationers' score (5.7) and those of the other groups which were approximate to the U.S. norm. Even though the 15-25 years group again fared the worst overall they once more scored higher than the U.S. norms. Although the 5-7 years, and the 15-25 years groups, were in the former equal to, and in the latter higher than, than the U.S. normative scores, there was still a significant difference between these groups and the even more highly satisfied Probationers. (.05).

Finally, only for growth need strength does the largely consistent scoring pattern alter. Probationers scored lowest for 'would like' G.N.S., and held the middle position for job choice G.N.S. Results show that all fire groups scored below U.S. normative figures.

1. It was decided at an early stage to omit this initial literature review from the final thesis. This was done for two reasons: firstly, because reviews of this material are commonplace, and secondly, because of the limitations of space in a four study thesis. Instead sections of work were published as a review article (see Hassard and Shackleton, 1982). The most comprehensive review of the job characteristics approach is provided by Roberts and Glick (1981). See also Salancik and Pfeffer (1977) for a discussion of conceptual foundations, and Wall et al. (1978) and Dunham et al. (1977) for a critique of the Hackman and Oldham (1975, 1976) thesis in particular.
  
2. The data for trainees was not evaluated in the results section as with the small sample size, and lack of reasonable comparative data, it was decided instead to give a brief overview in footnote form.

The multiplicative M.P.S. score of 107 seems to underrate the degree of motivating potential perceived by Trainees. Indeed, the mean scores presented in Table 3 suggest that this group experienced high overall motivation in their initial immersion in the Fire Service. Although direct comparison is not applicable, to give a feel of the general profile we find Trainees scoring higher than other groups on Skill Variety, Task Identity, Feedback from Agents, Dealing with Others, Growth Satisfaction, Internal Work Motivation, Social Satisfaction and the G.N.S. scores, while lower on Autonomy.

The high Skill Variety Score may have arisen simply through being in training, where the emphasis is on learning a multiplicity of tasks. For Task Significance the exceptionally high mean score (6.7 on a 7 point scale) is probably linked to new recruits on joining considering the Fire Service to have a significant impact on the lives of others. Trainees scored lower than the other groups on only one dimension - Autonomy. This is perhaps an accurate reflection of the low level of freedom, discretion and independence allowed Trainees in the Fire Service.

3. At an early stage of the research the writer considered undertaking a 'hierarchical task analysis' (Annett and Duncan, 1967) to complement the questionnaire results. Due to the extent of the projected empirical schedule this was not developed, although the initial work served as a useful guide to work procedures.
4. It must be remembered that Hackman and Oldham (1980) report U.S. - Service Industries as their third highest M.P.S. occupational grouping having a mean score of 152, this score only being bettered by Professional/Technical (154), and Managerial (156).

CHAPTER FOUR:

THE DAILY WORK ROUTINE: PERSONAL

CONSTRUCTION AND SOCIAL ACCOMPLISHMENT

#### 4.1 Introduction

"The individuals common sense knowledge of the world is a system of constructs of its typicality".

Schutz, 1953, p.3

In upholding the deterministic natural science principles of post-Wundtian psychology, developers of psychometric tests have been signally unable to account for subjective construing of action (see Sanders, 1982; Psathas, 1973; Van Mannen, 1979; Morgan and Smirchich, 1980, for elaborations). Indeed, questions of 'mind' and 'self' are especially problematic for approaches such as Hackman and Oldham's 'Job Characteristics Model' which stem from a behavioural lineage. This failure to account for personal phenomenological awareness represents a 'blindspot' of the 'mono-method' (Martin, 1981) used in the last chapter, leaving a position where we know little of the constructs the individual fireman employs in seeking to make sense of the events in his working reality.

In this chapter we seek to understand the fireman's everyday work by employing research methods appropriate to obtaining phenomenological insight. This is accomplished in two stages. Firstly, we attempt to discover, via personal construct theory, the pure subjective constructs which firemen invoke in anticipating, interpreting and sustaining work reality. This process not only gives powerful autobiographical data, but serves also to offer a data base from which to conduct, secondly, an ethnographic participant observation study. Here familiarisation with the personal constructs employed by firemen gives the research a more stable foundation from which to understand organisation culture. Thus, an appreciation of the subjective precedes analysis of the intersubjective.

This method of letting the participants suggest the patterns for research goes a long way to obviating the apriorist 'bad journalism' charges frequently levelled at phenomenological (especially ethnomethodological) studies (cf. PONDY and BOJE, 1981). In fact the strategy produces constructs which, in grounding the researcher into the cognitions employed in the setting, serve as a learning process from which to develop a more informed ethnography. The strategy can be best considered as phenomenologically based grounded theory.

#### 4.1.1 Interpretive Research: Ethnography and Personal Constructs

In chapter 2, we outlined the assumptions underlying, and prominent schools comprising, Burrell and Morgan's interpretive paradigm. In the model's terms we found the paradigm characterised by a consensual/integrative theory of society, while accepting a nominalist ontology, an anti-positivist epistemology, a voluntarist view of human nature, and employing predominantly idiographic research methods. In sum, the paradigm sees the world as an emergent social process created by the individual's concerned, with explanation being sought within the frame of reference of the participant actor as opposed to the detached (social) scientist.

When considering phenomenological approaches the Burrell and Morgan model is restricted to sociological approaches, and especially those associated with ethnographic (mainly participant) observational programmes. As such, Burrell and Morgan (1979) offer reviews of work in ethnomethodology and phenomenological symbolic interactionism. However, while sociological methods have been employed frequently in phenomenologically based organisational research (cf. Zimmerman, 1973; Bittner, 1973; Silverman and Jones, 1976), rather less common has been the consideration of

possibilities in the sister discipline of psychology<sup>1</sup>. To expand our awareness of interpretive research opportunities we may wish to consider some of the methods in psychology relevant to this approach. Here the literature on personality theory is especially appropriate, and notably the possibilities for gleanng personal interpretations as the basis for intersubjective understanding. Let us examine some of these possibilities in terms of phenomenological methodologies.

#### 4.1.2 Phenomenology and Personality

Pervin's (1975) analysis of the relationships between theories of personality, methodological orientations and assessment techniques, cites two main phenomenological approaches to personality theory - Rogers' Self Concept Theory and Kelly's Personal Construct Theory. Here the theoretical basis for each approach is outlined along with their associated research instruments, i.e. the Q-Sort and the Repertory Grid Technique respectively.

However, although Pervin classifies these both as phenomenological techniques, Rogers' methodology is problematic with respect to its allegiance to phenomenological principles, as the Q-Sort involves the subject using statements provided by the researcher rather than his own<sup>2</sup>. Kelly's repertory grid, meanwhile, remains more consistent to phenomenological research as the method is voluntary, the subject himself outlining the dimensions used in constructing the social world. Indeed, the repertory grid allows the subject to suggest both the objects/events (i.e. 'elements') that make up his world, and also the cognitive dimensions (i.e. 'constructs') he develops to make sense of them. Thus, the method so employed allows the subject to erect an approximation of his phenomenological field, and through classification over time, to

illustrate changes in this field. In offering rich subjective data, personal construct theory offers an initial methodology for coming to terms with the culture of a small organisational setting; in this case the daily work routine of a fire station.

Before we outline the repertory grid methodology employed, let us examine the philosophical assumptions of Kelly's Personal Construct Theory and illustrate its relation to interpretive theorising.

#### 4.1.3 Personal Construct Theory: Philosophical Assumptions and Phenomenological Principles

All personality theories have implicit assumptions regarding man's essential nature. Kelly's (1955) model is of 'man as scientist'; a model seeing the subject as experiencing events, perceiving similarities and differences in these events, formulating constructs to order phenomena, and on the basis of these constructions seeking to anticipate events. Here actors are seen as similar in that they employ the same psychological processes in construing, but unique in their personal use of constructs.

Therefore, unlike in behaviourist theories where the individual merely responds to the environment, 'man as scientist' has the capacity to 'represent' it and thereby interpret, construe, and reconstrue his environment. Kelly (1955) argues that in personal construct theory man is free, but in this freedom to an extent determined. While his personal construct system permits the individual to deal with events in a subjectively meaningful way - instead of forcing him to be helplessly directed by them - it does not, however, allow him to make choices outside the world of alternatives he has erected for himself. While man is free to consider events, he is nevertheless bound by the constructs he makes,

albeit that he can constantly win his freedom by reconstruing his environment and his life.

Such arguments have obvious similarities to debates introduced in Chapter 1. Indeed the evaluation of Kelly's work in comparison to other interpretive social theorists (e.g. those reviewed in Giddens, 1976) is a task yet to be adequately accomplished. Kelly's stated philosophical position of 'constructive alternativism' may, however, serve a starting point.

#### 4.1.4 Constructive Alternativism

In constructive alternativism there is no absolute reality or absolute truth available for man to discover. As such, man can never totally 'know' the world, he can only place personal constructions upon it. It is a process whereby the individual attempts continuously to construe events, thereby making representations of phenomena in order to make sense of them. The better we are able to fit our constructions to the fluctuating events we perceive, the more control we have over the world. As Kelly notes, "there are always alternative constructions available to choose among in dealing with the world. No one needs to paint himself into a corner; no one needs to be completely hemmed in by circumstances; no one needs to be the victim of his biography" (1955, p.15).

This position was influenced by the 'as if' philosophy of, especially, Vaihinger (1924), (i.e. that all matter should be regarded in hypothetical ways) and as such led Kelly to argue that the scientific enterprise is not the discovery of truth, but rather the process of developing construct systems that are useful in anticipating events. Such a position Kelly felt could be contrasted with what he perceived to be the 'classical view'

of science, that of the prevalent positivist epistemological assumptions of 'accumulative fragmentalism'. This latter approach was characteristic of traditional philosophy of science whereby truth is collected piece by piece, the nature of the universe being manifest when enough pieces are collected. Kelly therefore indicted this traditional position for advocating that the scientific enterprise should avoid subjective statements and simply get down to the hard facts of reality. For Kelly subjective thinking represented an essential step in the scientific process. Thus, in constructive alternativism hard 'facts' are displaced in favour of interpretation, it being the process of interpretation and reinterpretation, rather than accumulative fragmentalism, that will help us to approximate the reality of the world. As Kelly notes, "howsoever the quest for truth will turn out in the end, the events we face today are subject to as great a variety of constructions as our wits will enable us to contrive" (1966, p.1).

#### 4.1.5 Kelly and Schutz

Although an adequate appreciation of Kelly's 'phenomenological' theorising has yet to be fully accomplished, many writers have nonetheless highlighted the phenomenological implications of personal construct theory (e.g., Landfield and Leitner, 1980; Shaw, 1980; Spender, 1980). However, a more specific evaluation has been of the relationship of Kelly's position to that of Alfred Schutz (Holland, 1970).

Holland, like others, suggests how Kelly's work identifies many of the distinctive qualities of the human being long noted by phenomenologists, for example, "that man has a sense of time, that he is open to the future and projects himself towards it, that he uses his experience as a unique

base from which to construe future possibilities, and that he enjoys a remarkable degree of flexibility in dealing with events" (p.131).

However, Kelly in being relatively isolated from works in existentialism and phenomenology, was, Holland feels, robbed of the opportunity to overcome some of his theoretical shortcomings, with especially of benefit being an awareness of the affinity between his position and that of Schutz. Holland documents similarities between their basic positions, such as Schutz suggestion that "the individuals common sense knowledge of the world is a system of constructs of its typicality" (1953, p.3), and Kelly's premise that "man looks at his world through templates which he creates and then attempts to fit over ... the world" (1955, pp.8-9). By documenting further similarities with the work of Schutz and also Merleau-Ponty, Holland concludes that Kelly "in trying to look without preconceptions at human experience, exemplified the phenomenological method which is the basis of existentialism" (p.132).

#### 4.2 The Nature of Construing

"it is the future which tantalizes man not the past, always he reaches out to the future through the window of the present".

Kelly, 1955, p.49

The act of construing unites the philosophy, theory and methodology of personal construct theory. In the process of construction and reconstruction an individual actively attempts to encompass his inner and outer worlds by use of personal dimensions of meaning. Such dimensions (personal constructs) are formed by the process of differentiation and integration; with construing, therefore, (which can be conceptualised at different levels of verbal awareness), being a uniquely bi-polar process

in which the experience of a commonality of certain events implies a negation of some other aspect of that experience.

As noted, the essence of construing is anticipation, with personal constructs being structures which facilitate the better understanding of future events. By emphasizing this anticipatory quality of human experience Kelly has removed his theory from the constraints of stimulus-response and drive theories of personality. Thus, in stressing how man is born alive and kicking he avoids the need for drives to 'push' or stimuli to 'pull' the human organism into action. In contrast to work in the previous chapter we find in Kelly a theorist who has 'done away with motivation'; as for Kelly living matter is constantly in motion<sup>3</sup>.

The understanding of human behaviour is, therefore, not enhanced when we use our own personal interpretations to attribute a motive for the behaviour of others, as static descriptions of what we think a person to be may not equate with the essence of human action. The individual is constantly looking to the future and anticipating the stream of events instead of reacting to emerging stimuli<sup>4</sup>. This process is facilitated by the individual's personal construct system, in which the bi-polar concepts serve to typify events in terms of similarity or difference<sup>5</sup>.

Although Kelly has suggested two techniques for exploring an individual's phenomenological world - the self characterization and the repertory grid - it is the latter that has received by far the greater attention and which forms the methodology for the first part of the research in this chapter.

Let us now examine the research method itself.

### 4.3 Repertory Grid Technique

The repertory grid attempts to produce an approximation of the way an individual personally constructs elements in his social world. The method as used here seeks to produce unique semi autobiographical accounts of how the work situation is anticipated and its events evaluated. Thus, the method attempts to elicit many of the subjectively meaningful constructs that the fireman employs in making sense of his work.

In this process the repertory grid employs three basic components: (1) 'elements' which specify the phenomenal objects/events of relevance to the subject, (2) the personal 'constructs' the subject employs to differentiate between phenomena, and (3) a 'linking mechanism' which approximates how each element is evaluated on each construct<sup>6</sup>. Therefore, in physical form the grid is a matrix with at the top, a list of elements and down either side the sets of bi-polar constructs. Spaces are provided for evaluating each element on every construct.

#### 4.3.1 Elements

Elements are the primary ingredients of the grid with the constructs being derived from them. Here, for analysing particular aspects of the life world commentators have stressed that - for empirical analysis - the phenomena (elements) in question must firstly, be homogenous, and secondly, provide representative coverage of the area being understood. The main reason for not mixing element categories is that the typifications an individual employs for evaluating one part of his life are not necessarily those he employs in another<sup>7</sup>.

In terms of the number of elements a grid requires, Easterby-Smith (1980) suggests that adequate coverage of a topic is usually accomplished with

between 6-12 elements. While most topic areas can be exhausted by 12 elements, less than 6 may produce a distorted presentation.

Due to the great flexibility of the repertory grid, some recent investigations have seen elements supplied rather than elicited by researchers. However, in clinical investigations, and indeed in the present study, in order that the subject should define his own reality, elements emerge through discussion between subject and researcher in which the former is asked (in an open-ended manner) to specify the events of personal importance.

#### 4.3.2 Constructs

Although some investigations have similarly witnessed the supplying of constructs, the majority of repertory grid studies have remained true to personal construct theory in having the subject elicit the constructs.

The most common method has been to produce constructs by contrasting the objects or events within element 'triads'. Here sets of three elements (triads) are selected randomly from the element list, with the subject then being asked to state a way in which two are similar and yet different from the third. The objective is to verbalize the bi-polar constructs which the individual employs in making sense of the phenomena under study. Some critics have claimed, however, that rather than producing 'opposites in meaning' the process tends to yield 'logical opposites'. (For review of both element and construct generation methods see Fransella, 1980, and Fransella and Bannister, 1977.)

A further problem with the triad method is that it can produce constructs of little generality, in the form of constructs applicable to some elements but not others. The process of 'laddering' has been developed to

overcome this. Here the research simply asks 'why' questions concerning the relationship between the construct and the elements in order to gain the most evaluative construct that expresses the subject's meaning. In some cases, however, more specific constructs may be required for which the researcher asks 'what' and 'how' questions in order to narrow the 'range of convenience'.

#### 4.3.3 Methods of Grid Scoring

In Kelly's original form of repertory grid the matrix of elements and bipolar constructs was completed by a set of ticks or blanks. By this procedure the clinician could then, for example, ascertain whether an element nominated as 'untrustworthy' would also be nominated as, for example, 'unconventional'. However, the problem with such tick/blank data was the risk of obtaining an unbalanced distribution (see Fransella, 1980). Indeed, the only way to avoid gaining a skewed distribution when using a dichotomous scale is to make sure that the elements are divided equally between ticks and blanks on each construct.

To overcome difficulties with the tick/blank method, Bannister (1959) introduced the rank order grid whereby elements were ranked in terms of their relative association to either end of the bipolar construct. Subjects, however, have often reported difficulty in discriminating between the middle ranking of elements. Similarly the method can force subjects to indicate differences between elements when no substantive difference is felt<sup>8</sup>.

The method employed predominantly, however, has been the rated grid, whereby elements are scored on (usually) a 5 or 7 point scale; the points on the scale indicating equal gradations between the two poles of the

construct. Shaw (1980) noted that about 70% of published studies have used rating methods, albeit that choice should finally depend upon the purpose for which the grid is designed. A major advantage of the rated grid is that it provides opportunities to check whether elements really are in the range of convenience of all constructs, and thus whether the grid has been constructed validly.

#### 4.3.4 Methods of Grid Analysis

Increasingly, all methods of grid scoring have become analysed using computer technology. However, although computer packages are so widely used in grid analysis, they do not provide the answers from the data. Instead computer analysis is employed to aid comprehension of the data, and especially for cases where grids are large or where there are limited time constraints. Indeed, even with sophisticated computer packages it is still the case that, "the interpretation of grid data is very much an art and not a technology" (Easterby-Smith, 1980, p.11, emphasis in original)<sup>9</sup>.

Repertory grids have been analysed by many differing statistical computer packages. Traditionally, the  $D^2$  (non-metric) form of factor analysis has been used in work such as Kelly (1955), Osgood et.al. (1957), and Kelly (1964); while alternative factor analysis techniques of metric and non-metric forms by Cronbach (1955), and Coombs (1964). Other notable methods have been the principal components analysis of Slater (1964, 1967, 1968, 1972) and multidimensional scaling as employed by Torgerson (1958), Shepard (1962) and Kruskal (1964). All these methods are closely related, with differences only really occurring in the number of dimensions extracted and the form of representation used.

Recently, however, attention has centred on two programs in particular, i.e., Slater's (1977) principal components package - IGRID, and Shaw's (1980) cluster analysis program - FOCUS. Both these programs develop 'similarity' or 'distance' matrices for a grid's elements and constructs, these measures being conceived as distances in n-dimensional space. Here, the choice between the programs essentially depends on the context in which the grid is used. Whereas INGRID is useful when the resulting data is to be interpreted only by the researcher, FOCUS is preferable where the resulting analysis is to be presented back to the subject for his reactions (see Rump, 1974; Slater, 1974). As the writer is seeking to discover the way the subject interprets his own reality, Shaw's (1980) cluster analysis package was chosen as it offers an output which can be readily explained to the subject and used in a 'conversational' (Shaw, 1980) manner. The FOCUS program provides a technique for prompting subjects to talk meaningfully about their work in subsequent feedback interviews. Thus, when constructs are re-addressed in terms of meanings embedded in the speech, this offers a method for assessing the indexical (Garfinkel, 1967) nature of the communication content.

#### 4.3.5 Cluster Analysis

There are many differing forms of cluster analysis on offer the major types being outlined in reviews such as Ball (1971), Bolshev (1969), Harrison (1968), Johnson (1969), but most succinctly by Cormack (1971). Cormack classifies four major forms of cluster analysis: 'hierarchical'; 'optimization'; 'density' or 'mode seeking'; and 'clumping'.

In hierarchical techniques data are not partitioned into separate classes all at once, but instead are initially partitioned into broad groupings which are then subdivided into smaller and smaller groupings. This form

of classification continues until a final classification is produced which cannot be further subdivided; the process finally offering a connected graph or 'tree'. Optimization techniques offer clusters formed through the 'optimization of a clustering criterion', with classes being mutually exclusive and thus fashioning 'partitions' of the series of entities. In density search techniques the clusters are gained through probing areas holding a dense congregation of entities. Many density search methods originate from single linkage cluster analysis, these being essentially attempts to overcome the major problem associated with the technique, that of 'chaining'<sup>10</sup>. Clumping techniques commence by computing a similarity matrix to give an approximation of the semblance between each pair of entities in terms of the substances they display. Here entities are classified into two groups of which the smaller is usually the class being sought. The notable feature is that classes or clumps can overlap.

The program chosen for this research, FOCUS, employs a two-way cluster analysis that systematically reorders columns of elements and rows of constructs. This produces a FOCUSed grid with minimal variation between contiguous elements and constructs. However, instead of using the common Euclidean metric, i.e.:

$$d_{ij} = \left[ \sum_{k=1}^n (a_{ik} - a_{jk})^2 \right]^{1/2}$$

where:  $A_{ik}$  = the entry in the cell of the  $i$ th row and  $j$ th column

$d_{ij}$  = distance measure between points  $i$  and  $j$ .

the FOCUS program uses the city block metric, i.e.:

$$d_{ij} = \sum_{k=1}^n |a_{ik} - a_{jk}|.$$

because it has the advantage, "that the elements are designated the same distance apart if they are either: (i) two units apart on one variable (construct) and identical on the other, or (ii) one unit apart on each variable" (Shaw, 1980, p.159). To explain the difference between the two metrics let us equate an example from our later research. Here let us assume that the three sets of figures below are ratings of three work activities on two constructs.

		<u>Elements</u>		
		Activity 1	Activity 2	Activity 3
Constructs	A	1	2	1
	B	3	4	1

If  $d_{ij}$  equals the distance between points  $i$  and  $j$  then  $d_{12} = 2$  using the city block metric; but using the Euclidean metric  $d_{12} = 2$ ,  $d_{13} = 2$ . Put simply, the city block metric equates the distance between pairs of entities if they are either one unit apart on two variables or two units apart on one variable and identical on the other.

As Shaw (1980) notes, in FOCUS the distances  $d_{ij}$  between constructs or elements  $ij$  measured from the city block metric are functions of the relative numbers of constructs and elements the grid possesses, plus the particular rating scale employed. These in turn become scaled in order to give 'percentage matching scores'. The FOCUS algorithm, although similar

to the single linkage or nearest neighbour hierarchical method, is not, however, strictly a hierarchical method. Nonetheless, it is nearer to this form of clustering than to the others in Cormack's classification. Shaw gives a succinct summary of the main principles when she notes,

"The major criterion for forming clusters is that linear reorderings of the constructs and elements respectively will result in the final grid displaying a minimum total difference between all adjacent pairs of rows and columns ... This leaves the patterning in blocks of like responses". (1980, pp.34-5).

The results section will provide an explanation of the approach in terms of an interpretation of a program print-out.

#### 4.4 Research Procedure

The researcher undertook repertory grid interviews, and then periods of participant observation, at two stations on A Division - a 'busy' city centre station (Birmingham Central) and a 'quiet' suburban/rural station (Sutton Coldfield).

Following Sanders (1982) suggestion that for phenomenological research "sufficient information may be collected from approximately three to six individuals" (p.356), six interviews were conducted at each station. Two of these interviews (one per station) were pilot studies with the remaining ten interviews forming the data for analysis. The age range of the subjects was between 20 and 54 years, with length of service ranging from 8 months to 31.5 years.

The repertory grid interviews were effected on an individual basis. At both stations the lecture room was used to conduct the research, with the interview process being as follows. On being invited into the room each fireman was given a verbal briefing to explain both the purpose of the

exercise and the fact that all the material would be kept completely confidential. Subjects were then asked to think of a recent day at work "perhaps yesterday, today, or even what you'll be doing tomorrow", and to inform the researcher as to the differing work activities encountered<sup>11</sup>. As the fireman described the work events the researcher listed the names given to these activities on file cards. These cards were then spread out in front of the subject and he was asked whether there were any other activities he had forgotten to include. When a picture of the work was completed which satisfied the subject then the cards were turned blank side up, collated and shuffled. Cards were turned over one by one and the work task/ event written along the top of a 12 x 12 printed repertory grid.

To gain constructs the triad method was used, with the subject being given random sets of three work activities and asked to state a way in which two were similar and yet different from the third. In this process the researcher noted Bender's (1974) suggestion that subjects tend to produce more 'important' constructs when successive triads are varied by at least two elements at a time. Thus, the writer imposed a rule whereby if two elements emerged that had been in the previous triad then one would be changed.

When the subject had exhausted his constructs these were randomized and placed upon the printed grid in the order that the poles were verbalized<sup>12</sup>. In certain cases laddering discussions were necessary to gain more elaborate constructs. During the period in which the researcher was writing the constructs on the grid, the subject was given an instruction sheet explaining how to complete the grid.

Grids were completed using a seven point rating scale with 'very strong agreement' with the emergent pole (left hand side) representing seven, and conversely 'very strong agreement' with the 'implicit' pole representing one. Following the completion of the grid subjects were told of the procedure for the feedback interview.

#### 4.4.1 Feedback

When the individual repertory grids had been FOCUSED and the researcher had interpreted the output, the FOCUS themes were fed back to the subject to gain clarification. Feedback interviews were tape-recorded.

For these sessions the researcher developed brief notes regarding the main element/construct clusters produced, together with questions concerning the 'meaning' of the subject's constructs<sup>13</sup>. For the latter the researcher sought clarification where he felt clear intersubjective understanding was not afforded. The rationale for feedback was that although constructs were assumed to be capable of being verbalized, not all the proposals would be intersubjectively comprehensible. This was mainly where, 1) constructs were abstract; 2) where the poles seemed illogical opposites, or 3) where a construct seemed unusual in the Fire Service context<sup>14</sup>.

In these feedback interviews; and also in the participant observation sessions, the researcher sought to employ the phenomenological suspension process of 'epoche' in order to temporarily 'bracket' (Husserl, 1931, p.108) existing personal beliefs, preconceptions and assumptions. In doing so, the researcher followed the methodology adopted by Silverman and Jones (1976). Thus, subjects in clarification were commonly required to explain the events in terms of the way they were worked through, this

process seeking to discover the 'emergences' from an 'intentional' analysis of the object/event (see Idhe, 1977, for an introduction to experimental phenomenology).

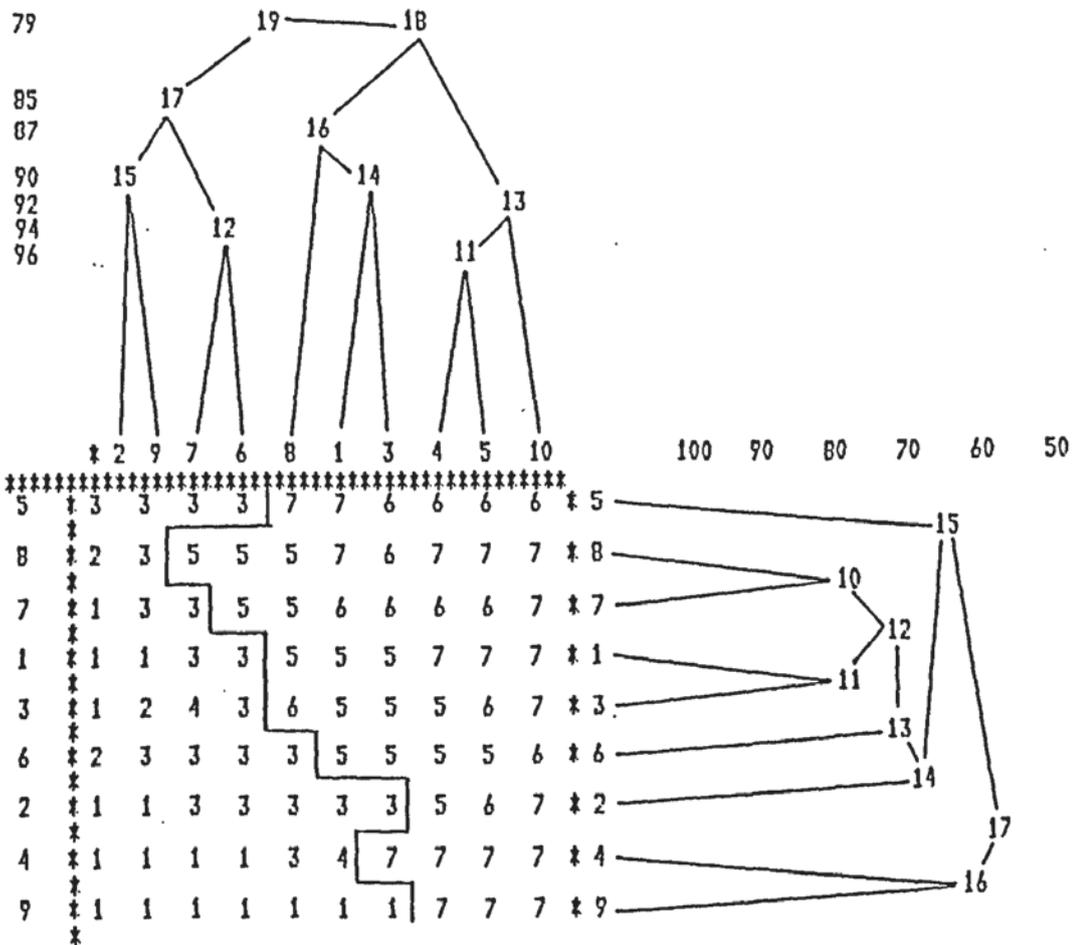
Accounts were obtained by computing a FOCUSed grid for each subject (figs 16, 18, 20, 22, 24 and Appendix 3 a-e), with the subsequent results taking the form of ten individual biographies. Each account was analysed firstly by description of the focus output - in terms of element and construct clusters - and then by clarification and elaboration of points from the feedback discussion. To explain the program we will introduce the first grid computed in terms of a step-by-step demonstration of the output.

#### 4.4.2 Interpretation of FOCUS Output

Figure 16 presents Fireman Fowler's FOCUSed grid<sup>15</sup>. Here we have not only the listings of elements and constructs, but also an outline of the mechanics of the grid. The grid is composed of the raw data ratings made originally by the subject, except that these have been rearranged as per the FOCUS algorithm. Above the raw ratings lie the 'element' numbers, the coding being that of the original grid. Therefore at the very left of the grid is element 2 (kit cleaning) while at the extreme right is element 10 (fires). The FOCUS program reorders the elements linearly so as to give the minimum total distance between contiguous element rating columns. The same logic applies to the construct list at the right of the matrix, where the constructs have been reordered to achieve the minimum total distance between contiguous rows of ratings. Here construct 5 (informative -just necessary) appears at the top of the matrix, while construct 9 (public thinks I do for a living - other aspects of what I do) appears at the bottom.

FIGURE 16: FOCUSED GRID - CENTRAL NO.1 (FOWLER)

- 2 Kit Cleaning
- 9 Station Routine
- 7 Parade
- 6 Check Appliances
- 8 Lecture
- 1 Drill
- 3 Out Duties
- 4 Road Traffic Accidents
- 5 Special Service Calls
- 10 Fires



- 5 Informative - Just Necessary
- 8 Important - Less Important
- 7 Specialised Training - Run of the Mill
- 1 Operational - Procedure
- 3 Different - Mundane (Reversed)
- 6 Carry More Responsibility - Carry Less Responsibility
- 2 Exciting - Not as Exciting
- 4 Work Off the Station - Work On the Station
- 9 Public Thinks I Do For a Living - Other Aspects of What I Do

FIGURE 17: GRID SCORES - CENTRAL NO.1 (FOWLER)

RAW GRID

	1	2	3	4	5	6	7	8	9	10
1	5	1	5	7	7	3	3	5	1	7
2	3	1	3	5	6	3	3	3	1	7
3	3	7	3	3	2	5	4	2	6	1
4	4	1	7	7	7	1	1	3	1	7
5	7	3	6	6	6	3	3	7	3	6
6	5	2	5	5	5	3	3	3	3	6
7	6	1	6	6	6	5	3	5	3	7
8	7	2	6	7	7	5	5	5	3	7
9	1	1	1	7	7	1	1	1	1	7

ELEMENT MATCHING SCORES

	1	2	3	4	5	6	7	8	9	10
1		44	90	74	70	70	68	87	53	62
2	44		42	22	18	74	75	53	90	11
3	90	42		79	75	68	66	81	51	68
4	74	22	79		96	48	46	61	31	88
5	70	18	75	96		44	42	61	27	92
6	70	74	68	48	44		94	79	83	37
7	68	75	66	46	42	94		77	85	35
8	87	53	81	61	61	79	77		62	53
9	53	90	51	31	27	83	85	62		20
10	62	11	68	88	92	37	35	53	20	

CONSTRUCT MATCHING SCORES

	1	2	3	4	5	6	7	8	9
1		70	-20	70	60	66	73	66	46
2	-3		10	60	43	70	56	36	56
3	80	70		-30	-13	13	-6	-13	-26
4	-43	-33	50		36	50	50	43	63
5	-26	3	66	-36		66	73	66	6
6	0	16	73	-23	6		66	53	26
7	-20	10	73	-30	-13	13		80	20
8	-20	10	60	-30	-13	13	-20		13
9	-46	-56	26	-63	-6	-26	-20	-13	

Directly above the reordered list of elements is the element 'tree' (i.e. dendrogram) giving the clustering of events obtained through FOCUS. Along the left hand side of the tree appear the element matching scores, these indicating the increasing degree of similarity between adjacent columns the closer they are to the horizontal axis and thus a perfect matching score of 100. The output shows the closest match for this subject is between elements 4 and 5, these forming cluster 11 with a matching score of 96%. Here we have a perfect match between these elements on seven of the nine constructs, the exceptions being constructs 2 and 3 'reversed'<sup>16</sup>. The next highest match is between elements 7 and 6 which form cluster 12 at 94%. However, the next cluster is 13 whereby element 10 has been matched with element 5 to form cluster 13 at 92%. As element 5 now has two links the program excludes it from further analysis of matching scores. This process continues until the whole tree is formed. It must be remembered that the loosest cluster (i.e. where clusters 17 and 18 join to complete the tree) only represents the matching score for the two adjacent elements 6 and 8 and does not represent the level of similarity between the two large clusters.

Figure 16 also gives the construct tree produced by FOCUS. The logic is exactly the same as for the element tree. The dendrogram illustrates that the closest match is between constructs 7 and 8 at 80%, while the loosest match is between constructs 2 and 4. As a rule element clusters tend to receive higher percentage matches than construct clusters. This is because the latter represent diverse 'dimensions of awareness', whereas the former are relatively homogenous events.

Within the FOCUSed matrix the writer has drawn contour lines through the data. The lines indicate the division between scores for each pole (i.e.

1-3 and 5-7 score areas) and serve to indicate where interesting differences occur. The mid-point score (4) is contoured at discretion, although as a rule the researcher has placed this score with the nearest adjacent like set of scores (e.g., 4 being nearer 3 than 6 etc.). In Figure 16 the only case is for element 1 on construct 4. Here, the 4 is nearer to 3 than 7 and so is contoured with the former.

In the individual analyses that follow, the writer offers a description of the cluster themes emerging from each fireman's grid. In general there is a high degree of commonality in their descriptions of the working day, most firemen tending to cite work tasks undertaken (e.g. check machines, routine maintenance etc). The main concern of the accounts, however, is to illustrate how the working day is conceptualised in terms of a fireman's personal constructs, or the dimensions of awareness through which the subject makes sense of the working day. Each account offers an illustration of personal dimensions employed to anticipate and accomplish events at work, and therefore of the dimensions considered of subjective and inter-subjective importance.

Following descriptions of the main themes from the element and construct clusters, the writer offers some brief sections from the feedback interviews. Such material, as noted earlier, seeks to clarify and elaborate themes from the FOCUS output. A major use of the feedback clarification/elaboration process is to further cement some of the FOCUS themes in order to provide a grounding for the ethnography. Due to the limitations of space the feedback of material is kept to a minimum as many of the themes are expanded upon in the ethnography. Also, for easier reading the accounts have been divided between the main text and the appendix. Thus, five accounts are presented below (3 Central, 2 Sutton)

while the remainder are found in Appendix 3 (2 Central, 3 Sutton). A final point is that repertory grid analysis tends to produce large variations in the quality of material produced (Easterby-Smith, personal communication). Thus, some accounts offer considerable insight whereas others are rather restricted.

The order in which the accounts appear is the order in which they were conducted at each station.

#### 4.5 Individual Biographies

##### 1. Fireman Fowler (Central)

As noted Figure 16 gives the elements and constructs elicited from the initial interview together with the final grid produced by FOCUS.

#### Elements

Three distinct element clusters are produced, i.e. from left to right clusters 17, 16 and 13. The tightest cluster is 13 containing elements 4 (road traffic accidents), 5 (special service calls) and 10 (fires). Here road traffic accidents and special service calls are matched at 96% with fires joining special service calls at a 92% match. The contour lines illustrate how these are construed differently from other elements in the degree of 'excitement' they offer (construct 2), and also in that they, more than other activities, represent 'what the public thinks I do for a living' (construct 9). They also 'require specialised training' (construct 7) and are seen as more 'informative' (construct 5), more 'important' (construct 8) and 'different' (construct 3 reversed).

The elements of cluster 13 share certain commonalities with those of cluster 16, i.e. lectures (element 8), drill (element 1) and outduties (element 3). They are similar in 'requiring specialised training'

(construct 7) and being both 'informative' (construct 5) and 'different' (construct 3 reversed). However, in contrast to cluster 13 these elements offer little in terms of 'excitement' (construct 2), and are not what the public thinks a fireman does for a living (construct 9). Also whereas drill and out duties carry 'more responsibility' (construct 6), lectures carry 'less responsibility'. The cluster matches drill with out duties at 90%, with lectures being matched with drill, i.e. the other main training component, at 87%.

The last main cluster, 17, contains kit cleaning (element 2), station routine (element 9), parade (element 7) and checking appliances (element 6). Here parade and checking appliances are matched at 94%, and kit cleaning and station routine at 90%. The contour lines show how these elements are construed similarly on most dimensions. Exceptions here are, firstly; that while parade and checking appliances are considered 'important' (construct 8), kit cleaning and checking appliances are 'less important'. Also whereas checking appliances is seen as requiring 'specialised training' (construct 7); kit cleaning, station routine and parade are 'run of the mill'.

The contour lines indicate how these elements contrast with those in clusters 13 and 16 in being mundane (construct 3 reversed), less informative (construct 5) and in carrying 'less responsibility' (construct 6). Commonalities with cluster 16 are in both clusters being 'less exciting' events (construct 2) and 'other aspects of what I do' (construct 9). Finally, the contour lines show how the elements in cluster 17 are differentiated from those in cluster 13 for almost every element on every construct, the exceptions being that checking appliances and parade are

construed as 'important' (construct 8), while checking appliances also requires 'specialised training' (construct 7).

### Constructs

The construct dendrogram gives two main clusters, those of 14 and 16. In cluster 14 there are tight matches for constructs 8 (important - less important) and 7 (specialised training - run of the mill) at 80%, and constructs 1 (operational - procedure) and 3 reversed (different - mundane) also at 80%. These four constructs form cluster 12 at 73%. Construct 6 (carry more responsibility - carry less responsibility) joins the cluster with a 73% match with construct 3 reversed, while construct 2 (exciting - not as exciting) completes the cluster being linked nearest to construct 6 at 70%.

The match of constructs 8 and 7 suggests that if events require 'specialised training' they are construed as 'important', whereas if an event is 'run of the mill' it is less 'important'. The one exception is 'parade' which is 'run of the mill' but still 'important'.

The high match for constructs 1 and 3 reversed indicates that events which are 'operational' are 'different', while those being 'procedure' are 'mundane'. The clustering illustrates how most events are construed in a pattern whereby 'operational' activities requiring 'specialist training' are 'important' and 'different', while 'procedure activities' are 'run of the mill', 'mundane' and 'less important'. The main exception to this pattern (i.e., 8/7 with 1/3) is for checking machines (element 6), which although 'procedure' and 'mundane', nevertheless, involves 'specialised training' and is 'important'.

The dendrogram next joins construct 6 (carry more responsibility - carry less responsibility) to the cluster, the contour lines again illustrating the high degree of association between this construct and cluster 11. 'Operational' events are not only 'different' but also 'carry more responsibility'. The one exception is 'lectures' (element 8) which although construed as relating to 'operational' events and as 'different', nevertheless 'carries less responsibility'. The cluster finally matches construct 2 (exciting - less exciting) with construct 6 at 70%. This construct has commonality with constructs 1, 3 and 6 for element clusters 17 and 13, but general disagreement over the tasks in cluster 16. Here, although lectures (element 8), drill (element 1) and out duties (element 3) relate mainly to 'operational' factors and are 'different', they are nonetheless 'not as exciting'. Similarly drill and out duties although 'carrying more responsibility' are still construed towards the implicit pole of construct 2.

The only other notable cluster is 16 containing constructs 4 (work off the station - work on the station) and 9 (public thinks I do for a living - other aspects of what I do). In nearly every case where an event is 'work off the station', it is also what the 'public thinks I do for a living', while conversely when it is 'work on the station', it is 'other aspects of what I do'. The one exception is out duties which although 'work off the station' is nevertheless 'other aspects of what I do'.

### Feedback

Fireman Fowler's feedback schedule is presented as an example in Appendix 4. The schedule has three main sections; a) and b) representing an interpretation of the FOCUS output (as per the description given above), and c) listing constructs or themes for clarification. The

schedule enables the subject to be taken through the grid step by step so as to correct and/or elaborate parts of the interpretation in any way erroneous or unclear.

In feeding back the results the subject is first familiarised with the FOCUS output, and then shown how the clusters emerge by cross reference to the original grid<sup>17</sup>. The elaboration process can be gauged from the following example from section a) concerning the 'construing of 'parade' as 'important'. This illustrates how material from the feedback sessions offers insight for the subsequent ethnographic analysis<sup>18</sup>.

Researcher: When something involves 'specialised training' it is usually 'important' but when it is 'run of the mill' it is 'less than important'.

Fowler: M'm, yeah yeah.

Researcher: Except for parade which while 'run of the mill' is nevertheless 'important'. Would you agree with that?

Fowler: Yeah, it is, yeah. It's important not necessarily from a fireman's point of view, but from an officer's point, because if you haven't got the manpower you can't man the machines. It's important from that respect, but a mundane task, anybody could take parade and it's just a case of roll call and reading out orders. But it is important.

The above discussion not only confirms parade as 'important' but elaborates to show how this importance is notably from 'an officer's point of view' more than the fireman's. The elaboration also highlights a central element of the event in that parade indicates if there are the required number of men to operate the machines. Nevertheless, it is 'mundane' (albeit scored a 4 on the grid) as 'anybody could take parade'. Therefore, while as a technical process parade is 'run of the mill', it nonetheless has an 'important' function.

However, for the second point in section b) we find the subject wishing to amend the interpretation.

Researcher: The second one is where something is an 'operational' activity it requires 'specialised training', and whereas 'procedure' is more 'run of the mill'. Except checking appliances which is again 'procedure' but nevertheless requires 'specialised training'.

Fowler: Well thats a bit strong really, specialised training is a bit strong. It's just that you have to know where all the equipment is on the machine which anyone could be trained to do. But unless you're in the Fire Brigade you're not going to know the appliance or where to find the equipment and what it's used for.

Here although the scoring for checking appliances as requiring 'specialised training' (i.e. 5) suggests only 'slight' agreement with this construct pole, the feedback discussion serves to give a clearer understanding of the subjects meaning. Unlike for cleaning tasks, which can be done instantaneously by anyone, checking machines does in fact require some specific job knowledge - albeit that the task is easily comprehensible.

For construct cluster point 4, though, Fowler initially seeks to correct the analysis; albeit that he is actually pre-empting the relevant section of the output which is subsequently agreed with.

Researcher: Now when something is 'working off the station' it is what the 'public thinks I do for a living' /

Fowler: / When I'm working off the station?

Researcher: Yes

Fowler: No I wouldn't. From the public's eye I wouldn't necessarily agree with that because there's - did we have 1(I)(d) inspections? /

Researcher: / The exception being out duties which /

Fowler: / With the exception of out duties that's correct.

Following this correction we then gain an elaboration of the theme.

Researcher: That's the only thing that's not seen in that respect.

Fowler: Yeah, I don't think the public tend to, they only seem to see us if we're fighting fires or rescuing people or pulling cats out of trees and so forth. They don't seem to see the theory part of the practical side of the job if I can put it like that. Which is going around inspecting premises for fire prevention points of view, routine visits to familiarise ourselves with properties, hydrants. Oh perhaps that's one of the things they do see, hydrants. But not many of the others, we tend just to be classed as a practical side rather than a theory side of the job as well.

Fowler's correction (re: l(I)(d)'s) serves to elaborate a finer distinction in that of all the outduties - fire prevention inspections, I.I.D. inspections, bridge door inspections, fire well inspections, hydrant inspections - perhaps only the latter is really visible to the public.

The elaboration seems also to infer a construct that, while not cited by Floyd on his grid, is nevertheless offered by other subjects later, i.e., 'theoretical-practical' aspects of the work (cf. Haynes, Richards, Croft below).

For Fowler's remarks vis-a-vis l(I)(d)'s, the 'theory side of the job' refers to the knowledge of building layout etc. gained during the visit. Thus, the 'theory' side is important in providing background information which may of use if any 'practical' firefighting is needed on that site in the future. Therefore, prior knowledge of the layout of a building; or having systematic records of fire wells or hydrants (which are either working or not working), all serve to contribute to the 'theory' of the work.

The final section of the schedule concerns construct clarification.

Firstly, for the construct 'mundane - different', the researcher asked for clarification of the latter pole. Fowler began by suggesting that the term had distinct meanings according to the context in which it was expressed.

Researcher: In the construct 'mundane - different' I think I know what you mean by things being mundane but what exactly do you mean by 'different'?

Fowler: Er, it depends on what I've referred it to in particular cases. M'm take fires where I've put 1. By different I'm on about each fire never being the same; the way we approach an incident, what it looks like, the way to tackle it. They're never the same and that's what I mean by different.

Researcher: And you've also said that lectures are different as well.

Fowler: Again, we do a set number of lectures, but if somebody in the room thinks they know a little about a particular point they'll want to bring it up and they'll continue the lecture and stretch it even further and put in their spoke or their oar and say what they think about it and what they know about it. Eventually we'll again cover the same lecture but in a different way.

However, whereas the construct 'mundane - different' is claimed to have a wide 'range of (contextual) convenience', in clarification of the construct 'informative - just necessary' Fowler seems to suggest that this construct has a much narrower meaning. The transcript implies that although the construct is used to evaluate all the events on the grid, that, nevertheless, the emergent pole ('informative') primarily interprets these phenomena with respect to the meaning of one element, drill. Thus, the term verbalized for the emergent pole relates foremost to the qualities held by drill, with all other phenomena being evaluated in respect to these drill related factors. It was the implicit pole, however, that the researcher initially felt needed clarification, and it was only during the feedback discussions that the significance of the pole

became clear. Consider the following transcript in respect of both points.

Researcher: Right, the construct 'informative - just necessary,' right. What do you mean there?

Fowler: Personally, drill is informative in the respect that it tells me how to handle my equipment. M'm the locations on the appliance. To work with men in my crew. To work with crew off my station ground, for example, Handsworth, or Erdington or Perry Barr. M'm to accept orders on the drill ground, or if you go to an incident. That's what I mean by informative.

Researcher: Right, but what about when it's in respect to something like road traffic (accidents) then?

Fowler: Again, drill is a be-all and end-all towards knowing your job prior to having to carry it out. And if you can carry out the routine simple things like running a length of hose out and it's second nature, you've got time to think about something that's maybe a little more difficult or problems to overcome. And that's what comes with your road traffic accidents. You may roll up and you carry out the normal procedure, i.e., knock off batteries, this sort of thing. But while you're carrying out these tasks there's always that room from your informative point of view, it gives you that room to think of something else which comes from your drill. I mean we carry out road traffic accidents and the way we tackle them, I mean you may find somebody with a broken back or unconscious and rather than just thinking well, 'oh he's unconscious get the first aid box', you're thinking 'why is he unconscious', 'is he carrying a card with him to say he's a diabetic' or 'why is he lying back like that', 'why is he lying forward like that', 'why has he passed out?' I think that's where informative comes into it for me.

Researcher: On the other pole you said things are 'just necessary' /

Fowler: / I think in those cases I refer to things like station routine /

Researcher: / That's right /

Fowler: / And checking appliances. Perhaps I was a little strong there - 'just necessary'. It is necessary, I mean they must be done. But it's like saying can you carry your job out, can you do your job without them? There's a reason for everything we do even down to kit cleaning.

The transcript brings out many of the 'because' and 'in order to' motives used by Fowler to anticipate and interpret events in the setting. Indeed,

by such explanation the initially difficult implicit pole is understood. For Fowler, while all tasks in the work are 'necessary', some are only just necessary, i.e. necessary and nothing more. The scoring of 3 as the nearest to the pole extreme of 1 seems indeed to reflect Fowler's suggestion that 'just necessary' may have been a 'little strong' to typify these elements.

To briefly complete the points in the schedule the querying of the lecture as 'operational' was explained by Fowler as simply 'because they're all located to operational situations'.

In being used as an example we have allocated considerable space to all sections of Fowler's feedback interview. However, for the remaining subjects we will only highlight one or two examples from each, bringing out other salient themes within the ethnography. Here, as most subjects ascended to the themes within the element and construct feedback, we shall generally relate only issues from the clarification of construct terminology except where puzzling themes are explicated (cf. Richards below). We will also restrict grid analysis to the basic themes condensed by FOCUS.

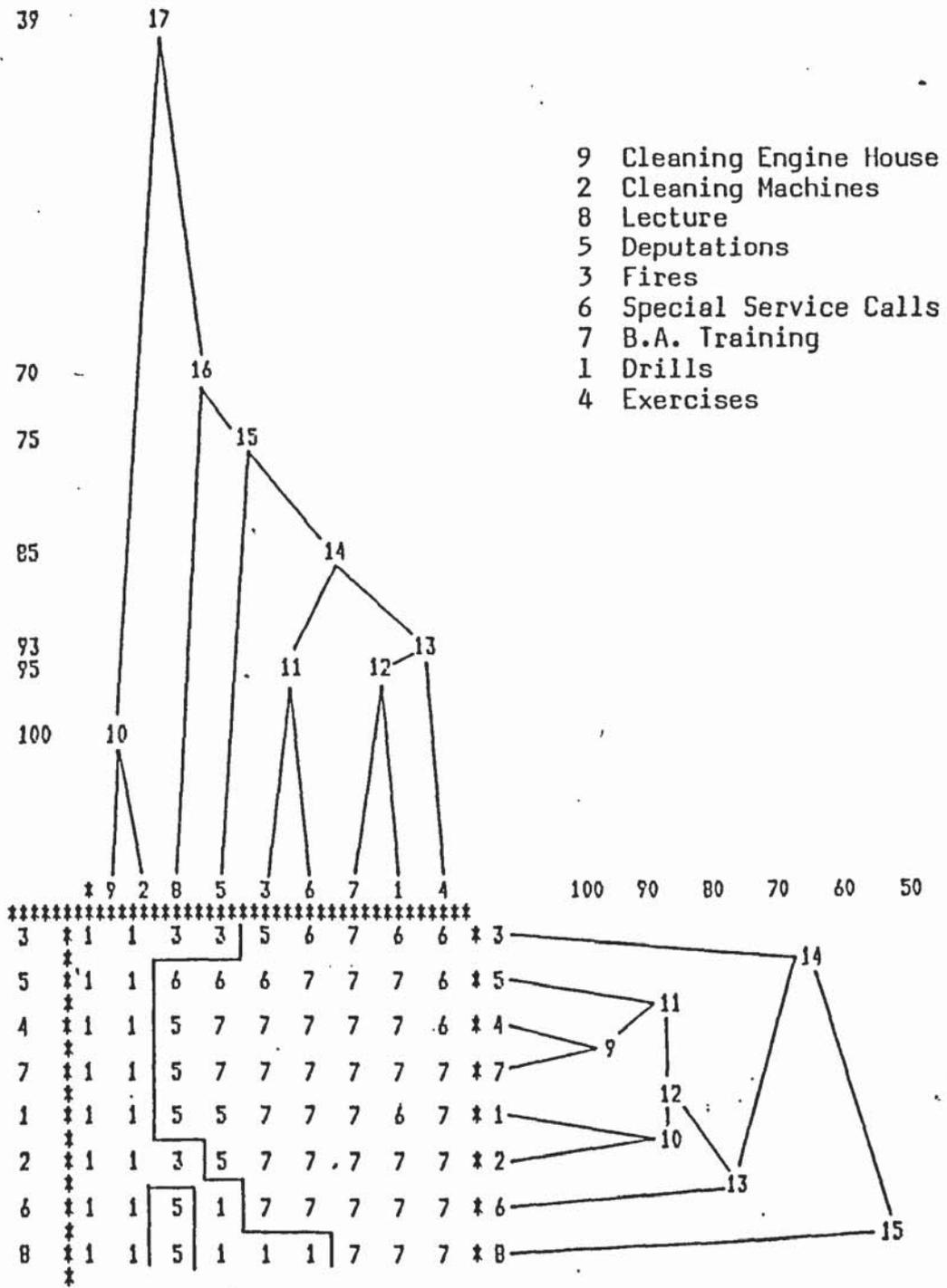
## 2. Fireman Randall (Central)

Figure 18 gives the element and constructs from the initial interview together with the final grid produced by FOCUS. There are no reversed constructs.

### Elements

There are two main element clusters - 10 and 14. For cluster 10 elements 9 (cleaning engine house) and 2 (cleaning machines) receive a perfect match on all constructs, these all being rated at the implicit pole.

FIGURE 18: GRID SCORES - CENTRAL NO.2 (RANDALL)



- 3 Enjoyable - No Interest
- 5 Gives Confidence in the Job - Gives Little Confidence in the Job
- 4 Shows your expertise - No Knowledge of the Job
- 7 High as Regards the Job - Low as Regards the Job
- 1 Gives more Scope - Can get very Boring
- 2 Gives Knowledge to People - Doesn't Give Knowledge to People
- 6 Learn a Lot - Don't Learn/Switch Off
- 8 Keeps you in touch with what's going on - Doesn't keep you in touch with what's going on

FIGURE 19: FOCUSED GRID - CENTRAL NO.2 (RANDALL)

RAW GRID

	* 1	2	3	4	5	6	7	8	9
1	6	1	7	7	5	7	7	5	1
2	7	1	7	7	5	7	7	3	1
3	6	1	5	6	3	6	7	3	1
4	7	1	7	6	7	7	7	5	1
5	7	1	6	6	6	7	7	6	1
6	7	1	7	7	1	7	7	5	1
7	7	1	7	7	7	7	7	5	1
8	7	1	1	7	1	1	7	5	1

ELEMENT MATCHING SCORES

	* 1	2	3	4	5	6	7	8	9
1	4	81	93	60	85	95	64	4	
2	4	18	6	43	14	0	39	100	
3	81	18	83	75	95	81	62	18	
4	93	6	83	58	83	93	66	6	
5	60	43	75	58	70	56	70	43	
6	85	14	95	83	70	85	58	14	
7	95	0	81	93	56	85	60	0	
8	64	39	62	66	70	58	60	39	
9	4	100	18	6	43	14	0	39	

CONSTRUCT MATCHING SCORES

	* 1	2	3	4	5	6	7	8
1	88	70	85	81	81	88	37	
2	-59	74	81	77	77	85	33	
3	-33	-44	62	66	66	59	44	
4	-70	-66	-40	88	74	96	29	
5	-66	-62	-37	-74	70	85	33	
6	-66	-62	-51	-59	-62	77	55	
7	-74	-70	-44	-81	-77	-62	33	
8	-22	-18	-29	-14	-25	-40	-18	

These activities are therefore 'boring' (construct 1), 'don't give knowledge to people' (construct 3), are of 'no interest' (construct 4), give 'no knowledge of the job' (construct 5), make 'you switch off' (construct 6), are 'low as regards the job' (construct 7), and 'don't keep you in touch with what's going on' (construct 8).

The other main cluster (i.e. 14) contains elements 3 (fires), 6 (special service calls), 7 (B.A. training), 1 (drill) and 4 (exercises). There are two main sub-clusters here - 11 and 13. Cluster 11 gives a 95% match for fires and special service calls. These elements are scored towards the emergent pole for every dimension except construct 8, where they are construed as 'doesn't keep you in touch with what's going on'. The elements in cluster 13 - B.A. training, drill, and exercises - all receive ratings consistent with the emergent poles of the raw grid. Indeed, these events are scored in a similar manner to cluster 11 except that these elements do 'keep you in touch with what's going on'. Again the elements are tightly clustered, with B.A. training and drill being matched at 95% and exercises joining drill at 93%.

The two elements most loosely clustered are lectures (element 8) and deputations (element 5), with, in general contrast to clusters 10 and 14, these elements receiving more widely ranging ratings. The contour lines indicate an association with the elements of cluster 14, especially in being construed as 'giving more scope' (construct 1), 'showing your expertise' (construct 4), 'giving confidence in the job' (construct 5) and being 'high as regards the job' (construct 7). However, the ratings for construct 3 indicate that these activities are construed more towards the implicit end of the 'enjoyable - no interest' dimension.

## Constructs

The construct tree shows how 5 of the 8 constructs are contiguously clustered at 88% or higher in cluster 12. Cluster 12 contains two main sub-clusters, i.e. 10 and 11. In cluster 10 we see construct 1 (gives more scope - can get very boring) matched with construct 2 (gives knowledge to people - doesn't give knowledge to people) at 88%; the contour lines showing that the only discrepant element is lectures (element 8) which although 'giving more scope', nevertheless, and perhaps surprisingly, 'doesn't give knowledge to people'.

In cluster 11 we find a high match for constructs 4 and 7. The clustering suggests that if an event 'shows your expertise' (construct 4) it is also 'high as regards the job' (construct 7), whereas if it is 'no knowledge of the job' it is 'low as regards the job'. Construct 5 ('gives confidence in the job') is also closely aligned here, being matched to construct 4 at 88%.

Of the three remaining constructs, number 6 (learn a lot - don't learn 'switch off') joins number 2 to form a new cluster, 13. The construct matching scores show how this construct has an 81% match with construct 1 and a 77% match with construct 2; with which it is matched in the tree.

The final two constructs, 3 and 8, are more loosely matched with the other dimensions. Although construct 3 (enjoyable - no interest) does have a 74% match with construct 2, construct 8 ('keeps you in touch with what's going on' - 'doesn't keep you in touch') only achieves a top matching score of 55% and is thus greatly separated from the other dimensions.

## Feedback

The first clarification was for construct 8; and especially its marked dichotomy between elements 5, 3 and 6 (scored at the implicit pole) and 7, 1 and 4 (scored at the emergent pole), which are otherwise construed similarly on most constructs. Randall explains:

Randall: M'm when you've got your exercises [i.e. divisional exercise training] you do them at a specific place like a factory or Esso petroleum and they show you the different equipment they've got for firefighting. We can turn up to a place after we've had drill and we know where all the hydrants are, where all the pumping positions are, how to turn the sprinklers on around the tanks and everything like.

Researcher: And B.A.?

Randall: With B.A. like, you could come on today and they've got a new piece of equipment. Maybe it's a new decontam suit, m'm new things to go on the B.A. sets, m'm well it's all things to cover you for going into these dangerous substances and stuff like that. You could gamble that half a dozen times a year, you'll come on duty and there's two new [B.A.] sets down there, two brand new sets, different styles as regards the back plate, they're lighter, they've got a different valve group, there's a different demand valve on them, there's a different bypass valve where you just press the front. Just general things like that.

When Randall construes 'keeps you in touch with what's going on', this relates especially to knowledge of possible fire grounds, or to fire fighting equipment which may have changed in design. In this context, drill, exercises and B.A. training all serve to 'keep you in touch'. Fires (element 3) and Special Service Calls (element 6), however, are not so construed for although you can 'learn a lot' (construct 6) here, they don't 'keep you in touch with what's going on' because they don't concern 'learning' in respect of preparation for future events.

Feedback discussions revealed that many of Randall's constructs revolved around the theme of 'learning' and 'not learning' (see 'lectures' in

ethnography). These links are visible in Randall's clarification of construct 5 (i.e. 'gives confidence in the job'). Like Fowler's recourse to drill as a standard for his 'informative' construct, Randall refers to drill, and again B.A. training, in explaining this construct:

Randall: Giving you confidence in the job as regards drills, B.A. drill; you get to know your equipment, you can handle your equipment blindfolded. The 'little confidence in the job' is well, it's boring, cleaning machines and stuff like that. That's what I mean by giving you confidence in the job, is when you're learning, you're handling the equipment and as I say you can do it blindfolded. Whereas the other side as I say you're not learning anything.

Throughout Randall's clarifications he invoked a plain distinction between tasks he considered worthwhile and those he disliked. This was clear not only from the bald scoring of grid elements, but also in the hierarchy of events emerging through description of 'high' or 'low' activities (construct 7).

### 3. Fireman Cowans (Central)

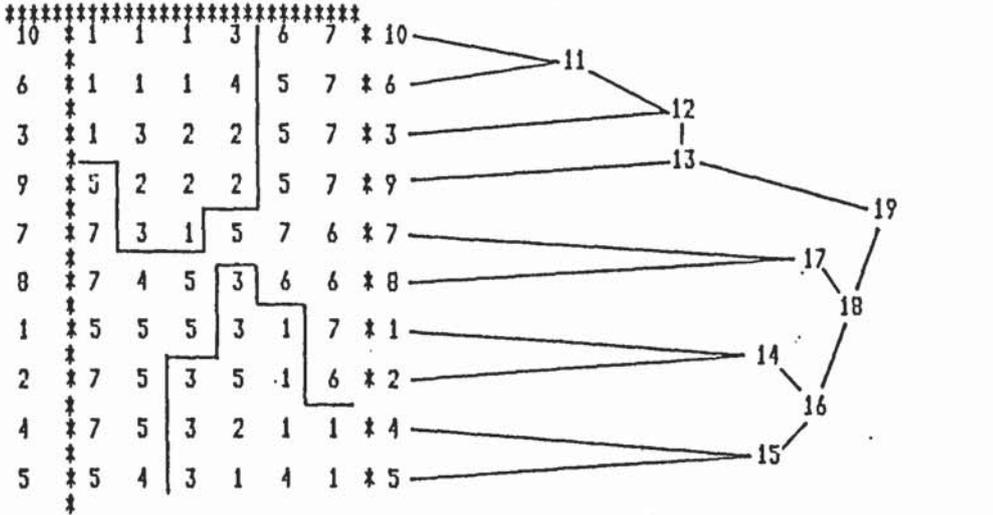
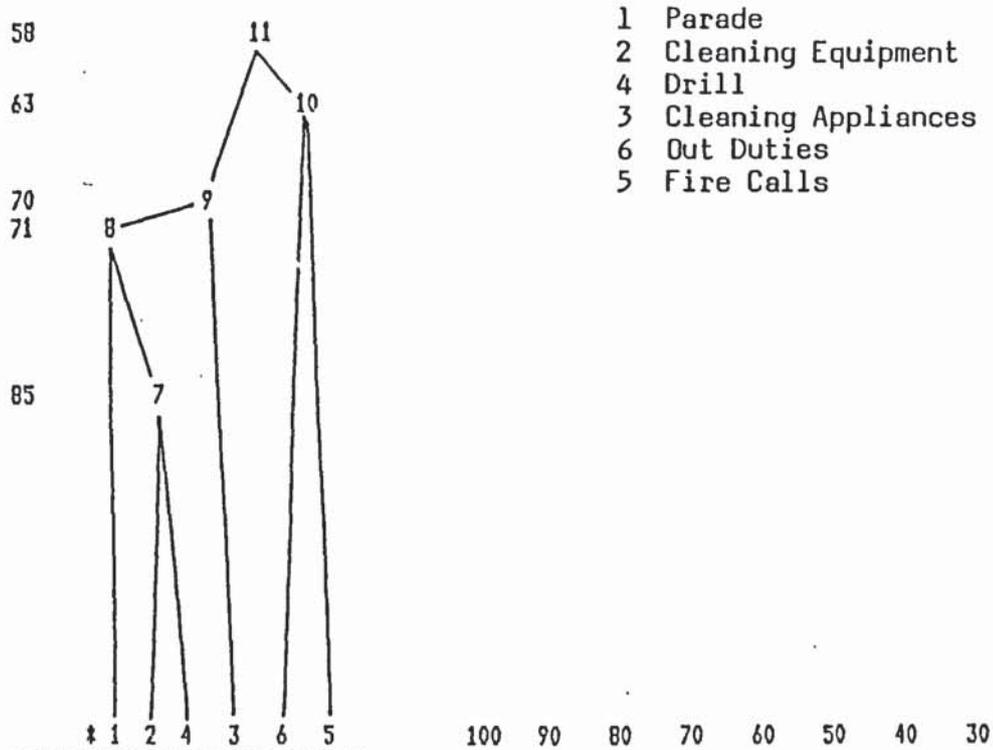
Figure 20 gives the elements and constructs from the initial interview together with the final grid produced by FOCUS. Constructs 3, 4 and 8 are reversed.

#### Elements

Only six elements were supplied by Cowans. There is a general division between the construing of clusters 9 and 10, albeit that the matches are not as tight as for other grids.

Within cluster 9 we find the tightest match for elements 2 (cleaning equipment) and 4 (cleaning appliances) at 85%. These are construed as similar to their nearest matching elements - 1 (parade 71% with element 2) and 3 (drill 70% with element 4) - in being 'in the public eye' (construct

FIGURE 20: FOCUSED GRID - CENTRAL NO.3 (COWANS)



- 10 In Public Eye - Not in the Public Eye
- 6 Uses Taxpayers Money - Uses Little Taxpayers Money
- 3 Exciting - Routine (Reversed)
- 9 Stand to be Criticised if Done Wrongly - Can't Really Be Criticized
- 7 Appearance Important - Appearance Not Important
- 8 Very Little Room for Error - Room, for Error (Reversed)
- 1 Dealt With Internally - Dealt with Externally
- 2 Daily Occurrence - Done Once a Year
- 4 Indoor - Outdoor
- 5 Don't Use Energy - Burns Energy (Reversed)

FIGURE 21: GRID SCORES - CENTRAL NO.3 (COWANS)

RAW GRID

	1	2	3	4	5	6
1	5	5	3	5	7	1
2	7	5	5	3	6	1
3	7	5	6	6	1	3
4	7	5	2	3	1	1
5	3	4	7	5	7	4
6	1	1	4	1	7	5
7	7	3	5	1	6	7
8	1	4	5	3	2	2
9	5	2	2	2	7	5
10	1	1	3	1	7	6

ELEMENT MATCHING SCORES

	1	2	3	4	5	6
1		71	53	63	41	48
2	71		71	85	40	46
3	53	71		70	55	58
4	63	85	70		38	48
5	41	40	55	38		63
6	48	46	58	48	63	

CONSTRUCT MATCHING SCORES

	1	2	3	4	5	6	7	8	9	10
1		61	22	38	44	5	5	16	38	5
2	5		38	55	27	0	44	33	22	-11
3	22	5		50	22	-38	5	27	-16	-50
4	16	0	-5		-16	-33	0	33	11	-33
5	22	16	33	61		27	16	27	27	16
6	16	22	72	44	-5		33	22	55	88
7	38	11	27	33	5	-11		0	44	33
8	50	44	27	22	38	11	55		0	11
9	16	11	72	22	38	-22	-22	44		55
10	16	33	72	44	-5	-55	-11	22	-33	

10), 'routine' (construct 3 reversed), and activities which 'use the taxpayers money' (construct 6). The contour lines, however, indicate differences in the clusters for while 'appearance' (construct 7) is 'important' for parade and drill, it is 'not important' in cleaning tasks. Also, while for parade you can 'stand to be criticized' (construct 9) if it is 'done wrongly', in drill and cleaning equipment/appliances you 'can't really be criticized'.

Cluster 10 gives a match at 63% between elements 6 (out duties) and 5 (fire calls). These events are in varying degrees 'exciting' (construct 3 reversed), activities where 'appearance (is) important' (construct 7), in which you 'stand to be criticized if done wrongly' (construct 9), and where there is 'very little room for error' (construct 8 reversed). The activities have only moderate matches with other elements.

### Constructs

Cluster 13 represents the tightest construct matches. The closest match here is for constructs 10 and 6 at 88%. Construct 3 is then matched to construct 6 at 72% forming cluster 12, with construct 9 completing the cluster with a 72% match with construct 3. Cowans construes that events which are 'in the public eye' (construct 10), generally 'use the taxpayers money' (construct 6), are more 'exciting', but are things over which you 'stand to be criticized if done wrongly' (construct 9). An exception in this pattern is parade which although something that is 'not in the public eye', 'uses little taxpayers money', and is 'routine', is nevertheless something over which you can be 'criticized if done wrongly'.

While cluster 18 gives three sub-clusters none of these is closely matched (the tightest being constructs 4 and 5 reversed at 61%) and they can all be evaluated individually.

### Feedback

Although many of the sample grids contain rather similar constructs, Fireman Cowans offers two rather idiosyncratic dimensions in his 'criticism' (construct 9) and 'taxpayer' (construct 6) themes. Indeed, when asked to explain how a fireman could be 'criticized' over parade, fire calls, and out duties, the 'taxpayer' (and also the 'public eye' and 'appearance') theme emerged.

Researcher: You say that someone can be criticized over parade, fire calls and out duties. What really do you mean there? How can that happen?

Cowans: Well you see, from the public eye really. I mean a lot of people that are in the know, they tend to have a critical eye of public service really. And it's just like when they get a fire call and we seem to be taking time and doing things at our leisure they can complain in that, that's where most of the tax is going to keep up the public service. I said parade as well?

Researcher: Yes.

Cowans: Well that's from the officers like. It's a disciplined service you see so that I guess your appearance on parade has a lot to do with the sort of reports you get you see, and the time you've spent in the fire service, really, so I mean appearance is important.

Researcher: Complaints from the public, are these common or? /

Cowans: / They're not particularly common, no. But I think as time goes by a lot of people get more in the know, and know that the tax they pay, you know, is to pay these people, their public servants.

In contrast perhaps to the intuitive impression that by 'criticism' at fires and outduties this would mean personal criticism by Fire Officers, Cowans focuses on possible criticism from the public, i.e., the taxpayer.

His attention only turns to criticism from officers when he comments on the more insular activity of parade. Here there emerges a background theme that personal appearance, in events such as parade, can have an effect on promotion reports.

Another indefinite point is Cowans suggestion that there is 'very little room for error' on parade. Cowans notes:

Cowans: I mean it's supposed to be a disciplined service so that everything that's done we've got to get it right to begin with to save any mix-ups during the day you see.

Here we see reasoning similar to Fowler's explanation that parade is 'important', in that it is the reading of the daily work instructions that is important. Both firemen, in fact, construe parade not only as parading but as incorporating the roll call, the dismissing of the off-going watch; the detailing of drivers, appliance riders and B.A. men; and the reading out of orders.

#### 4. Fireman Holding (Sutton Coldfield)

Figure 22 gives the elements and constructs from the initial interview together with the final grid produced by FOCUS. Constructs 1 and 6 are reversed.

##### Elements

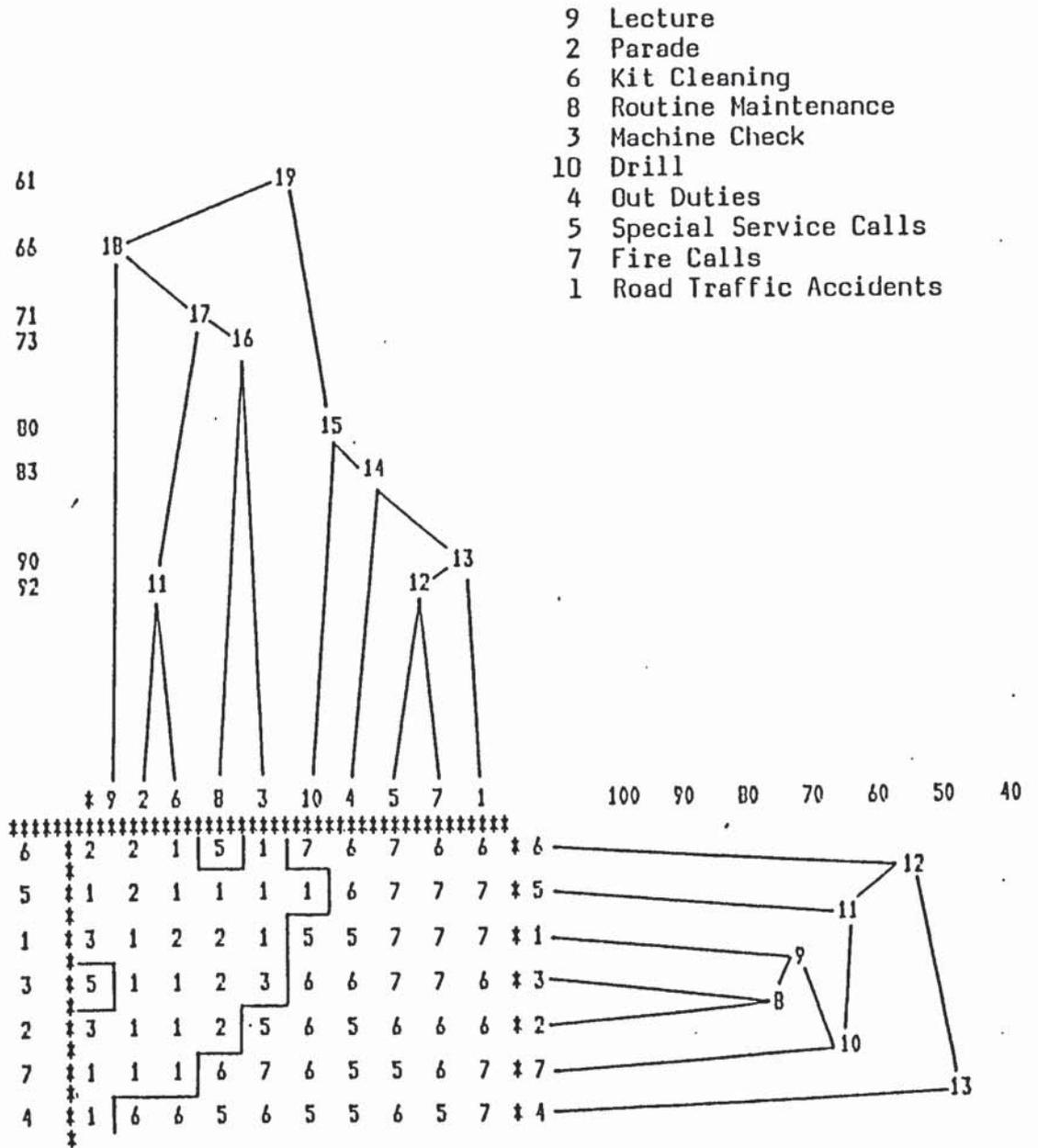
Figure 22 offers two main element clusters, i.e., 15 and 17. The tighter cluster is 15 containing elements 10 (drill), 4 (out duties), 5 (special service calls), 7 (fire calls) and 1 (road traffic accidents). Here the elements in subcluster 14 are especially highly matched; there being no contour divisions. The tightest match is for elements 5 and 7 at 92%, with element 1 then forming cluster 13 with a 90% match with element 7.

Element 4 is then matched with element 5 at 83%, and the cluster is completed when element 10 is matched with element 4 at 80%. The contour lines show only one discrepant score in the cluster, that is for element 10 (drill), which unlike the other elements is construed as 'initiated at station level' (construct 5). All five elements are construed as 'spontaneous/different' (construct 1 reversed), 'practical' (construct 4), and 'cover(ing) a wide spectrum' (construct 3); these being activities for which there are 'different ways to accomplish' (construct 6 reversed), while allowing the firemen to 'use initiative' (construct 2).

Cluster 17 contains elements 2 (parade), 6 (kit cleaning), 8 (routine maintenance) and 3 (machine check). The closest match is for elements 2 and 6 at 92%, these elements being scored similarly on all constructs. Subcluster 16 matches elements 8 and 3 at 73%, although the contour lines illustrate differences on constructs 2 and 6 reversed. Here, routine maintenance (element 8), although having 'different ways to accomplish', nevertheless requires 'less initiative'. The machine check (element 3), however, is an activity in which the fireman can 'use initiative', albeit that there is a 'right way to do it'. The cluster is finally formed with a 71% match between elements 6 and 8. All activities in cluster 17 are construed as 'practical' (construct 4), 'regularity/routine' (construct 1 reversed), 'more narrow' (construct 3), and events 'initiated at station level' (construct 5).

The lecture (element 9) receives by far the loosest matches with other elements. Only two reasonable matches are recorded, those of 69% with kit cleaning (element 6), and 66% with its linked element, parade (element 2).

FIGURE 22: FOCUSED GRID - SUTTON COLDFIELD NO.1 (HOLDING)



- 6 Different Ways to Accomplish - "Right" Way to Do This (Reversed)
- 5 Initiated by Others - Initiated at Station Level
- 1 Spontaneous (Different) - Regularity (Routine) (Reversed)
- 3 Covers Broad Spectrum - More Narrow Activity
- 2 Use Initiative - Use Less Initiative
- 7 Involves Machinery - Does Not Involve Machinery
- 4 Practical - Theory

FIGURE 23: GRID SCORES - SUTTON COLDFIELD NO.1 (HOLDING)

RAW GRID

	* 1	2	3	4	5	6	7	8	9	10
1	1	7	7	3	1	6	1	6	5	3
2	6	1	5	5	6	1	6	2	3	6
3	6	1	3	6	7	1	7	2	5	6
4	7	6	6	5	6	6	5	5	1	5
5	7	2	1	6	7	1	7	1	1	1
6	2	6	7	2	1	7	2	3	6	1
7	7	1	7	5	5	1	6	6	1	6

ELEMENT MATCHING SCORES

	* 1	2	3	4	5	6	7	8	9	10
1		23	47	80	88	21	90	45	28	71
2	23		66	38	26	92	23	69	66	38
3	47	66		52	40	69	42	73	57	61
4	80	38	52		83	35	85	59	47	80
5	88	26	40	83		23	92	42	30	73
6	21	92	69	35	23		21	71	69	40
7	90	23	42	85	92	21		50	33	76
8	45	69	73	59	42	71	50		59	69
9	28	66	57	47	30	69	33	59		52
10	71	38	61	80	73	40	76	69	52	

CONSTRUCT MATCHING SCORES

	* 1	2	3	4	5	6	7
1		-30	-40	13	-60	63	-16
2	70		76	36	43	-26	66
3	73	-23		13	53	-36	43
4	26	10	13		13	3	50
5	66	-36	-46	0		-43	30
6	-43	60	63	30	56		-33
7	43	-26	-23	-10	-23	53	

Notable differences between the two main clusters are that elements in cluster 17 are all 'regularity/routine' (construct 1 reversed) and 'more narrow' (construct 3), whereas those in cluster 15 are 'spontaneous/different' and 'cover (a) wide spectrum'.

### Constructs

The dendrogram shows that five of the seven constructs are contiguously matched at 66% or higher in cluster 11. Here constructs 1, 2 and 3 are especially highly matched. Constructs 2 and 3 form the highest link at 76%, with construct 1 then being matched with construct 3 at 73%. Cluster 9 suggests close associations between events being 'spontaneous/different' (construct 1 reversed), 'cover(ing) (a) broad spectrum' (construct 3) and allowing a fireman to 'use initiative' (construct 2). Conversely an event that is 'regularity/routine' is closely aligned with construing activities as 'more narrow' or 'use less initiative'. The contour lines, however, illustrate two exceptions. Firstly, although machine check (element 3) is 'regularity/routine' and a 'more narrow activity', it is nevertheless something within which you can 'use initiative'. Secondly, the lecture (element 9) while 'regularity/routine', and an activity whereupon you 'use less initiative', nonetheless 'covers (a) broad spectrum'.

Construct 7 joins construct 2 at 66% to form cluster 14. Here events that 'involve machinery' (construct 7) are generally those upon which you can 'use initiative', while alternatively, tasks which 'do not involve machinery' are those 'us(ing) less initiative'. The exception noted by the contour lines is routine maintenance which 'involves machinery' but is an activity upon which you 'use less initiative'. Cluster 11 is completed by construct 5 (initiated by others - initiated at station level) being matched with construct 1 reversed at 66%. The only exception to the polar

matches is for element 10 (drill) which although 'initiated at station level' is still 'spontaneous/different'.

The remaining constructs, i.e., 6 (right way to do this - different ways to accomplish) and 4 (practical - theory), have looser matches. Although construct 6 does have a 63% match with construct 1 (not reversed), the highest match for construct 4 is only 50% with construct 7.

### Feedback

Holding was first asked to clarify the construct 'initiated by others - initiated at station level' and specifically why in cluster 15 'out duties' was scored at the former pole (cf. Cowans above). By 'others' Holding explained that in this instance he did not mean 'members of the public' (as with fire calls and R.T.A.'s) but instead:

**Holding:** Members at Divisional Headquarters who decide that someone's going out to do such and such. Transport is an out-duty as such. That is where it comes from Division Headquarters at Central and they may say we need a man to do the transport this morning, [they'll say] 'you're one man up, will you send a man out'. Whereas drill, the S.O. will sit in the office and look at the drill record, the sheets. O.K., that's something that's been devised by someone else, but he will say 'you are down for, you are going to do'. So really that's initiated at station level.

Holding was then questioned over the construct 'use initiative - use less initiative', and especially how you can 'use initiative' in drill and out-duties. For drill, Holding explained that he was referring more to 'combined' drills rather than the repetitive 'drill book' exercises:

**Holding:** Drills are often there to imitate a real incident and so the officer in charge can say to you, 'you will be the officer in charge, you roll up at a road traffic accident, somebody's got his arm trapped under a car or twisted around the wheel, do what you are going to do'. So obviously you've got to use your initiative and get his arm out of the wheel or get him from underneath the car, initiate ambulance services,

whatever. So that's how you'd use it on drill, it's not always exactly the same. Other drills are in what's known as the drill book and there is a set way, we learn it parrot fashion.

In respect to outduties, Holding explained that when you are 'doing hydrants' or 'on transport' you can decide on your own schedule for accomplishing the task as no set order is prescribed:

Holding: For transport, for instance, you're given the van, given the list of things to do, 'go out and do it'. Whatever order you take is entirely up to you.

Holding next explained the 'regularity - spontaneous' construct and especially how drill and out-duties could be 'spontaneous'. For out-duties, Holding gave a similar explanation as for 'use initiative' in that it was a spontaneous decision on the part of the fireman as to which order the outduties were accomplished. However, drill, Holding suggested:

Holding: Can be spontaneous in that the Officer in charge or the person who's taking the drill decides for himself there and then exactly how the drill will be structured, what form the drill will take. You know they're devious, they sort of get together and say 'what are we going to do on drill today, we won't just do the standard ladder drills, we'll put a man up on the tower and rescue him in a certain way. It's spontaneous on their part, they will decide there and then what form the drill will take.

Holding finally explained some of the themes in cluster 17. First was his scoring of 'different ways to accomplish' routine maintenance. Here Holding noticed that such 'routine' maintenance did not mean that the maintenance checks involved the same patterns of activity. Although there are set procedures for checking equipment there is often variety in the procedures:

Holding: Depending on what the problem is, depends on what you're going to do to solve the problem. Routine maintenance is on

a B.A. set for instance. Many things can go wrong. The face mask can have a fault, the valve on the cylinder could be damaged. Depending on what the problem is depends on how you're going to fix it which isn't a set pattern.

The writer then questioned how 'machine check' could be evaluated by the pole 'use initiative'. Holding explained in terms of the machine check inviting a necessary deviation from the stipulated routine:

Holding: You're supposed to do it on an inventory board, and don't let it be known to (senior) officers that it isn't done on the inventory board. But let's face it, having done it every four days for two years you start to know exactly what should and shouldn't be there anyway. You don't need to keep looking at the inventory board. So basically the officers at station level expect you to know how to check a machine; what should be on it. And so long as it is checked they leave it entirely up to you.

#### 5. Fireman Garner (Sutton Coldfield)

Figure 24 gives the elements and clusters for the initial interview together with the final grid produced by FOCUS. Constructs 2, 6, 7 and 9 are reversed.

#### Elements

Figure 24 illustrates two main element clusters - 10 and 11.

Within cluster 11 we have an 88% match between elements 6 (hydrants) and 5 (station work). These are construed similarly in being 'never varying' (construct 9 reversed), 'not what the public thinks I do' (construct 3), and while 'not essential' (construct 2 reversed), nevertheless, 'enjoyable' (construct 1). The contour lines illustrate differences in that, whereas you 'must be self motivated' (construct 7 reversed) for station work, for hydrants you get 'motivation from the blokes around you). Furthermore, while you 'can make mistakes' (construct 4) on station work, this is not the case for hydrants. Element 3 (studying) completes

cluster 11, this element gaining its two highest matches with the other elements of the cluster, i.e., 75% with element 5, and 68% with element 6.

Cluster 10 contains elements 2 (road traffic accidents), 1 (firefighting) and 4 (drill). Here we see a 100% match between elements 1 and 2, with element 4 being matched to both these tasks at 77%. All these events are construed as 'varying' (construct 9 reversed), 'prime purpose' (construct 2 reversed), 'helping the public' (construct 3), activities in which you gain 'motivation from blokes around you' (construct 7 reversed), and also for which you must be 'fully fit' (construct 8). One discrepancy in the grid is that you 'can make mistakes' (construct 4) on drill, but 'can't make' them at R.T.A.'s or fires.

Element 7 (fire prevention) has no high matches with other activities, it's closest link being at 66% with element 3.

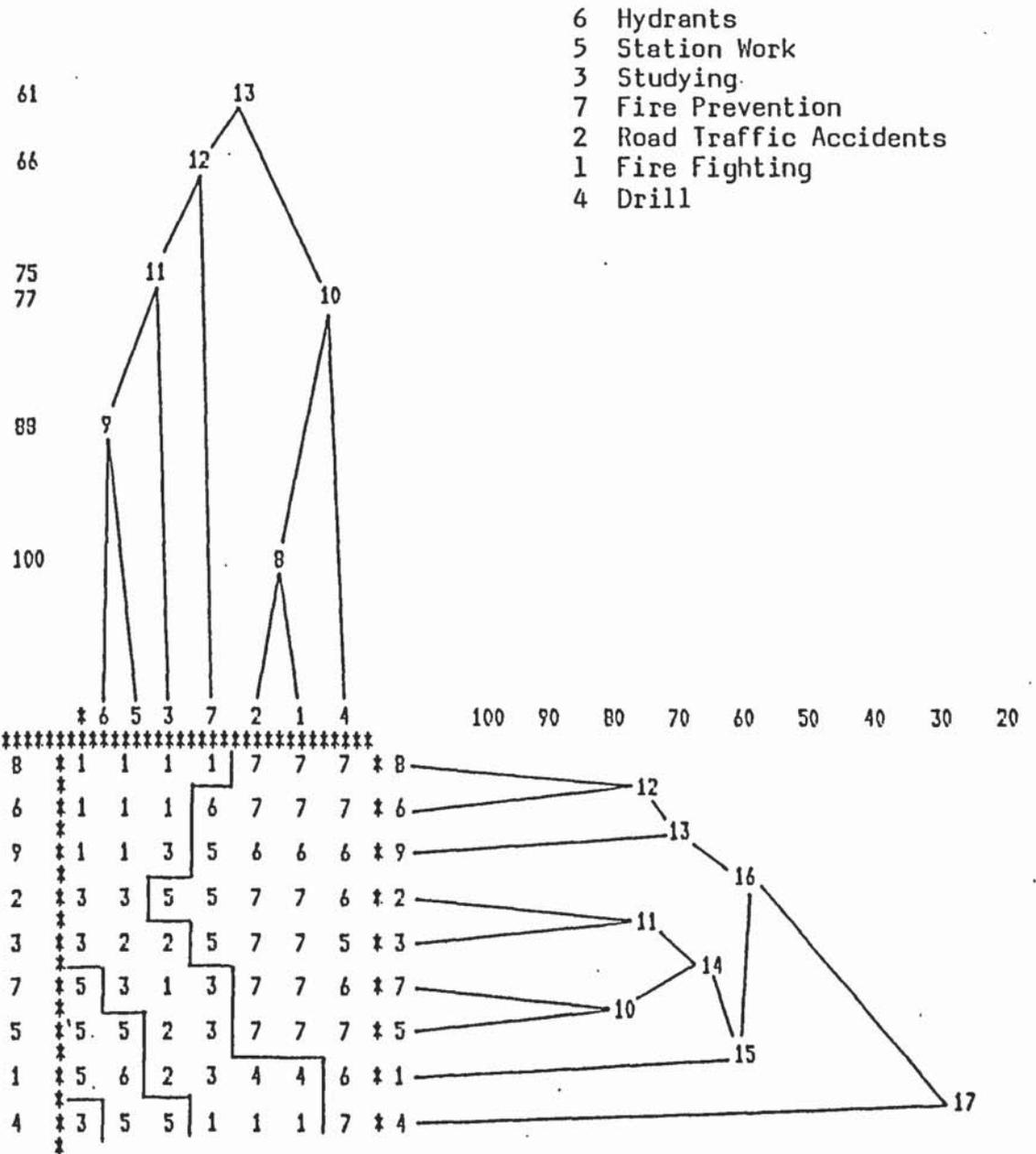
### Constructs

The dendogram shows three main clusters, i.e., 10, 11, and 13.

In cluster 10 we can see an 80% match suggesting that when something is 'more tangible' (construct 5) it is also 'motivation from blokes around you' (construct 7 reversed), and conversely when 'not tangible' is 'must be self-motivated'. The only exception is for station work (element 5) which although 'more tangible' involves being 'self-motivated'.

In cluster 11 we see a match at 76% between 'prime purpose' (construct 2 reversed) and 'helping the public' (construct 3), and alternatively 'not essential' and 'not what the public think you do'. The exception here is for 'studying' (element 3) which while 'prime purpose' is nevertheless 'not what the public think you do'.

FIGURE 24: FOCUSED GRID - SUTTON COLDFIELD NO.2 (GARNER)



- 8 Must be Fully Fit - Can Do On Light Duties
- 6 Cannot Do This by Yourself - Can Do By Yourself (Reversed)
- 9 Varying - Never Varying (Reversed)
- 2 Prime Purpose - Not Essential (Reversed)
- 3 Helping the Public/Others - Not What the Public Think You Do
- 7 Motivation From Blokes Around You - Must be Self Motivated (Reversed)
- 1 Enjoyable - Hard Work
- 4 Can Makes Mistakes - Can't Make Mistakes

FIGURE 25: GRID SCORES - SUTTON COLDFIELD NO.2 (GARNER)

RAW GRID

	1	2	3	4	5	6	7
1	4	4	2	6	6	5	3
2	1	1	3	2	5	5	3
3	7	7	2	5	2	3	5
4	1	1	5	7	5	3	1
5	7	7	2	7	5	5	3
6	1	1	7	1	7	7	2
7	1	1	7	2	5	3	5
8	7	7	1	7	1	1	1
9	2	2	5	2	7	7	3

ELEMENT MATCHING SCORES

	1	2	3	4	5	6	7
1		100	27	77	29	40	61
2	100		27	77	29	40	61
3	27	27		35	75	68	66
4	77	77	35		44	44	53
5	29	29	75	44		88	57
6	40	40	68	44	88		61
7	61	61	66	53	57	61	

CONSTRUCT MATCHING SCORES

	1	2	3	4	5	6	7	8	9
1		42	28	28	61	4	4	9	33
2	23		-9	47	14	52	61	-38	61
3	39	76		-14	57	-57	-9	52	-28
4	9	9	52		9	28	47	-4	28
5	-4	52	0	38		-33	-23	47	-4
6	4	-42	66	-28	42		52	-76	71
7	52	4	66	-9	80	-42		-57	42
8	-9	38	-52	4	-47	76	57		-57
9	23	-14	66	-9	33	-61	-14	57	

Cluster 13 offers a 76% match between 'must be fully fit' (construct 8) and 'cannot do by yourself' (construct 6 reversed), and conversely 'can do on light duties' and 'can do by yourself'. The exception here is for fire prevention (element 7) which although something 'you can do on light duties', is nevertheless something you 'cannot do by yourself'. Construct 6 is joined by construct 9 at 71% to complete the cluster. Here when something is 'varying' it is something you 'cannot do by yourself', and when 'never varying' you can generally 'do by yourself'.

### Feedback

In clarification Garner was first queried over the construing of 'hydrants' as 'not essential' in cluster 9. Garner replied that he did not mean that the checks were unnecessary, but that it was 'not essential' that the checks be carried out by W.M.F.S. personnel. He elaborated that until 1974 - and the forming of W.M.F.S. - Sutton Coldfield was in the Warwickshire County Brigade where these checks are carried out by the Water Board.

Garner next clarified the construct 'must be self-motivated - motivation from blokes around you', and especially how station work was linked to the former pole, while hydrants to the latter:

Garner: You find that station work there's a lot of it where the gaffer [i.e. S.O.] or Larry [Sub.O.] will say Joel I want you to do this, you do this, Viv, you do this, Colin, do this. So you've got four blokes on four different jobs. If I haven't got any interest in the job, say painting something, I mean I hate painting, so the motivation for me to do that doesn't come from the job - there's no-one there to help me. So I've got to get a bit of motivation to do this job I don't like. With other things like hydrants where you go out in a bunch on the machine, then you've usually got another chap with you and you can say OK we can soon knock this off, then we might get into the park and have an ice cream. So you've got a bit of camaraderie if you like. It's easier to do a job if there's two of you doing it, than for a bloke to do a job on his own.

Finally, the researcher indicated how fire prevention had the loosest matches with other job activities. Garner explained that fire prevention was perceived as a separate event, as instead of being directed toward the fighting of fire it concerned preventing fire from occurring.

Garner:            Firefighting, rescuing, R.T.A.'s, that is work we do as a result of a mishap or accident of some sort. Fire Prevention tries to pre-empt that accident and stop it happening. Therefore its totally devoid. A lot of firemen think that Fire Prevention should be totally devoid from the operational side, which it is to a large extent but now they're trying to bring it back in.

From the above, we again see how the session not only serves to clarify different themes, but often to discover new background information. By exploring 'not essential' we find how work practices, in fact, differ between brigades, while in the last transcript the issue of the increase of fire prevention duties for basic rank firemen becomes apparent. Indeed, a main issue during research was that a new Fire Prevention Office was being attached to Sutton Coldfield Fire Station to co-ordinate such duties.

#### 4.6 Remarks

The repertory grid method above has been used to obtain personal interpretations of the work situation. The objective has been to get 'inside the heads' of participants and discover how they personally construe the daily work routine.

To achieve this, interpretations have been accrued through three sources: firstly, the eliciting of important objects in the phenomenal field (elements) by non-directive interviewing; secondly, the accessing of psychological templates used in making sense of the work (constructs) via the triad method; and thirdly, the clarifying of interpretations of work events (meaning) by feedback interviews. Through this process we have

produced semi-autobiographical accounts of how daily work activities are understood; with important here being that the method has let the participants themselves produce the analysis by getting them to both set the research agenda (element elicitation), and then relate this in terms of personal and contextual explanations.

The research has, therefore, attempted to appreciate the ingredients of 'recipes' (Schutz, 1964) used by watch members in making sense of the setting; the material demonstrating the range of cognitive dimensions used in comprehending this portion of the life world. Here we have accessed cognitive dimensions relevant to both subjective and intersubjective explanations, in that the constructs are felt to reflect not only contextually shared meanings, but also the idiosyncrasy of personality<sup>19</sup>. However, while the constructions themselves offer rich data, by the nature of the method the phenomena representing the objective elements remain rather static. Although elements in the field are interpreted through construct explanations, details of how such phenomena fit into the daily patterning of events remain undiscovered. It is necessary, therefore, to place the elements within a more processual account of how the daily work unfolds, hereby gaining greater insight into how the various constructs are used in the understanding process. The ethnography which forms the second part of the analysis seeks to put the constructs 'in context' through observational research.

#### 4.7 Ethnography: The Normal Routine and It's Everyday Accomplishment

"an understanding of their work was made possible by their attempts to explain their activities to us, the researchers, as if we could make no sense of their world otherwise".

Silverman and Jones, 1976, p.111

##### 4.7.1 Introduction

We now turn to the second part of the research strategy, that of the ethnography. As the repertory grids have provided personal experiential data, we now employ this as a basis for a more processual report. Here the constructs produced from the repertory grid work are used to aid an understanding of observational material. The research continues to examine the working 'day', but specifically how subjects employ constructs and typifications 'in order to' (Schutz, 1964) sort out the activities of the day. In so doing the analysis reveals the grounded nature of their actions and provides explanations more comprehensible to 'any-man'.

The process is not, however, accomplished by any hard formalised method (e.g. content analysis) but rather through facilitating an interpretive grounding into life within the context. Indeed, one of the main aims has been to let the participants structure their conversations, descriptions and analyses themselves. Therefore, as with the personal construct work, an inductive approach is used in which the knowledge of the subjects is treated as 'strange' to the researcher. Here again the researcher has attempted to employ epoche and adopt as far as possible a position of neutrality towards the assumptions of intersubjectivity.

However, in adopting such a position we must remember that through time there become available (to participants and researcher) more or less stable meanings which delimit the indefinite possibility of interpretations. Indeed, the repertory grid work has familiarised us with many of the shared constructs employed in the setting. Therefore,

although within the research the tenuous nature of organisational 'reality' is clear, this is not to deny the factual nature of that reality for the members of the organization.

#### 4.7.2 Data and Research

The data presented below concerns subjects either talking through, or about, their work. As such, the ethnography is of mostly unstructured conversational material collected during non-participant observation. The research is based on the premise that it is only through the speech, gestures and actions of competent participants that we can hope to understand their world.

The research process involved the researcher accompanying men through their daily work and asking them to explain the differing activities before, during and after the event. From this it was hoped to further appreciate the various 'stocks of knowledge' (Schutz, 1964) employed in making sense of the work situation. For some activities, however, the writer could not (practically) be 'talked through' the process and could only observe (e.g., parade, active drill, private discussions). In such instances the researcher obtained information from either the commentaries of firemen not engaged in the activity, or by way of post-hoc explanations from those involved.

To avoid overburdening any particular subject the researcher accompanied differing members at differing times of the day. Such changes tended to occur fairly naturally, especially in that the research involved work both 'on and off' the station. Indeed, on most days the writer was taken on 'out duties', while also at Central being assigned to the second pump ladder ('Alpha One Two') for attending operational incidents. The

physical collection of data was made using a dictaphone cassette recorder (Sony TCM-131).

#### 4.7.3 Uncertainty and Discretion in the Normal Day's Routine: Examples of Contextual Knowledge and Negotiation

As any fireman knows, work on a typical day shift begins at 9 am with 'parade', this being followed by checking the machines. These two events are construed to account for the process with which the official W.M.F.S. Standing Order (see Standing Order 7/1, Appendix 5) terms 'change of watch procedure', or the routine of: 'parade; roll call; dismiss off-going watch; detail drivers, appliance riders and breathing apparatus men; read out orders; check appliances and equipment' (p.1, Standing Order 7/1)<sup>20</sup>. It is during this process that the men are initially accounted for (roll call), and then informed of the main work roles they have been assigned to for that day<sup>21</sup>. For most basic rank firemen this will involve operational duties of driving (where qualified) or using breathing apparatus, although, it may be a fireman's turn to be either the 'duty-man' and therefore to manage the station office, or to be 'on quarters' and responsible for making tea or even preparing lunch.

Although a fireman is seeded for one of these roles, he may, however, be redirected to perform another role at a differing station, through being called to go on 'standby'<sup>22</sup>. Here, while prior notice may be given of standby duties (especially in cases where stations are undermanned because of holiday - 'annual leave' - arrangements), if a station finds itself unexpectedly short staffed (e.g., through illness) then the S.O. will have to contact stations in the same 'zone' in order to acquire a man for a specific task<sup>23</sup>. If this happens a fireman at Sutton may have to work at, for example, Perry Barr or Erdington for a day or even longer<sup>24</sup>.

As being called for standby often stems from another station finding itself without a full parade complement, reprimands, both formal and informal, are given for lateness. Indeed, S.O.'s have discretion in employing a range of sanctions from "a reprimand, to giving you a warning, or making you put an M.I. which officially goes in your record" (Miller)<sup>25</sup>.

Although uncertainty can be encountered here also, this is commonly tempered by indexical understanding, as for firemen late for parade the form of reproof depends both on the 'situation' and the 'individual'. Whereas an explanatory phone call before 9 am can 'take the edge off it', the extent to which excuses are acceptable depends upon whether the individual is regarded as one who 'tries it on'. Here, firemen who try it on are often defined as either the 'characters who breeze in at one minute to parade' (Taylor), or men who already have M.I.'s for lateness; with the S.O. possessing the threat that if M.I.'s are accrued then a fireman may be reported to Divisional Headquarters for 'official' reprimand. However, whereas the S.O. may formally request an M.I. he may in fact only use this as a threat and later scrap the report.

At Central, this theme of the 'importance' of lateness was highlighted with the arrival of a new S.O. In his opening watch address, S.O. Broad stated that he would 'not tolerate' lateness, and as such, 'would not mess about with M.I.'s'; if he gave an M.I. it would 'go straight over the D.O.'s office' ( Divisional Headquarters). A month later Miller had been late for parade. On coming out of the S.O.'s office the researcher asked him to account for what had happened. Miller explained that the S.O. had 'let him off'. Miller had indeed anticipated that the S.O. would not 'make things awkward' for him because 'he knows' Miller and so would be

aware that his time-keeping was good. Despite the S.O.'s previous edict Miller insisted:

Miller: He knows, we work close together, he knows the people. I mean, if I'd got an M.I. I'd have been most annoyed, most annoyed, simply because I'm one of the ones who arrives early and stops late. I couldn't have objected if he'd given me an M.I., but I would have been annoyed in myself and I might have said something to the S.O. and asked him whatever. But then that's his choice and it's his prerogative.

Thus, Miller's recourse to contextual knowledge was verified as correct. Despite S.O. Broad's explicit direction that lateness would result in an M.I., the address was interpreted (correctly) as only part of a general message on the strictness of discipline. While Miller 'couldn't have objected' if the S.O. had used his 'prerogative' and invoked the order, he nevertheless would have construed this as unreasonable behaviour in light of the S.O.'s 'knowledge' of watch practice: with Miller's analysis of what a watch member can (reasonably) expect revealing the grounded nature of his anticipations.

Following parade, watch members 'fall out', put their kit (boots, helmet, tunic, leggings) on the appliances, and begin checking the machines. On a pump ladder 'riding' with five men, the driver is responsible for the running efficiency of the appliance (and therefore the checking of petrol, oil, water and lights), while of the three men 'on the back' (back seat) the 'baco man' (breathing apparatus control officer: seated in the centre), checks the appliance's fittings with an inventory board. He is joined in this by the other men on the back (i.e., those assigned to using breathing apparatus), when they have checked their B.A. sets. All that remains then, is to check the machine's two remaining B.A. sets, which are done by the driver and officer in charge respectively. Once these sets are checked the firemen sign the 'B.A. books' to testify that all the sets

are working properly. The 'machine check' usually takes about twenty minutes<sup>26</sup>.

The main objective of the machine check is to confirm that all the equipment in the machine's lockers is present. However, despite an outward appearance of formality, the machine check is an event where the fireman can 'use initiative' (see Holding's feedback interview). Although the prescribed method of checking is by reference to the inventory board, after completing the probationary period, firemen, sensing increased job security, are less inclined to consult it. Indeed, while the inspections are 'important', there is no need to 'go by the book' and check off every item because 'once you've done it over and over ... it becomes a second nature to you' (Haynes). Therefore, while probationers (Croft, Smith) have suggested that they do check the board, and recently-qualified men 'make a show' by carrying the inventory board with them (Holding), some older men - 'who know how to get around things' (Cowans) - 'don't bother taking the list around' as it 'goes out of the window' (Randall). In fact while senior officers know that the rules are disobeyed ('they know what goes on, they've done it themselves: Holding), there is an implicit understanding that the rules can be broken as long as the practice not vaunted ("if they knew you'd found out": Richards).

This process of implicit negotiation is similarly found when, after the machines are checked, watch members take a 'quick cup of tea': the tea being prepared by the fireman on 'quarters' for about 9.20 am. Although this break is a regular feature at W.M.F.S. stations, as can be seen from Standing Order 7/1 it is not 'official'. Indeed Richards noted that, "for twenty five years I've had it and they've (senior officers) been meaning to knock it on the head all the while". Although supposedly 'frowned upon' (Richards) this simply represents an event which is again deemed

acceptable through contextual understanding, with no formal action ever being taken to remove it.

However, despite being established in the normal daily scheme, younger firemen are often keen to justify the practice, mostly by suggesting that it fills in a 'spare ten minutes' in the day. Such justification is indeed a necessary part of the negotiation process in which a certain wariness on the part of the men is adopted in return for oversight by senior officers. The standing orders do in fact allocate a full half hour for 'change of watch' and this is seen to give sufficient reason for Fowler's explanation that, "it's only because we usually finish the machines at twenty past or something like that, that we have a quick cup of tea, and then its back down for drill". However, in substance the tea interval is not so much the happenstance inferred by Fowler. Although 'circumstances' may necessitate that the break be foregone, in a 'normal day's routine' the quick cup of tea takes on a much more stable existence with custom and practice mostly overriding the official schedule. A discussion with Miller eventually overcame the official gloss and pointed to the more enduring nature of the break.

Miller: We always come up here at half past nine or before half past nine. M'm hang on, get down here for half past nine for drill but there's situations where as you can't, you know, but nobody complains about that, it's just a spare ten minutes, you know, so we have a cup of tea. That's something the S.O.'s always got up his sleeve you see because it's not official. Because if anybody was complaining that they hadn't had a cup of tea you can't do anything about it, can you.

Researcher: Why don't they make the period for cleaning machines shorter?

Miller: Because it wouldn't be done officially then would it.

Researcher: How do you mean?

Miller: O.K. When [S.O. Broad] came here, he was S.O. at an out station, but he's worked here before. M'm I've got me times wrong there anyway. On the out stations the S.O. he's

totally in charge, it's up to his discretion when you start drill. All he turned round and said is that I want everybody down here in fire kit [i.e., for drill] for quarter to ten, not nine-thirty, quarter to ten - although it should be nine-thirty. Simply because it gives us time for tea, to make sure that the blokes instead of rushing the checking of the machine, do it correctly. There's stacks of time to do it, and you have; as I say its repetitive. And then you can get up here and have a cup of tea with ease.

Although S.O. Broad knows that the men often rush the machine check in order to have tea, he does not wish to enforce official policy by removing the break, but instead chooses to facilitate accepted practice by allowing drill to be delayed until a quarter to ten. The transcript in fact reflects an implicit questioning of the subject's statement by the researcher. As observation did not equate with the explanation, Miller was pressed to account for why the time allocation could not be reduced and drill started earlier. It is only then that Miller discloses ('O.K.') how the agreement between the S.O. and the watch is not in line with the official ('all he turned round and said') timing of events. Even though the agreement is known, Miller explains that firemen cannot complain if 'situations' necessitate the break be waived, for de jure it's 'something the S.O.'s always got up his sleeve', that is, something he can legitimately override if the tacit rules become distorted.

As the tea interval ends, watch members disperse and begin to change into fire kit before parading in the yard for drill<sup>27</sup>. Drill sessions are taken by the junior officers on the watch (i.e., S.O., Sub.O., L.F.) and often simulate operational incidents<sup>28</sup>.

The statutory requirement for W.M.F.S. training is that a minimum of 100 hours general training, and the 'appropriate' number of hours specialist training, be completed within a thirteen week period. In terms of daily training there is a requirement for two hours drill, of which at least one

hour should be physical drill. On day shifts, however, the guidelines suggest that three hours drill be aimed for. For scheduling the 100 hours a document called a 'Thirteen Week Pre-planner' is issued so that junior officers can prepare in advance what drills will be undertaken. When all drills for that period are completed they are marked off on a larger plan listing the training requirements for the twelve months commencing on 1 January (form T.R.2).

The drill requirements do not, however, only refer to overall training hours per watch, but also to the amount of training accomplished by each fireman. All firemen must satisfy the same training requirements over the year and individual records are kept of the drills completed. These drill records, which outline practical drill requirements on one side and technical drills on the reverse, are inspected at bi-monthly intervals by a Divisional Officer. The records indicate the type of drill to be taken and the number of times per year it must be performed; the form being completed by indicating the date the drill was completed and the time spent on it.

Despite the seemingly hard and fast nature of the drill requirements, in order to 'sensibly' (Miller) complete the yearly schedule, the S.O. may again employ discretion; this time in compiling the records. Even though the W.M.F.S. guidelines stress that practical drill should be undertaken daily, often 'circumstances' can again prevent the sessions starting. This constant influence of uncertainty indeed serves as a predominant factor in the eventual completion of the records. As the year progresses drill records, instead of being completed 'according to the book', tend to be completed according to their 'necessity'. Here, the S.O. defines which drills need to be undertaken in order to account for 'adequate' fireman training. As the year closes and there remains a surfeit of unfulfilled

drills, 'specialist' drills tend to assume priority over all others, some drills becoming expendable. Specialist drills are, therefore, undertaken while drills of lesser priority may be filled-in as completed although never performed.

Miller: I mean obviously, a ladder drill, you know what I mean, that's bye the bye. But if we've got a specialist piece of equipment or a special drill like a decontam then we'll leave that space blank and when we've got a buckshee day, if you like, when we've got ladder drills we'll wang [put] that in. The ladder drills just bread and butter, it's adhered to as best we can, but again it's all down to circumstances.

It is accepted that the junior officers will cover the drill requirements in the most sensible manner, and that in doing so, some of the less important drills can be foregone. Indeed, the S.O.'s prescriptions are seen as authoritative and the 'thirteen week planner' as unnecessary red tape which can, and is in some circumstances should be, overruled. In explaining this process Richards noted how certain drills can be even eliminated by verbal agreement.

Richards: Drills are laid down for us now, every day of the week, and every week of the year.

Researcher: The thirteen week planner.

Richards: Exactly. But if they [Junior officers] think it's [the designated drill] boring, they'll bring it up and say 'this is what we should be doing, is everybody aware that that's the way you do it?' 'Yes'. 'Righto, well now I want you to do this.' And he'll give us something else to do.

These practical drills are complemented by 'theoretical' drills, or 'the lectures', which on a normal day's routine take place after mid morning break at around 11.15 am. Lectures are also taken by a junior officer, and generally by one of the L.F.'s or the Sub.O. These sessions vary in presentation and can take the form of a video from the Home Office, a talk from a visiting speaker, a report from a l(I)(d), or - as is most usual -

a reading from one of the Fire Service Training Manuals. Notable here is that the lecture period, like the machine check earlier, serves to illustrate differences in personal strategies in the work environment, and especially in terms of the ability to display certain forms of conduct. For example, older firemen tend to 'get around' being overtly bored (e.g., yawning, slouching in chairs etc.), whereas younger, and especially 'promotion minded', men, need to appear more interested and attentive, it being the promotion horizon that is the important factor:

Fowler:       if you're youngish and still keen on the promotion side, then you're going to put a little more effort, well not effort so much as the way you go about it is going to be a little bit happier. Because if you're seen to be doing things properly then hopefully this will come out in any report that the boss puts in for you.

It is the younger promotion-minded firemen that tend to act 'properly' unlike many of the older or non promotion-minded men. To these latter groups, the lecture is a 'theoretical' input into what is a 'practical' job. Thus, there is not the same compulsion for them to do things properly for, as Fowler noted, they see themselves more as 'long-term' firemen and as such, "tend to get drawn more towards the operational side". Indeed, a dislike of the lecture is often harnessed to a general antipathy towards studying, the exam system and promotion; with often the rationale being given that, "we're practical men not bookmen" (Haynes, see chapter 5). As such the lecture is often a complete 'switch-off' and an event from which 'you don't learn' (Randall), because, "it's all talking, it's very rarely practical, so very few people like that" (Dilley). In fact the content of a 'run of the mill' lecture is forgotten by watch members within days, although conversely if an 'interesting' lecture has taken place it tends to stand out as a notable event. Separate discussions with Dilley and Randall evoked the same contrast between the

tedium of everyday drill book lectures and a visit from a C.E.G.B. spokesman which had disturbed the stream of expectations.

Dilley: That fella that came down from the C.E.G.B. was brilliant, you know, he went on for an hour and a half and he could have gone on all day if he'd have wanted to. But the run of the mill lectures we have, you know, everybody just gets bored. They're (Junior Officers) not trained lecturers anyway. They're only like us the firemen. They don't particularly like giving the lectures anyway.

Randall: I honestly thought when we came down, that oh my God, you know, where's me cigarettes, where's me seat, I'm going to kip off here. But I honestly thought it was one of the most interesting lectures I've ever had.

As with physical drill, lecture topics are listed on form T.R.2 together with the required times that each topic must be covered per year. However, unlike for physical drill, there are no guidelines for the lecture to be taken every shift. Indeed, the lecture is one of the events that can - at the S.O.'s discretion - be used strategically, in being inserted into the day to prevent a hiatus occurring. As such it is a fairly capricious event for the fireman, and can only be 'half expected' by assessing if there is 'much doing'.

Dilley: I doubt whether we will have a lecture today because we've got a lot of things on. So the lecture will probably go out the window. But there again, tomorrow, if there isn't much doing, we might go and have a lecture. It's on the spur of the moment you see.

The flexibility we noted in completing the drill records is also evident here. If there are 'a lot of things on' and lectures have to be passed over, then the watch may be requested to cover two topics in a single session in order to catch up.

The remainder of the morning and most of the afternoon is again open to uncertainty as the routine hangs on what combination of maintenance checks, cleaning tasks, or outduties will be chosen.

In carrying out maintenance firemen complete the daily, weekly, monthly or three monthly tests required in the standing orders. Here, for example, lines are tested for strain, hose tested for pressure tolerance, ladders examined for wear and damage, and so forth. The equipment is also regularly cleaned as are the station environments, although 'civilian' cleaners are employed to complete similar tasks.

These 'routine' cleaning tasks again illustrate how more experienced firemen tend to hold alternative definitions of acceptable behaviour, and especially in terms of 'getting round things'.

Haynes: You make short cuts when you get to know what's expected of you. It comes with experience really. You know a bloke in his probationary period wouldn't dream of doing some of the things you do when you've finished it. He thinks, well I've got to do that properly, you know, I must do that. But when you've done it and you're sort of out of your probation you think well I can relax a bit now.

Thus, 'knowing what's expected of you' will affect your possible actions and the degree to which you do things 'properly', as, for example, on 'mundane' cleaning tasks.

Haynes: If you're scrubbing the floor or something you'll find that younger members of the watch are dead keen and scrubbing away, and the older members of the watch tend to drift off and go into some corner. You know, you find at the end of the day the young bloke's there stuck on his own and all the rest are gone. You know we've all gone through it. But if the D.O. comes on station, then obviously everybody's there, make a show.

Although experience facilitates a finer appreciation of possible short cuts, it is always necessary to be able to 'make a show' that work is being done in case a senior officer arrives on station.

The other main option for occupying personnel in late morning or the afternoon is for outduty inspections to be made, i.e., hydrants, bridge

doors, fire wells, l(I)(d)'s and fire prevention. Like drill these are the 'black and white' activities which necessitate some clerical work being undertaken. These are generally considered more important events than routine maintenance and cleaning tasks as, 'things that aren't in black and white tend to get pushed to one side' (Hendrick).

'Doing hydrants', for instance, requires completion of individual record cards (form 012) that outline 'routes' of hydrants on the 'patch'. Here, a comprehensive list of all roads is compiled together with its appropriate route number. Like other outduties, hydrants can be done by several watch members taking out an appliance; or by two men on special appliance (e.g., T.L. or Foam Tender); or, if there is 'good manning', by a single fireman taking out a small van.

Although there are specified lists for inspecting hydrants, bridge doors, and fire wells, the repertory grid work indicated how the 'routes' are not completely determined, as the fireman can 'use initiative' in completing the task, and thus employ personal discretion,

Garner:           What actually happens is that you go main road and the side roads of it. Or perhaps a bunch of side roads. So it's up to you to sit and look at it and think well I'll do that crescent down there, then that one. So it's up to you to pick out just the way you do it.

For l(I)(d)'s', however, discretion is built into the formal specification. l(I)(d)'s are the inspection of premises required by the 1947 Fire Services Act, the purpose being to familiarise firemen with the layouts of buildings in the station province (e.g., to note storage of dangerous chemicals, identify water supplies etc.). As such, the Act bestows considerable latitude as to the definition of buildings for inspection, and allows for visits by Fire Service personnel without prior consultation.

Taylor: The only places we can't go into are people's houses. We can only go into these under another Act of 1947 Fire Services Act, when we consider that it is involved in fire at that particular time or we think that it could be affected by fire from an adjoining premises. But under this Act we can go in there we can go in anywhere.

Hendrick: Anywhere, reasonable.

Taylor: Yeah, reasonable that's the word. What we're doing now I don't need to make an appointment, but we do like to make appointments because it keeps everybody informed of what we're doing.

l(I)(d)'s are invariably, however, orderly and pre-planned activities, with organisations due for inspection being given prior acknowledgement. Indeed, a prime strategy is to make the visit seem as unexceptional as possible, with the fireman who arranges the visit (usually a junior officer) stressing that it is not a fire prevention inspection which may involve the organization being requested to fit fire doors, exits, extinguishers etc.

Although in general fire prevention inspections are the domain of the Fire Prevention Department, operational firemen can be required to assist if there is a backlog of work. However, firemen often consider such work to be an encroachment, for although they are given fire prevention instruction, they argue that they are not trained specifically in this work. Fire prevention is often seen as a 'thankless job', (Garner), and especially in that host organizations tend to dislike the visits and frequently fail to observe the recommendations made.

Garner: I can go into a shop and I can say 'that door's no good, change it', 'another light there', 'that door'. And the bloke's going to say 'yeah, OK mate, yeah, OK mate'. So we get the bloke to say 'yeah, it'll be done', but when we've gone out the door it's going to be 'up yours, Jack'. And I'll go back in twelve months and say 'well, you still haven't done it', and he'll say, 'oh well, you see, it was a bit tight on the old cash'.

Fire prevention work is in fact seen as less glamorous than operational firefighting. Indeed, those joining the Fire Prevention Department can be typified (by operational firemen) as men who simply want to get 'up the ranks' quickly, it being thought that promotion is easier to obtain in Fire Prevention than in the operational side.

Combinations of the above activities are carried out either side of the mid-afternoon tea break (3.30 - 3.45) and continue until stand-down at 5.00 pm. The only possible remaining task before dismissal at 6.00 pm is cleaning personal fire kit (i.e., leggings, tunic, etc.), which is scheduled to be accomplished between 5.30 - 6.00 pm. However, even the degree to which kit is clean is dependent on the 'stocks of knowledge' or tacit assumptions held by the participants, with several indexical constructs being used by Fowler in the following discussion.

Researcher: Is it (kit cleaning) done everyday?

Fowler: It should. Well, it's a question really of if your kits dirty. See when we drill our kit should be clean. We work for the Councils, members of the public are paying us. They don't want to see us running around in tatty kit handling machines. So it's naturally taken that we keep ourselves in tidy order. It's up to you whether you sort of [say] 'well it's clean enough, it will do' or [you say] 'will he jump on me if it's not clean?' So it's down to you really.

Researcher: Does the S.O. ever jump on anybody?

Fowler: Yes.

Researcher: Regularly?

Fowler: No, not regularly, but especially if we've got a drill like this morning when we're more than expected to have our kit clean. Because we've got principal officers taking us for drill.

Researcher: So you're warned of that beforehand?

Fowler: Yeah, I mean we know we should clean our kit, but the S.O. will come round and say 'make sure your kit's clean'. And that's it, you've been told then, so if you kit's not clean you're right in it.

Researcher: So when would he say that?

Fowler: Well, for example, last night the S.O. said 'make sure your kit's clean'. So it wasn't just a question of 'oh, I forgot'.

While a fireman 'know(s)' that his kit should be clean, the degree of immaculacy depends on how he deciphers certain messages. Generally, the level can be assessed through interpreting the construct 'it's clean enough it will do - will he jump on me if it's not clean?' However, this freedom can be relatively suspended when special circumstances arise and, for instance, the fireman is 'more than expected' to have his kit clean. Here personal discretion is reduced because as 'you've been told' of the special circumstances, it's no longer a case of 'oh, I forgot'. Thus, while the latter may be an acceptable strategy for getting through a normal drill parade, it is not acceptable for a drill being taken by Senior Officers. Failure to understand the 'more than expected' inference behind the S.O.'s message may find the fireman being reprimanded.

#### 'Fill-In Work'

Although our descriptions indicate that the main body of work continues until 'stand down' at 5.00 pm, the research revealed that 'real' work may in fact finish much earlier. When 'real' work is finished then 'fill-in' work will be prescribed in order to keep the day going.

Haynes: Now yesterday's a typical example. Now I leathered off that machine four times, me, God Almighty, but they wanted it done. Now the last time I'd leathered it off, put it away, and swept the floor, the lot, finished, it was half past four. Now Larry [Sub Officer] says 'you can't go yet it's not five o'clock, don't go sloping off doing anything you shouldn't be.

While the researcher had observed work being regularly undertaken until 5.00 pm, firemen were quick to advise that the days real work often

finished much earlier. This theme of work not being genuine work first emerged during a conversation with Haynes, Croft and Holding at Sutton.

Haynes: They can always say 'do the general cleaning'. It's a way to find you work when there ain't really any work to be found.

Croft: You see, we're not really busy all day whatever your belief is. That is the one thing I don't really like is the fact that people tend to make work for the sake of it when there is none.

Researcher: What sort of things do they do to make work?

Croft: Things that you've already done. Doing things in a slower time /

Haynes: / The favourite of the Fire Service is 'inside gear'. That's the favourite one. They can get you on that any time of the day, any day. You've possibly used a ladder and standpipe and two lengths of hose this morning on drill. So you've used them, wiped them off and put them back. Now for all intents and purposes they're clean because you've done them and you've put them back on. But probably if they've run out of work at 4 o'clock this afternoon [they will say] 'er well carry on with the inside gear until 5 o'clock. And you know you've done it but you've got to do it again.

Holding: Would you believe that sweeping up all the grit on that great big yard out there is one of the tasks that will be presented. You know [they will say] 'have you done everything?' [and we will reply] 'yes' [and they will say] 'O.K. go and hose the yard down and sweep the grit up'. What a bloody mundane task that it. It's certain to take a couple of hours for one man to do that of the most monotonous, boring work you could think of. But it's a good fill-in job.

'Fill-in' jobs are not exclusive to 'quiet' outstations like Sutton, but are similarly employed at Central. Such work serves both to smooth out gaps within the day and also to extend the day to official stand-down at 5 o'clock<sup>29</sup>. We noted earlier that even bone fide tasks can be used to smooth over holes in the day, and that often the decision to have a lecture will be based on this interstitial criterion. For the latter, Randall in suggesting how the lecture is so strategically used (especially after the National Agreement of 1978), began to outline a major reason for the need to employ fill-in jobs.

Randall: We're supposed to do two hours drill now; an hour and a half outside, and half an hour lecture up here. All they're trying to do is get the two hours drill in. I mean they can sit there and read a roll of toilet paper out to you and you've had your lecture. As long as its down as having the lecture. Or unless a big noise comes on station [and says] 'where's everybody?' [the officer in charge can say] 'well they're up in the lecture room'. And he walks in here and sees an L.F. with a book in his hand and the blokes sitting there [and he will then say] 'O.K., you're having a lecture away you go'.

Although Standing Order 7/1 states, "it is not the intention to manufacture work for the sake of occupying personnel for the whole work period", the threat of a visit from a Divisional Officer, is sufficient to prompt S.O.'s to re-cycle work. The day must be made acceptable to the D.O. who may question the S.O.'s deployment of watch personnel. Many firemen in fact appreciate the position in which a Station Officer finds himself and as Holding suggests, although all the watch know that all necessary work has been completed,

Holding: The Officer in charge can't very well knock his men off at quarter past four because if a D.O. walks on station [and says] 'where are the blokes' [and the officer in charge replies] 'oh, they're up there watching television' [the D.O. will reply] 'why?'. Obviously he's [i.e., S.O.] has got to safeguard himself which is only fair. But in doing that he will look for something to do.

Although the Station Officer is 'obviously' forced to 'safeguard himself' against a possible D.O. visit, D.O.'s themselves are also seen as under pressure to make sure that station personnel are ('seen to be') constantly employed. As Haynes suggested, they in turn have to 'justify your existence' when seeking public funding from the County Council. However, even firemen themselves can adopt a general defensiveness regarding the justification of work time, especially at quiet stations. At Sutton, on entering the station the researcher would often be greeted by phrases emphasising that watch members were working hard ("we're earning our corn

today": Haynes). Indeed, as some firemen undertake 'fiddle jobs' (e.g., window cleaning, gardening, van driving) on their days off, there is an awareness that this may be thought incompatible with public service work enjoying stand-down periods.

### The Good Job

L.F. Turner: It's pretty gruesome sometimes, but I've been pretty lucky. Although you'll get a pretty gruesome job, I've never been involved with a job with children yet. But I've had some very good jobs in the past couple of years.

In this ethnography we have concentrated thus far upon the 'other aspects' (Fowler) of firemens' work, or tasks that are mostly 'not what the public think you do' (Garner). Such an approach has been adopted not simply because 'routine' tasks occupy the great majority of a fireman's work time (96.7% average for full-time firemen: Cunningham Report, 1971), but also because descriptive accounts of operational work are legion (e.g., Honeycombe, 1976, Wallington 1979). We must, however, finally note that the nature of operational actions can have an influence on the manner in which the routine day is experienced, this being especially so if the watch has undertaken a 'good job'.

The 'operational side' is of course the 'prime purpose' (Garner), and as such makes for repercussions not only on the scheduling and completion of routine work, but also on the frame of mind in which such work is approached. Notable here is the effect that a 'good job' can have especially when 'making up the kit' on returning from an operational incident. The construct 'good job' is common currency throughout the Fire Service and possesses considerable intersubjective understanding. Its use was first encountered when asking Fireman Pocock (Central) to account for incidents on the previous night's shift. On starting to explain the events, Pocock suggested, "we had a busy night and there were some good

jobs as well". Later, the researcher asked Pocock to explain what he had meant by the phrase 'good job'.

Pocock: Well I think a good job is really if you use breathing apparatus . I mean, if you go to a car on fire it's just basic, you know, or a rubbish fire or something like that. But if you've got a house fire, you've got to use breathing apparatus, and it's hot in there, smoking, or [an] office fire, you know, a good crash, road traffic accident, or something like that is a good job.

Other firemen not only confirmed many of the parameters outlined by Pocock, but expanded these further. Dilley suggested that they could attend a house where 'one room could be going' or a factory where 'the lot could be going' and both could be classified as good jobs. A rubbish fire in a block of flats however, would not be so. It was basically a question of whether a 'lot of smoke and flames' could be seen, and thus if the room or factory was 'going well'. However, Dilley also added an approximate time indication in that "anything more than an hour [i.e., from setting out to return] I'd say is classed as a decent job. Anything less than an hour is just a small one"<sup>30</sup>.

Although both a 'good fire' and a 'good crash' can be seen as good jobs, and while overtly similar behaviour is displayed on returning from station, the meanings and strategies employed as the basis of such actions are qualitatively different. Most notable here is the use of humour. If a watch returns from a 'good' fire then the humour and good spirit tends to be genuine. Dilley suggested how after such a fire although everybody is 'shattered' they are nevertheless 'laughing and joking' and 'raring to go' when making up the kit. Indeed, the latter work is not only pleasant for those that have been directly involved in the incident, but also affects the disposition of other station personnel. It can be 'quite a pleasant hour' when such an appliance returns as "a bloke who's come back

from this job is telling a lot of stories of what he's been up to" (Cowans). However, if the watch has returned from a serious road traffic accident, although humour is still evident, this serves a different purpose. Here firemen engage in 'laughing and joking' but only as a device for safely confronting what may have been a distressing experience.

Researcher: What happened at this R.T.A. then?

Hendrick: Well I was driving the first pump ladder approximately about ten to three, three o'clock time, 'three pump R.T.A. on the Expressway' so we knew it was a job. Turned out, got on to the Expressway, and as soon as we'd got on the Expressway, they'd closed the Expressway completely off, all the lights the lot, closed off. Went along to Park Circus and there were three private cars involved, but the mess was terrible like. The one, the Peugeot was on its roof and we just made for somewhere we could get in, where there was patients we could see because there was firemen there already. So me and this ambulanceman bloke went to the passenger door of this Peugeot where the woman and the bloke was coming away from town. Now we lifted her up and put her away, but her husband was trapped completely in the car, leg in the passenger seat glove box, engine all tangled up around him. And there was no way that we could get him out with our lifting equipment, and oh we tried everything, couldn't get him out. So in the end, the surgeon came, certified him dead and said 'you'll have to chop his leg off like to get him out'. So it went down the line and nobody wanted to do this like, we're firemen not surgeons. So in the end we had to hold the bloke in the car while the surgeon crawled in and chopped his leg off with an Arsenger saw.

Researcher: So what happened with the body, what did they do with that then?

Hendrick: The body got put in a plastic bag and took in for autopsy and this like, whatever they do with it.

Researcher: Who did that, the surgeon?

Hendrick: Well, we have to put him in the bag, and then the ambulance take them to the mortuary.

#### 4.7.4 Concluding Remarks

The ethnographic material above has attempted to develop the analysis of the daily work routine by a more processual report. Here information gained from the personal construct work has been used as a base for understanding the indexicality of the work setting.

The research procedure itself has again involved the 'bracketing' of the writers own taken-for-granted assumptions in order to bring out those of the participants. In so doing the focus of the analysis has been a description of the work process, but specifically, in terms of the personal use of (stocks of) knowledge within the setting. As such, emphasis has been placed upon the tacit assumptions which form the ingredients for the 'recipes' used in interpreting everyday events.

In the participants' descriptions we have noted the many discretionary strategies used in negotiating and managing uncertainty. Indeed, such strategies are employed both in order to smooth-out the working day by filling-in awkward gaps, and also, at the personal level, to retain social identity by interpreting how 'properly' to undertake the work. Thus, while Station Officers can include or exclude tasks in order to fulfil either an 'adequate' days work or a 'sensible' completion of the training records, similarly firemen can employ personal strategies for either 'getting round things', or acting 'a little bit happier'. Indeed, within the analysis we have noted how even a task as basic as personal kit cleaning will be subject to consideration of many tacit factors regarding expected future states.

The ethnography has therefore tried to penetrate organisational 'glosses' such as the seemingly logical and structural progression indicated by Standing Order 7/1. The material has, thus attempted to demonstrate the

highly strategic, discretionary and negotiated nature of the work process as constructed and enacted by the participants.

1. In terms of the origins of phenomenological theory, Husserl's proposals were developed from his teacher Brentano's conception of 'descriptive' as opposed to 'genetic' psychology (see Spiegelberg, 1965). Also Merleau-Ponty's 'Phenomenology of Perception' is in the genre of a long standing phenomenological school in the psychology of perception. Its doctrine suggests that the significant role of sense-data rests in the form of the object as perceived by the individual; and not in the object itself, nor in material descriptions or identification of the object following the dictates of physical science.
2. The Q-Sort involves the subject sorting (Q-Sort) a number of statements about the self into categories ranging from most characteristic to least characteristic.
3. As Kelly notes, "Life, itself could be defined as a form of process or movement. Thus in designating man as our object of psychological inquiry, we would be taking it for granted that movement was an essential property of his being, not something that had to be accounted for separately. We would be talking about a form of movement - man - not something that had to be motivated" (1969, p.80).
4. Indeed the centrality of anticipation is stressed in the basic 'Fundamental Postulate' of personal construct theory, Kelly suggesting that, "a person's processes are psychologically channelized by the ways in which he anticipates events" (1955, p.46).

5. In order to obtain tangible empirical results we have, however, to accept a number of assumptions made by personal construct theory especially with respect to the repertory grid method. Firstly, as the rep. test requires the subject to state the elements in his life world upon which constructs are based, it is assumed that such elements (objects/events) are of relative importance in the subjects life. Secondly, it is assumed that the constructs which are verbalised by the subject are indeed the ones he uses to construe his world. This in turn assumes that the subject can verbalise the constructs he uses, and that in the research situation he feels free to report these constructs. Finally, it is assumed that the words the subject uses in naming his constructs are adequate to give the researcher an understanding of how he has organised his past events and how he anticipates the future.
6. Although we shall explore the technical 'psycho-physics' of the instrument, this is a secondary exercise. The technology (see below) serves only to conveniently arrange the subjects descriptions and does not produce any 'tricks' of its own.
7. The necessity of homogeneity was first stressed by Kelly in his clinical work, along with the premise that elements must cover all aspects of the topic under consideration. He gave the example here of the problems of accepting a grid on 'important people in my life' which omitted 'mother' and 'wife'.
8. There is also a tendency for subjects to rank elements primarily in terms of the 'emergent pole' while ignoring the 'implicit' pole (see later).

9. As Kelly himself notes, "the contribution the computer makes is to the economy of the language employed, not to conceptualisation" (1969, p.200). For the present study, while the use of computers may at first seem inconsistent with a technique advocating phenomenological understanding, we will see that when computer systems are used as 'conversational tools' such fears can be allayed. Gaines and Shaw (1980) in fact draw upon Habermas (1968) to illustrate that although the major use of computers to date has been "technical cognitive" (whereby the technology dominates and controls the user), certain repertory grid packages use an interactive construct elicitation process, providing an 'emancipatory cognitive' (Habermas, 1968) technology, and encouraging the user to, "comprehend, change and develop in his own fashion by reflecting back to him the essence of his own approach to various aspects of his life" (Gaines and Shaw, 1980, p.114). Due to the size of the grids used in this research a computer programme is used for handling the data. Techniques for undertaking manual grid analysis are presented in Shaw (1980) and Easterby-Smith (1980).
10. Chaining, in its simplest form, is the tendency to absorb entities into present clusters where the development of new clusters would have been more appropriate. This is only a problem where there is an extensive number of grid elements. As the largest number of constructs obtained in any grid in the present research is ten, it is assumed that excessive chaining is avoided.
11. This method of asking subjects to list events in their working day was chosen after conducting pilot work, not only with firemen, but with subjects from various other occupations (e.g., teachers,

researchers, junior executives, civil servants, manual workers). Originally, the researcher had employed the looser time span of "a recent week, maybe last week, this week, or even what you'll be doing next week". However, while this approach was expedient for subjects with high discretion work roles (e.g., research workers, marketing/advertising executives), subjects with conventionally low discretion work roles (e.g., firemen, Met. Office weather forecasters) tended to describe their work by starting at 9 am and running through what they perceived to be the major events until finishing at e.g., 6 pm. Therefore, for firemen the time horizon of 'a working day' was used.

12. It is unusual for non-mentally ill subjects to be able to verbalize more than about 10-12 constructs for any one aspect of their life.
13. In seeking to access meaning the researcher followed Alston's (1964) proposals regarding the understanding of the sense and intention of linguistic expressions. As such for actors to know the 'meaning' of words is essentially to know the 'rules' of its use among some specific groups of speakers such as watch members (see Clegg, 1975). Therefore, it is not simply a basic acceptance of idiosyncratically defined objects in the subject's world that is the object here, but the appreciation of various verbalized dimensions that are typically employed by members of the culture for making sense of events.
14. For example, in Fireman Fowler's grid (below) whereas the construct "work off the station - work on the station" is concrete and logical, the construct "mundane - different" is not so obvious. While we can appreciate how a task can be 'mundane', the meaning of a task being 'different' is less clear cut.

15. The names used throughout the text are fictitious. Where firemen are quoted in different sections of the thesis the same fictitious name is used.
16. Here construct 3 is 'reversed' because in seeking the minimum contiguous space FOCUS not only computes all possibilities for the original construct pole positions, but also for the opposite pole positions - implicit pole on left, emergent on right - and thus for all combinations of both. Therefore whereas on the original grid construct 3 was written 'mundane - different', in terms of minimum contiguous space it has been reversed to 'different - mundane'. All other constructs have remained as per the original grid.
17. This interview (the first of the main groups undertaken) served to highlight a possible problem with the method, i.e., the problem of 'horoscoping'. Estelle Phillips (Open University: personal communication) has suggested that the researcher's feedback interpretation may serve to promote a horoscope effect whereby subjects subsequently ascent to themes different to those employed in their original grids. However, although for most of the feedback Fireman Fowler agreed with the analysis, in the transcription concerning 'out duties' as what the 'public thinks I do for a living' (see below), the unprompted correction perhaps offers partial evidence in contradiction of Phillips hypothesis.
18. In all transcriptions the use of / indicates overlapping speech. Sections of tape which proved untranscribable are indicated by (). For authenticity the tapes are transcribed verbatim, i.e., with inclusion of speech 'incidentals'. In certain transcripts, the

researcher has added explanatory clauses (in parantheses) to aid comprehension of the dialogue.

19. While the majority of constructs (e.g., the 'theory side' of the work, what the 'public thinks' the fireman does, the difference between 'routine' and 'important' tasks etc.) are highly contextual and thus indexically linked within the setting, other constructs; while contextually relevant, often seem to reflect a more personal orientation (e.g., 'burns energy' by a semi-professional sportsman; 'carries responsibility' by a fireman chosen for junior officer training).
20. Although Standing Order 7/1 represents an ideal chronology of the working day, even without fire calls the day commonly deviates from the scheduled format. During the research subjects explained that things were always likely to 'crop-up' (Randall), and especially if they were 'half-expected'. It all depended on 'circumstances' (Miller). Indeed, simple enquiries asking if, for example, drill was to take place, could receive explanation via a welter of divergent activities.

Dilley: Well we were supposed to go for a divisional drill this morning and we've got this station efficiency here as well. But the machine I'm on has got this water leak on the radiator so we knocked it off the run, the drill went out the window, the station efficiency for me went out the window. I went and got another machine from another station and brought it back, and everybody knocked off drill then to put it back on the run and they're still working on it now. Whether we'll carry on with drill after I don't know, you see.

Therefore, in seeking to make sense of the daily work activities, the 'ideal-type' schedule of tasks seemed rarely congruent with the

actual process of events; even during long non-operational periods. Indeed, the working day was often characterized by a rather unstable ontology. This was nowhere more apparent than at the start of the research where this uncertainty made the scheduling of sessions more difficult.

During the initial repertory grid sessions the writer had been given permission to visit Birmingham Central and Sutton Coldfield Fire Stations without needing to make prior arrangements. This was especially useful at Central as in working fairly close to the station, the researcher could conduct interviews immediately he assembled the necessary material. As such, Order 7/1 gave the researcher a certain control over the setting, in that knowledge of the timetabling of events aided the planning of access to the setting.

However, when feedback material for Central was first assembled, the gauging of station events proved difficult to fathom. Instead of events running to schedule, they were, on the contrary, found to be unpredictable. The researcher had planned to visit the station at one of the, seemingly, best times to interview, i.e., at 9.40 am when the machines would have been checked, the first tea-break completed, and subjects would be more available for research. However, on walking onto the drill ground - where the men should have been assembling for (or have started) drill - there was no-one present. Although the appliances were in the bays no personnel were in the engine house or in the mess. Not knowing of the arrangements made by the watch, and not wishing to risk disrupting a special event, the researcher decided to delay interviewing until the same time the

following day. However, on visiting the station the next day the schedule was again awry, the Sub Officer stressing that it was not a 'normal' day as the 'station efficiency' was expected. The researcher was asked if he could come back tomorrow for the night shift.

At Sutton Coldfield, although classed as a quiet station, the predictability of events was almost no better. The first feedback session had to be postponed as Garner was 'on transport' and the rest of the watch were going to Erdington Fire Station. The following day the researcher arrived at Sutton immediately after lunch, again anticipating station routines to be taking place. This time no one was visible around the station although the two appliances were present. The explanation was that although there had not been a 'shout' (fire call), the watch was engaged on the lecture session - an activity officially scheduled for mid-morning.

21. This 'list of runners and riders', as it is called, is posted on the duty board prior to the 'detailing' of positions. As the feedback interviews noted, parade is 'important' in order to assess if the required number of personnel are present to man the machines, and therefore as L.F. Taylor suggested, "the most important thing is if you miss it", and are thus not counted for duty.
22. Although, it is more usual for such manpower transfers to be initiated at the start of the shift, often they can be even 'more unpredictable' in that, as Holding notes, "we [can] get a phone call from another station in the middle of the afternoon [which says] 'have you got a man spare, we need one', so we upset everything by sending him out". Here not only is the routine of the station upset,

but also of course that of the fireman, as the call has "messed up his routine for the day so he's got to get used to another routine" (Holding).

23. For standby purposes divisions are divided into 'zones'. Here every station on a division is 'zoned' with three others from whom stand-by personnel must first be sought. Sutton Coldfield, for example, is zoned with Aston, Erdington and Perry Barr. If, however, an undermanned station requires a driver and none are spare in the zone, the S.O. may then contact other stations in the division to find a station where they have, for example, a driver 'on the back', i.e., designated for B.A. work. If Sutton Coldfield had a spare driver on the back then he might be sent to Aston and replaced by whoever was on quarters.
24. Another unanticipated event can be when a fireman is called to go on 'transport'. Here if a station has a spare driver then he may, for example, be withdrawn from operational duties to deliver oxygen cylinders to member stations, or take machines to the workshops for repair.
25. M.I. forms are general report forms, used by officers or firemen in officially reporting lateness, grievances, applications for transfer etc.
26. On a whole-time watch, work roles are not static but change daily, the only constant factor being that firemen without the necessary Heavy Goods Vehicle licence must always remain 'on the back'. Therefore, during the four day tour of duty, each fireman will

usually find himself at some stage on the back seat and thus responsible for checking an inventory board - the 'boring' but 'important' routine.

27. In general the more the day progresses the more likely it is to diverge from Order 7/1, until, that is, the day begins to close in the late afternoon after stand-down.
28. The use of simulated incidents has been employed more extensively, after the W.M.F.S. training directive of July 1981, which stated how "the philosophy of Brigade training ... is based on combined drills rather than individual drills".
29. Besides the tasks outlined above, other possible 'fill-in' activities include washing and leathering the appliance and cleaning the engine house floor.
30. To the layman the term is, of course, an anachronism, and as Cowans suggested, "what is good to us is bad for them". Indeed, in Taylor's remark above, we note the seeming illogicality whereby although stating his luck in not having been called to a crash involving child fatalities, he has nevertheless been to other good jobs in recent years.

CHAPTER FIVE:

WORKPLACE IDEOLOGY AND MEDIUMS OF HEGEMONY

## 5.1 Introduction

"the important thing about hegemonic consciousness is that it becomes part of everyday life - of 'common sense'".

Salaman, 1981, p.139

For the third empirical study we turn to Critical Theory in order to investigate cultural codes of workplace ideology. The chapter highlights the role of organisational science in cementing the 'hegemony' of workplace 'common-sense' (Gramsci, 1971), and specifically it's role in junior officer management training. Here, the main empirical analysis concerns the training of promotion candidates for the position of Leading Fireman; that is, to use Goodrich's (1920) phrase, training to cross the 'frontier of control'<sup>1</sup>. In so doing we employ methodology including participant observation of training courses, document analysis of training materials, and unstructured interviewing of students and tutors. However, as Gramscian theory suggests that several media serve in cementing hegemony, we also offer speculative analysis of two further channels.

In sum, the chapter proceeds in four stages. Firstly, by considering the rapprochement of Marxism and phenomenology as a possible departure point for critical experiential research. Secondly, by appreciating the background to Junior Officer training through describing the Leading Fireman's relationships with the watch. Thirdly, by analysing the process through which firemen are trained for first level supervision. And finally, by assessing how the Fire Service is signified in school texts and media news (see Figure 26).

Figure 26: Workplace Ideology: Levels of Research

<u>Levels of Analysis</u>	<u>Theoretical/Empirical Components</u>
1. Theoretical Locations	'Critical' Marxism, Phenomenology
2. Relevant Theorists	Lukacs, Gramsci, Frankfurt School
3. Central Research Concepts	Ideology, Hegemony, 'Common-Sense'
4. Focus of Central Concepts and Empirical Analysis	Ideological Functions of Administrative Science and Management Education
5. Main Empirical Data Base	In-House Training Courses for Junior Officers
6. Subsidiary Data Bases	Image of the Organisation presented through Socialization (School) and Mass Communications

## 5.2 Phenomenological Marxism, Critical Methodology and Communication

""Orthodox" Marxism typifies the crisis which has ensnarled Marxism for the past century; and to the extent that this anomolous situation persists, any attempt at a critical Marxism today must start out in contraposition to the orthodoxy."

Piccone, 1971, pp.3-4.

Critical theory represents intellectual territory first indebted to Hegelian dialectics, but thereafter, and more crucially, to developments by the left Hegelians and specifically Marx. However, despite this heritage it is only relatively recently, and especially for sociology, that this Hegelian tradition has re-emerged from the shadows of 'orthodox' Marxist political economy, such developments owing considerable debt to the availability in English of the works of the 'early' Lukacs and the 'later' Gramsci.

Such a re-establishment is the cornerstone for the present analysis in that this 'humanistic' Marxism, in being premised on qualitatively different epistemological values (see Althusser, 1970) to 'orthodox' Marxist economy, may allow the resolution of many of the deterministic

orientations to which for many the analysis of political economy has succumbed. As Piccone and others (Paci, 1972; Dallmayr, 1973) have indicated, the opportunity to develop such a truly 'critical' Marxism will be aided considerably by authenticating the relationship between Marx and phenomenology (see also Kosik, 1968; Miller, 1970), such a rapprochement having effects at the level of theory, political method, and also, it can be argued, the more visible level of empirical analysis. Let us, then, examine this revival as a basis for grounding an empirical perspective.

In seeking to revitalise the dialectic Critical Theorists have attempted to re-emphasise the centrality of spirit that was, for many, lost in the Engelsianism of the fin-de-siecle era. Indeed recently, this re-emergence has represented a movement against the tendency for liberal disintegration associated with an increasingly 'determinist' and 'reductionist' Engelsian (Marxist) orthodoxy. This reaction as Dallmayr (1973) notes, has raised questions regarding a role for phenomenology as an agent for developing Marxist humanism, with phenomenology here not being deemed the 'subjective delusion' of Lukac's (1954) claim, but seen as necessary for a truly 'critical' Marxism to, "recover the unifying source of all knowledge and experience behind the dichotomics of nature and history, subject and object" (p.308). As such, phenomenology could aid this recovery by once again allowing Marxism to explore intentional consciousness and thus reclaim the totalities of experience purged by economic objectifications.

This renewed interest in the subject (actor), and especially in relation to the relative independence of the superstructure, stems notably from the translation of, in the former, the early Lukacs and works of the Frankfurt School, and in the latter, again the early Lukacs, but especially the prison writings of Gramsci.

Despite Lukacs' later Moscow rebuffals, Paci (1972), like others, cites him as the pioneer of phenomenological Marxism. Indeed both Arato (1971) and Parkinson (1970) note how Lukacs's contact with phenomenology in fact preceeded any embracing of Marxism, with Lucien Goldmann (1966) putting flesh on the skeleton by outlining how Lukacs's early thinking - as displayed in 'The Soul and the Forms', 1911 - evolved at the interface of 'Dilthey's hermeneutics', 'Husserl's phenomenology' and 'Southwest German Neo-Kantianism'. However, it is History and Class Consciousness (1923) which is seen as the major milestone in the revival of Marxist humanism and its rapprochement with Husserlian phenomenology. Goldmann especially, notes how Lukacs in resurrecting the dialectic has been able to overcome the 'fragmentation' accruing from Engelsian determinism, and thus "restore to Marxism its internal coherence" (Goldmann, p.229). Indeed, in this work Lukacs shows how the alienation cycle relies on the objectification of thought and reflection to consciousness, the cycle only being transcended on the realisation of the (class-less) identical subject-object, i.e. the realisation of a class at one with itself on having finally revealed the essential relations of capitalist totality.

Lukacs's early work here begins to resemble Gramsci's prison writings albeit that they were developed in isolation. For Lukacs the transcendence of domination, and thus alienation, is consequent upon the dialectical removal of reified screens between subject and object. For Gramsci similarly, domination is not secured merely through basal economic relations, but equally through historically sedimented hegemonic 'blocs' serving to preserve reified and mystified relations (see Adamson, 1980). Therefore, for both writers the superstructure is active not passive. As such both Lukacs and Gramsci are prescribers of an active revolutionary and strategic Marxism. Marxism should endorse a continuing active

practical philosophy instead of a research programme of economic and historical laws, it should thus concern developing tactics which can be practically pursued. If Marxism loses its voluntarist potentialities it loses its revolutionary potentialities.

Therefore, in Gramsci, on whom we will concentrate shortly, we have, like Lukacs, a writer concerned to reactivate the dialectic in response to what he perceived as the debasement of Marxism to naive reductionism. For Gramsci, only by an active 'philosophy of praxis', a 'truly dialectical theory', could classical antinomies be transcended (Boggs, 1976). Here, domination is not merely a surface reflection of relations in the base, but is reproduced through sustained attempts by institutions to harden hegemonic cement<sup>2</sup>. To borrow Therborn's (1978) phrase, 'what the ruling class does when it rules' is not merely to control the means of production, but, moreover, to perpetuate a belief system ('historical bloc') serving to legitimise existing social relations. Thus, consciousness is reinforced and protected by the notions of 'common-sense' established in major institutions, and notably the 'workplace', 'mass communications' and 'education' (Salaman, 1981, p.139)<sup>3</sup>.

At the level of theory, therefore, the above works offer opportunities for the conciliation of Marxism and phenomenology which may, in turn, provide openings for empirical analysis. Piccone's suggestion that such an interface provides a truly critical counterposition to the 'orthodoxy' is particularly appealing for the present chapter. Indeed, most significant is his suggestion that the 'orthodoxy' has in fact created a situation whereby 'revolutionary potentialities' have been 'shipwreck(ed) into standardisation', with thus its sophisticated formulae being incapable of 'overwhelming bourgeois cultural hegemony'. For Piccone, this is where

phenomenological Marxism can "perform (its) extremely urgent revolutionary task" (p.31).

### 5.2.1 Methodology

For documenting empirical analysis there is a need to ground this interface in terms of methodology. This, however, has in certain areas of organisational analysis already been attempted, albeit with varying degrees of success.

Clegg's (1975) conversational analysis of interpersonal power relations on a Yorkshire construction site is conditioned by the correspondence of ethnomethodology and Marxism; while similarly, Silverman and Jones (1976) analysis of a large public bureaucracy, although commencing as a straightforward series of ethnomethodological accounts, ends by highlighting the pervasiveness of status divisions in everyday communication. Willis's (1977) work on the career expectations of working class school children also reflects a similar methodological approach, as do industrial anthropologies by Beynon (1973), Cavendish (1982), and Nichols and Beynon (1977). All of the latter, however, lack the explicit theoretical and methodological confluence attempted by Clegg.

With the exception of Clegg, while these works operate at our interface methodologically, and in so doing bring to life the everyday experience of power relations, none evaluates in specific terms the ideological practices of the organisation. The nearest approach to this is perhaps Silverman and Jones' analysis of 'acceptable' and 'abrasive' selection criteria. It is, however, ideological hegemony and the battle for securing its legitimation, that remains not only the prominent image in recent superstructural theses, but moreover, the most original concept in contemporary critical Marxism. In Gramsci's stress on praxis we see an

active dialectical method, essentially voluntaristic and phenomenological, with great potential for an understanding the dominant codes of organisational 'culture'

Below, then, we will examine the possibilities of applying the theory of hegemony to an experiential understanding of W.M.F.S. authority structures, in order to illustrate how these social relations are both reproduced and legitimated.

### 5.3 Ideological Hegemony, Organisational Science and Management Training

Gramsci's concept of hegemony is a development of his mediations on political control, in which he contrasted the direct physical coercion of state apparatus with the consensual mechanisms characteristic of ideological control. To sustain power, Gramsci argues that the state (and the mass organisations it represents) needs to employ 'civil hegemony' in order to ensure the reproduction of a ruling class. Through holding hegemony the ruling class succeeds then in persuading other social classes that it's political and cultural values are legitimate. Therefore, to be maximally successful, hegemonic control displays a minimum of explicit force.

Williams (1960) in an early article in English defines the concept as, "an order in which a certain way of life and thought is dominant, in which one concept of reality is diffused throughout society in all its institutional and private manifestations, informing with its spirit all taste, morality, customs, religious and political principles, and all social relations particularly in their intellectual and moral connotation. An element of direction and control not necessarily conscious is implied" (p.587).

Williams thus suggests that through hegemony we witness a sedimenting in civil society of a consistent belief system supportive of the interests of

the ruling class, this 'legitimate' value system being disseminated through institutions such as school, workplace, news media, trade union, church, and family.

However, despite this embedded institutionalism hegemony is never static (i.e., in total equilibrium), and Gramsci argues that the major task for socialist movements is to create a counter-hegemony capable of severing the ideological ties between the ruling class and the institutions which reproduce it's domination. Thus, structural change will occur as part of ideological change, with hegemonic struggle being a major cause of change instead of merely an effect of (basal) contradictions. In order to create a new totality, intellectual activists of the left need to be able to advance an effective alternative ideology to wrest legitimacy.

Indeed, the role of 'intellectuals' is pivotal here, with for Gramsci their influence serving to secure the legitimacy of a dominant ideology. It is intellectuals who produce ideology for the masses, and therefore who in capitalist society cement the ruling class's belief system of hegemonic 'common sense'<sup>4</sup>.

Such intellectuals act as the guardians of ideology. Therefore for hegemony to be successfully exercised, there must be in process a constant 'dualism' operating, "as a 'general conception of life' for the masses, and as a 'scholastic programme' or set of principles which is advanced by a sector of the intellectuals" (Boggs, p.39). It is, in fact, to the role of 'organic intellectuals', and centrally the 'servants of power' (Baritz, 1960) of administrative behavioural science, that we turn in documenting our empirical work; such intellectuals being a 'cadre' (Clegg and Dunkerley, 1980) of whose ideological potentiality Gramsci was well aware.

### Administrative Science

Indeed, in 'Americanism and Fordism' Gramsci noted how the techniques of 'scientific management' represented a major threat to consciousness<sup>5</sup>. Gramsci's attacks on Taylorism in the period of the Ordine Nuova and the Factory Councils are outlined by Franklin Adler (1977) in his description of the debate between Gramsci and the head of the Italian Individualists' Association (Confindustria), Ollivetti. Here, Adler documents the degree to which in Ollivetti's writings mainstream management theory was already based upon 'functionalist' principles. Adler quotes Ollivetti from 1910 and illustrates how links between 'productivism', 'functionalism' and 'optimality' are already explicit: "A modern theory says that each organ has its functions and that each function has its organ; and the theory advanced in psychology has found application even in the field of social relations ... the laws which regulate and dominate the human body can be adapted to the social body ... Specialization has thus found new and important applications: for every work to be performed, for every function to exercise, for every objective to obtain, one has created and creates the conditions, the ambience, the organs most adapted, so that such work may be performed, the function exercised, the objective attained in a more perfect manner and with the minimum expenditure of energy" (quoted in Adler, p.79).

This cohesion that Adler describes between theories of organisation and capitalist ideology, has also been noted by analysts of later theoretical developments. Here, while Baritz (1960) and Allen (1975) represent well known general critiques, further researchers have offered guides to the actual form of ideology implicit in (products of) this association, i.e., within actual texts in management and administrative science (see Braendgaard, 1978; Fleron and Fleron, 1972; Nord, 1974). These latter

writers emphasise how in mainstream administrative science factors such as social class, the unequal distribution of work rewards, and competition and private ownership are all hegemonically reduced to 'common-sense'; while similarly, economic anomalies such as unemployment, redundancy and wage freezes are accepted as 'natural' forces and thus as analytically unproblematic. As this position perpetuates, Fleron and Fleron suggest that administrative science increasingly represents, "an essential part of that instrumental knowledge which provides the ruling class with control over the proletariat" (p.70), a fact they acknowledge was known to Lukacs much earlier.

In Nord (1974), however, we find actual descriptions of common-sense assumptions at the root of administrative science, notably in his analysis of works by McGregor, Herzberg, Argyris, Likert, Blake and Martin, and Maslow. Through assessing this 'modern human resources management paradigm' (Lee, 1971), Nord outlines how "the current postcapitalist political-economic structure is taken as a given ... economic growth and technological change are largely realities to adjust to rather than to be adjusted ... the cultural emphasis (is) on individualism ... conflict is non-zero sum and can be resolved by consensus ... the existing distribution of power (is) legitimate ... changes in the character of work and individual organisations (are the) major requirements for the achievement of individual self-realisation ... social class (is) a relatively unimportant variable ... (and) ... the role of the applied behavioural scientist has become mainly a consultant to or change agent within the existing socio-economic system" (pp.558-60). As these assumptions serve as dominant meta-theories in the work of behavioural scientists then consequently, "the major thrust of (their) work becomes helping the established system to work "better", with "better" ... defined

in terms of existing criteria established by existing elites" (p.561). As such, this position reflects, "the symbiotic relationship between the M.H.R.M. paradigm and the capitalist ideology of the United States" (p.576).

### Management Training

Increasingly in Europe and North America this symbiotic relationship has been fostered by the growth of outlets for management training. This expansion has witnessed developments in both state and private organisations, with universities, polytechnics and colleges enlarging management departments especially in provision of post-graduate and post-experience courses. In British higher education the 'centre' for management studies has increasingly taken on a quasi-independent identity, and sought progressively greater funding from commercial and industrial organisations during periods of fiscal restraint. Prolific within this expansion has been the development of the Master of Business Administration (MBA) course.

However, recent British and French commentators have noted how courses such as the MBA form the basis for the 'development of a business elite' (Whitley, 1980; Marceau et al., 1978; Whitley et al., 1981). The Marceau/Whitley team suggest that as business has been increasingly eager to use the education system, then the image of business education as a medium of meritocracy has increasingly served as a mystification for the production of such ideology. By aiding the development of state recognised management centres, business has in fact been able to, "use the 'neutrality' of the state, and the presentation of the latter as essentially concerned with the 'public' interest ... while effectively retaining established recruitment patterns to elite positions" (Marceau et al., p.128). As such, this expansion has served primarily to effect "a

new legitimating ideology in relation to practices of recruitment and positions of responsibility" (p.146), with this ideology being, "what people do do at these institutions, which is to learn the rational science and techniques of modern management" (Clegg and Dunkerley, 1980, p.538).

As Clegg and Dunkerley (1980) note, business and management schools have become, "the institutional sites for the contemporary dominant ideology of late capitalism" (p.537), and thus, primary ingredients in the ideological mortar of 'historical blocs'. Management theorists whose works are continually endorsed within such settings are seen to promote 'organically' the reproduction of capitalist ideology and to rationalise and legitimate its mode of production.

However, while business has increasingly relied upon administrative science for training of managers, the placing of such personnel with outside educational organisations has raised questions about the control of information presented. Indeed, Marceau et al. (1978) note that as "the potential encapsulation by educational institutions of the skills of management threatens to weaken industry's control of management succession" (i.e., due to education and industry holding potentially different selection criteria), then business has tended to react by "preferring 'in-house' training where the 'company view' can predominate" (p.147, emphasis in original). Thus, in management training large organisations increasingly prefer private and internal short courses, in spite of efforts by business schools to market programmes offering bespoke techniques. It is indeed the internal short course that is employed for junior officer development in W.M.F.S. Here the 'Advanced Training Department' runs 'Cadre' courses (see below) of one to four weeks, the main objective of which is to train men in the management skills needed for holding higher rank.

The analysis of material presented on such short 'in-house' courses provides one avenue to understanding workplace ideology and the processes of hegemony. As such it forms the initial empirical focus for the present chapter. Through experiential analysis, we document how the fragile nature of the frontier of control necessitates training through which promotion candidates are made aware that they have logically separate interests from those of (other) basic rank firemen. The research concentrates, therefore, on both the type of material presented, and the reactions of participants. In this process we combine idiographic methodology with critical analysis in documenting messages treated as 'common-sense' within the organisation.

#### 5.4 Management Training for Junior Officers

##### 5.4.1 Introduction

Training Officer 3: (T.O.3) There was a lowering of standards when we started a massive recruitment system to comply with the 42 hour week. Now there we started to take a lot of people from industry who were coming into the job with shop floor union ideals, and I believe it was the impetus of their militancy that led to the strike. If we had the same men in the job prior to the strike in 1977 as we did on the 56 hour week there may well not have been a strike. After the strike I believe that we were just another job of work, we were not a Fire Brigade, an elite if you like, a closed clique of people, we were just another method of employment.

The Firemen's strike of 1977 represented a watershed for the Fire Service, for it proved not only that firemen could withdraw their labour, but moreover, illustrated the existence of work orientations at odds with those traditionally held by firemen.

The Fire Service has constantly operated selection procedures positively discriminating towards ex-servicemen. Therefore, the traditional make up of the labour force has been of recruits to whom industrial disputes, dissent to authority, and the open acceptance of separate work and life interests have been anathema. However, an expansion of the Service during the mid-1970's, to comply with moves to reduce working hours, resulted in a notable increase of recruits without previous Armed Forces training. Personnel recruited during the mid-1970's, although still displaying traditionally moderate levels of formal academic achievement, had commonly spent several years in industry, most predominantly in semi-skilled manual work. To these entrants, being a fireman was a job as much as a public service, the Fire Station being another place of work instead of an exclusive and insular barracks. In having been previously employed in industry, the mainly working class recruits had first hand experience of separation of interests between organisational strata.

The 1977 strike, therefore, left a marked psychological impression on the service, and especially on its Senior Officers. In the face of low wages, the confining ethic of public service had been cleaved, as basic economic considerations put asunder moral sacrifice. Above all, the belief system which had consistently produced instinctive obedience had been ruptured, as a new industrial awareness emerged upon the fragmentation of traditional 'common-sense'.

The post-strike era has therefore seen renewed emphasis on management control in a drive to re-establish traditional hegemony. This process is generally defined by senior officers as an attempt to 'raise standards' or 'raise morale' to levels similar to the pre-strike period. The process has, however, been at once both aided and complicated by further changes in the labour market. Since 1978, with rapid increases in the reserve

army of unemployed, plus statutory restrictions on recruitment, the Fire Service has been able to be mindful in selection. Here such limitations have not only facilitated the traditional preference for ex-servicemen, but, more importantly, meant that non-Forces applicants have been required to hold progressively higher levels of academic qualifications; often being recruited directly from the sixth-form or university. However, while recruitment strategies have restricted the input of ex-industrial workers, complications have arisen in that the examination based promotion system has seen younger, academically able, and commonly lower middle class, firemen, to be consistently the first qualified for advancement. In response, men hired during the recruitment drives of the early 1970's increasingly see themselves as the victims of these selection changes, and are conscious of their inability to compete.

Therefore, the system has come to hold within it a tense contradiction. While selection policies, in limiting the recruitment of shop floor applicants, may have potentially reduced threats to hegemony, they have also served to de-stabilize the process in that the concept of 'merit' has become separately defined. Experienced, but less academic firemen come increasingly to employ critical metaphors to account for the inequitable nature of promotion practices. Here they explain the displaced merit of the traditional practical emphasis by the currently favoured academic one. Indeed, situations are seen to arise whereby if a young 'book man' is promoted, his credibility can be held as questionable by the time-served 'practical' men<sup>6</sup>.

In W.M.F.S. two main strategies are used to overcome these threats. Firstly, officers seek to generate an impression that older men consent to the credibility of the advancement system by getting them to register for promotion exams. This is done in order to give the appearance of

voluntary subscription, and thus that the promotion system is legitimate. The second, and more determinist, strategy, is to make young promotion candidates aware of the type of challenges that will be made on their authority. Here in-house Cardre courses are used, inter alia, for training in ways of managing this form of conflict.

Let us, then, examine how these practices are worked through in order to illustrate some of the processes of hegemony maintenance. Here we will initially offer examples from the contradiction in order to outline the background to conflict. Following this we will describe events within a training course itself, and demonstrate how, firstly, an awareness of the fragile nature of junior officer authority is conveyed, and secondly, how the importance of establishing social distance between authority and non-authority positions is justified.

#### 5.4.2 Background to Training: Initial Observations

'Cardre' Leading Fireman:	I went in on a Tuesday morning, the first day on, and there's a letter there. The gaffer hands me a letter and he handed the L.F. a letter. The L.F. took his bars off and handed them to me and I put them on. And that's what happened to me on my own watch.
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In the formal Fire Service promotion system advancement to the rank of Station Officer is by examination and interview, whereas promotion to higher ranks is by interview only. Therefore, promotion to junior officer positions requires successful examination results plus a favourable interview with the Divisional Commander. In W.M.F.S., however, the advancement process has also come to include one further, albeit not statutory, factor - the completion of an in-house 'cardre' training course. It is during these courses that candidates are trained in the arts of man-management indicated earlier.

To understand the purpose of cadre courses, we need to understand the background issues necessitating such training. Such a background will help put in perspective many of the themes emerging from the descriptions of training below. For this, many of the earlier unstructured interviews revealed aspects of watch conflict having direct bearings on the type of material presented on H.Q.T.S. courses. Indeed, the unprompted nature of these interviews consistently raised issues that had failed to surface in the more formal sessions, but which proved crucial for fitting the analytical jigsaw together.

In the following section the text is given over, as far as possible, to the participants, in order to let them explain these conflict issues from first hand experience. These qualitative accounts give rich naturalistic insight into the political undercurrent of intra-watch relationships, and serves to illustrate the network of issues promoting the development of Advanced Training. Let us now focus directly on the main issue of concern here, that of promotion.

#### Promotion and Conflict: Unstructured Interviews

Although at the time of research there remained an overabundance of men with the Leading Fireman's promotion qualifications, and indeed so much so that, "to get to L.F. you probably need your S.O's [examination]" (Pocock), there was, nevertheless, constant pressure on Divisional Officers to account for the percentage of firemen registering for statutory exams. Indeed, firemen showing unwillingness to register were felt to be in some way detracting from the promotion process and thus to be possibly holding counter values. Here, men remaining at basic rank level for several years without taking exams, were felt to be potential mongers of discontent. This position meant that Divisional Officers were

encouraged to persuade such firemen to register for exams even if their promotion prospects were only mediocre:

Garner: I've been blackmailed into taking me Leading Fireman's (exams) this year against my will, by that some gentleman [i. e., the Divisional Officer] that begins with D. I shall take it but fail it on purpose.

Researcher: How can he get into that position?

Garner: I took the Qualified Fireman's (exam) about a month, no when did I take it, about 2 months ago. I failed it the first time on practical of all bloody stupid things which I should never have done. But I got two young A.D.O.'s out to make a name for themselves so they failed me. I knew they would, but that's by the by. I took it again and I had Denness taking me and he said "you're practical drill was fine, no problems". Then I took a question and answer session with him. Well my version of a correct answer didn't match up exactly word for word with what was written in the book and he wouldn't accept my answers unless they were word for word. So he went away 'umming and arring and faffing about' and rang me back an hour later and said, "if I say to you that I'll pass you on the proviso that you take your Leading Fireman's (exam) this year will you take it? Now I mean what am I going to say, No? So I said "yes, I'll take it". He said, "now, you've got to promise me". The man's a pleb. I'd much rather he'd turned around and said, "you're not fit to pass your Qualified Fireman's because you can't answer the questions, you've failed, you've passed everything but your questions and answers". If he's said that, I'd have a lot more respect for the guy. Well I said to him, 'if you need Leading Firemen that badly', and he said, 'well, I don't think you'd make a good Leading Fireman because you're indecisive'. I'm not indecisive, I've just not got the mind for book learning.

The apprehension regarding 'book learning', which is widespread among such firemen, is, of course, a major factor in the subsequent castigation of the success of more academic firemen. As noted, when such criticisms are made they tend to highlight the loss for the organisation in rejecting

practical men and devaluing practical ability. The promotion system is thus seen as dysfunctional:

Haynes: I've got no 'O' levels, 'A' levels, you know. I was just a driver when I came into the job. But when it comes to practical things I'll do them. All the book work in the world I wouldn't give you that much for. They're throwing a lot of good firemen out rather than have a good fireman and a good bookman.

In fact, even firemen who support the promotion system, and are seeking to advance through it, note that the rapid acceleration of academically qualified recruits may serve to question the legitimacy of the system:

Fowler: We've found a lot of graduates coming into the job. Bright lads, you know, flying through the exams, which is fair enough ... it's there for everybody to do. But we hope that the officers can pick and choose from the guys they consider firemen, and those that have just passed the exams.

Indeed, when young academically skilled men are promoted this can serve to heighten the tension between their authority and its acceptance by older watch members. As one L.F. noted the position is so tenuous that, "even if you're changing a channel on TV , you've got to know how to do it properly" (L.F. Brearley). It is therefore seen as crucial, given such potential threats to Junior Officer authority, that measures such as Cardre training be used to prepare personnel for facing conflict. For example, when an L.F. is first 'made-up' this is generally via a term as a 'temporary' junior officer during which regular three monthly assessments are made. As the men know of the assessment this can serve to increase the strain when the L.F. seeks to exercise authority.

Richards: The men can sort of break an L.F. because if he sort of comes the heavy hand and forgets he's one of the blokes, then the blokes will just non-cooperate with him. If he ain't progressing very well with the men and everybody's getting aggravated, then he won't get a good report, so its very difficult. You get the blokes with a bit of time in, and if

there's a young bloke made up then the blokes with a bit of time in say 'who is he trying to tell me, I've been in twenty years, no young punk's gonna tell me".

Despite such problems, on 'A' Division the progress of one junior officer has been outstanding. While formerly at Sutton and subject to such antagonism ("If he could throw his book at the fire he'd be alright"), he has nevertheless been able to override the tension and has, at 26, been appointed temporary Station Officer at another 'A' Division station. However, another promotion candidate, posted slightly earlier, failed to come to terms with the situation and was re-posted to the rank of fireman at his original station; where he has since remained at basic rank level. This L.F., like many others, failed to establish a relationship with the watch in terms of the validity of his experience and strength of his personality. As such he was subsequently unable to secure agreement that his authority was legitimate:

Richards: He wasn't a very sociable bloke, he didn't come in the bar and mix with the lads, and yet he wasn't material. He'd passed his exams but when it came to the practical side he was a load of rubbish. And the blokes knew this so it was sort of whatever he said you took with a pinch of salt and done what you knew right away. And he got bad reports and is now back at Erdington where he started as a fireman. He's gone back down again and probably will never get made up again within the near future because of this and this has been about two years ago.

While a lack of watch co-operation may serve to question an L.F.'s competence, such actions may on the other hand result in reprimands for any watch member adjudged as promoting obduracy. If when dissent occurs this is not seen as attributable to general watch discontent, but rather to one fireman in particular, then the individual concerned may be subject to either explicit formal reprimands, or an informal scrutiny of his actions.

Examples of both these sanctions occurred during the period of research. At Central Fireman Gooch was given a formal caution for exceeding the limits of normal conflict. The incident occurred when he refused an instruction from L.F. Taylor to empty the waste bins, the incident being amplified by Gooch using an expletive in his dissent. At Sutton a panoply of both formal and informal sanctions emerged from a conflict between Haynes and Sub. O. Gomes, regarding an instruction to clean the appliance cab. The incident in fact displayed several of the themes most commonly felt to precipitate the testing of an L.F.'s authority.

In general, firemen feel that in exercising authority the most precarious position for an L.F. is where, (1) he is promoted on his own watch; (2) he is younger than many of the watch members, and (3) he is not seen as a dominant personality. In the case of Haynes and Gomes, Gomes is in his mid to late twenties, is the son of a retired senior officer, and unlike Haynes ("a character" - Miller; "a headache for the watch" - L.F. Brearley) is reticent and rather underconfident. While Gomes was not promoted on the watch at Sutton, he had nevertheless been 'made-up' from a watch at Central where both he and Haynes were firemen.

Garner explained the situation and in so doing illustrated many of the background issues influencing the train of events. The incident is typical of the form of conflict depicted in cadre training exercises.

Garner: There's been a lot of aggravation with Des and Larry. They came off the same watch at Central to here which was a mistake: but. So they came here and there was a lot of aggro building up. Who's fault it was, I think it was six of one and half a dozen of the other, both riding each other and it blew up. I suppose its a month ago now when Larry [Sub Officer], what did he tell him?, Oh yes. Larry told Des to mop out the cab and Des said 'yes, alright'. As it happened a couple of blokes [were] down there just talking, it was obviously going to get done, they were in the middle of a conversation so they stopped work. Larry comes back out of the engine house a few minutes later and they were still

talking, and said "I told you to do that", and Des says "get off me back, stop riding me". And thats when it all just flared up, bang. Very bad feeling on the watch. Nobody wanted to side with one person or the other and I got me ears bent both ways in that Des was saying, "he's a c--- about this that and the other" and Larry was saying "he shouldn't ride me, he should do as he's told". Now why they're telling me I don't know. I couldn't give a damn what they do. If they want to kick each other's heads in, then get on with it, but I won't be saying nothing. Now that created a hell of a lot of bad feeling and then consequently there was a bit of pressure put on Des. Obviously the gaffer had to side with Larry as we'd expect him to. There was a bit of pressure put on, but you couldn't pressurize Des without victimizing him, so it had to come on the whole watch. We then got a bit up at Des and said, "now look, you're causing us extra work, back off." Then I think it was about a week and a half later. With this happening Larry started to get on my nerves by pressurizing me, not me particularly, but me as a whole with the rest of the watch. Now we'd just, now let me get it right, we'd just done up the pump house and [were] still finishing if off when Larry says, "now get the ladders off the machine and clean them". Now we'd used them this morning and the previous day for the H.M.I. [inspection]. So I went into Larry and said "Larry, there's no way those ladders need cleaning. They were good enough for the H.M.I. yesterday, we only used them once this morning. They weren't used last night so why are we cleaning them?" [Larry replied] "well, I thought they were dirty". Bullshit. Now that was all behind closed doors. I told him exactly what I thought, I said I didn't like the way the watch was being put under pressure and since then its eased off a bit, in fact its eased off a lot. But that is just one example of how one bloke [i.e., Haynes] can cause pressure for the whole watch. Not only that, we've had an A.D.O. come down, Nurse. A.D.O. Nurse twice to check Des's kit. Even the high-ups are putting pressure on him because he put in a request for a D.C.'s interview to get moved either to Perry Barr or to Central. The D.C. said 'no, no way', which was a little bit unreasonable because they're short of T.L. drivers at A.2., Des's T.L. and H.P. trained. They've got the R.V. moving to A.5, Des's R.V. trained. He can drive every vehicle on the Brigade including coaches. So he dismissed it out of hand. "No". So Des said "right, we'll have to see" and went over the D.C.'s head and saw Dave Brown which upset the D.C. so the D.C.'s decided to put a bit of pressure on him. But again you can't do that without pressurizing the whole watch.

This then is the type of incident typified in leadership exercises on Cardre courses. However, while illustrating an everyday example of such conflict, the incident further highlights some of the common-sense assumptions implicit in watch relationships. For example, although the

incident was 'six of one and half a dozen of the other', it was nevertheless 'obvious' that 'the gaffer had to side with Larry, as we'd expect him to'. Also, despite the uncertainty of attributing right and wrong, as the incident goes beyond the limits of normal (tolerable) conflict members of Haynes own watch apply pressure for him to conform ('back off'). Indeed, Garner comments how the incident illustrates how 'one bloke [Haynes] can cause pressure for the whole watch'. Finally, of course, we can also note the employment of informal sanctions by senior officers to secure Haynes' compliance, especially by the visits by an Assistant Divisional Officer to 'put pressure' on Haynes, by checking his kit and thus making Haynes aware of the many technical options open for issuing a formal reprimand<sup>7</sup>.

Therefore, we can see from the brief descriptions above some of the background issues impinging upon 'leadership' and 'command and control' inputs to in-house training. Indeed, the training process outlined below can be seen as but one of the three elements in the process of ensuring compliance outlined here, i.e., a process primarily seeking voluntary acceptance of the authority system, but which, as this is never completely cemented, provides training in conflict avoidance, but holds as a final resort, the option of formal sanctions of suppression.

Having described this background to training, let us now illustrate how these processes are all inter-related in the training context. Here, we will briefly describe the courses run at H.Q.T.S., especially in terms of inputs from administrative science, before addressing, first hand, the experience of junior officer management training.

### 5.4.3 Courses at H.Q.T.S.

Above, Clegg and Dunkerley (1980) suggested that the 'most important' aspect of management education was its role in 'reproducing ideology as well as middle class careers' (p.578), this ideology being developed through learning the 'techniques of modern management' (p.538) at training institutions. In order to appreciate such processes in the Fire Service the researcher enrolled on a junior officer training course at the W.M.F.S. Headquarters Training School (H.Q.T.S.), the specific aim being to experience with the participants material used in preparing candidates for officer positions.

The material which follows, therefore, describes both the basic course contents, and also the researchers own coming to terms with practices enacted on the course. In the latter we concentrate specifically on the teaching of administrative science, with data being collected via observation and tape recording of class sessions<sup>8</sup>.

In the main, the research takes the form of an observational documentary.

#### Courses and Course Content

H.Q.T.S. deals exclusively with training junior officers (L.F., Sub.O., S.O.), and operates four in-house courses under the heading of 'Advanced Training'; these being: 1. Cardre Leading Firemen's (C.L.F.) Course; 2. Cardre Sub-Officers' (C.Sub) Course; 3. Station Officers' Internal Command (I.C.C.) Course; 4. Station Officers' Operational Tactics ('Tactics') Course. Of these, the first three all include a large percentage of teaching in administration, whereas the last is exclusively a refresher course in operational firefighting procedures.

The first three courses are of interest due to the large input from administrative science. All are in some way 'Cadre' courses in that they are designed to "take those personnel nominated and prepare them for promotion" (H.Q.T.S. prospectus, p.1), the prospectus stating that candidates chosen are those who have, "shown considerable potential in their development as firemen, sufficient to indicate that they have the ability to become an officer with the required qualities to be of value to the service" (p.2)<sup>9</sup>.

For the actual make up of the courses, the 'C.L.F.' programme on which the researcher enrolled is a full-time (Monday to Friday, 9 am to 5 pm) course of four weeks, the day being divided into 8 periods of 45 minutes with an hour for lunch. The C.L.F. course takes candidates who have passed the statutory formal examinations and then received either an A or B grade at their promotion interview with the D.C. Participants are generally in their twenties, the course being developed to give familiarity with the L.F.'s role for men with less than ten years experience<sup>10</sup>.

Notable here in terms of administrative science is the large input for 'leadership'. Leadership is indeed the second largest course input (28 teaching units) taking up more time than 'operational procedures' (26 units) and 'practical training' (18 units), and only being exceeded by 'station administration' (36 units). Similarly, on the Cadre Sub Officers' course, 28 of the 75 teaching periods (a two week course) are allocated to either leadership or a behavioural input of 'command and control'<sup>11</sup>. However, the highest percentage of teaching in administrative/behavioural science is on the Internal Command Course (I.C.C.). This is a five day fulltime course for Officers holding either long term temporary S.O. positions, or who have been promoted to S.O. within twelve months of the course starting date. Here, the major input,

'Command', involves training in the three areas of 'leadership', 'decision making', and 'motivation', with a large percentage of course time being devoted to exercises evaluating 'leadership style', 'management style' and methods for 'develop(ing) subordinates'.

#### 5.4.4 Experiencing In-House Officer Training

The C.L.F. course on which the researcher participated ran from 28.2.82 to 25.3.83. Following an initial meeting with T.O.2 it was agreed that the researcher could attend all sessions, being free to interview members of the course and its training officers, and also to use the tape recorder at discretion. The work which follows describes the researchers observations as a participant on the programme. This material seeks to give an understanding of the contextual rules and constraints operating in the training environment.

#### Introducing the Course: Observations

Entering a setting is a crucial stage in observational research notably with regard to the issue of acceptance. However, the researcher's fears over acceptance were substantially reduced when discovering that Fowler and another fireman known to the researcher (Greig: Green Watch, Central) were members of the course. On being cordially acknowledged by Fowler and Greig this seemed to signal that the researchers presence was both known and unexceptional. This was indeed consolidated at the first break when Greig approached the writer to ask how the work was progressing.

Course outlines began at 9.00 am by the instructors (T.O.2, T.O.3, T.O.4, T.O.5) introducing themselves; each cross referencing his identity by recourse to a blackboard list giving T.O. names in rank order. During these introductions T.O.2 took the opportunity to discuss, informally, the relationship between course success and future promotion prospects. The

importance of the course was noted in that a high percentage of last years course members were not only 'substantive' (tenured leading firemen), but were already returning for the C.Sub course, so quick was their advancement. While this was explained a register was circulated..

The session then fell into hiatus as we awaited the arrival of, and subsequent address by, the Deputy Chief Fire Officer. This lull was sporadically relieved, however, by instructors outlining any 'rules' coming to mind. As 'N.A.T.O.' jumpers were being worn, members were told not to wear ties - as one participant was. Anyone having 'excessive' time off would be sent back to station. The local pubs were 'off limits'. And finally, we were to be well behaved when training at Sutton, as a Government Cabinet Minister 'lives round the corner', and the president of the Womens Institute is 'Lady Bird's Custard'.

The brief departure ended, abruptly, when T.O.5 opened the door to forewarn of the 'Deputy Chief's' arrival. As the D.C.F.O. entered all the class stood up. T.O.4, now seated next to the researcher, informed that the D.C.F.O. was essentially there to 'give his weight' to the course, and indeed when the class was seated the D.C.F.O. began by supporting the course, its instructors and its aims.

The speech centred on the position of the 'young L.F.', illustrating by analogy problems faced by those newly made up to 'N.C.O.' ranks. Examples were offered not only from the D.C.F.O.'s own L.F. experiences, but notably from 'recent military history'. The Deputy Chief suggested how he had felt like 'a fish out of water' on being made up 'above (his) mates', noting also how he knew of countless men who had also been 'thrown in at the deep end' but had failed to re-emerge. The course, therefore, was designed to overcome such problems by familiarising C.L.F.'s with the type

of situations they would face. Only if L.F.'s were so properly trained could they be instrumental in the functioning of a watch.

The D.C.F.O. ended by stating that 'criticism' of the course course only be 'constructive', and that 'destructive' criticism would 'not be tolerated'. As a parting shot, participants were reminded that the course was considered valuable not only by himself, but especially by the 'Chief' (Fire Officer). Everyone stood up and the D.C.F.O. left.

On the Deputy Chief's departure a five minute break was announced. However, as the final minute ran out another hiatus ensued as one of the group had not yet returned. T.O.3 asked, "he's thrown in the towel already, has he?" T.O.4 turned to the researcher, "we've already spotted a dummy". The course member returned.

Although the post-break session was scheduled to be an outline of the syllabus, the session began by a further (informal) discussion of course 'success' and the question of 'criticism'. T.O.3 told of how no previous course member had ever received a distinction and how the Chief (C.F.O.) would be keen to award one in being "fond of photo's in the Brigade magazine". This was followed by a reiteration of the D.C.F.O.'s point about criticism. Again, course members were told how they would be permitted to voice their general views about the course at the culmination of the months training, i.e., when the D.C.F.O. was to return to chair the closing session. T.O.3 stressed that although some of the material may seem difficult to comprehend initially, that through examples instructors would explain how certain circumstances do recurrently confront the young L.F. The course was geared to helping confront and overcome such difficult situations. As such, when confronting these situations, "when we feel your reaction is the wrong reaction, then we will try to suggest

the right reaction". Finally, prior to outlining the syllabus, T.O.3 focused on the quality of the participants themselves. As 'A grade' men, "your D.C. has told has you're the best he has to offer, we're just assessing to confirm he's right." By introducing Cardre training in W.M.F.S. it was now assured that, "we've got this elite moving up through the service". As course members had been selected by their respective D.C.'s, "the fellow who comes on a Cardre course and gets a good report can sit back and say when".

The remainder of the introduction was devoted to a formal outline of the syllabus (see next section). However, at the end of the session, in time allocated for questions, Fowler raised a query: "what happens if your authority (i.e., new L.F.'s) is not accepted by the men and you're ostracised?" T.O.3 answered by way of stereotypes that would form the basis of subsequent explanations of this central question:

T.O.3: You, the young L.F. get there first, young and fresh faced, and standing there are a bunch of them, all old sweats with 20 years in each.

T.O.3 suggested that the L.F. has no option but the 'be firm' and exercise the authority bestowed on him by rank. This same question, however, was to be not only the primary concern of the C.L.F.'s, but moreover, the main theme of for material presented to them - especially for 'leadership' training.

### Context and Culture

This introduction offers examples of how in-house training, although in a pedagogic setting away from the primary workplace, serves to reproduce established codes by retaining precepts mandated in the formal work context. As such, the teaching of administrative science is protected from any counter-values which may be held by either extra-organisational

instructors, or a foreign educational institution<sup>12</sup>. Through this encapsulation, even when removed to a quasi-educational setting, employees are still subject to traditional organisational rules regarding conduct and behaviour. While these in the main are simply expected and taken for granted, if need be they can be enforced and even established (i.e., if members are unsure of the implications). Thus we note in the introduction how standing up for the D.C.F.O., having instructors presented in rank order, and wearing Fire Service 'undress' uniform, are all expected. Indeed, even a slight variation from standard procedure, such as wearing a tie with a N.A.T.O. jumper, needs to be corrected. Some rules, however, may be unknown to certain participants and therefore must be established, such as members from other divisions knowing that behaviour at Sutton is always more conservative<sup>13</sup>.

The introduction also illustrates the importance, of establishing the psychological framework necessary for L.F. training. Here, in seeking to develop a consciousness of functional social distance (between an L.F. and basic rank firemen), instructors must depict C.L.F.'s as 'different'. C.L.F.'s, therefore, are part of the 'elite' presently 'rising through the Brigade' (T.O.3) and chosen because they are 'A Grade' men, their ability having already been noted by other offices (i.e. D.C., Watch S.O.). In training C.L.F.'s for these positions course instructors indicate that they are not there to disprove the D.C.'s judgement, but conversely for 'assessing to confirm he's right'.

However, there is at least one element within the introduction that seems misplaced in outlining an hegemonic process. As course members are specifically chosen from promotion candidates, one would assume compliance to be constantly verified, especially as frictionless participation would always seem to be in a candidates' best interests. As the Training

Officers give assessments on each course member, and these are lodged in each fireman's personal file, it would seem natural for participants to display almost uniform acquiescence in measures such as Cadre training. One would feel, therefore, in its role as a medium for organisational ideology, that Advanced Training would be secure and undisturbed, as members are aware of the expedience of giving tacit support.

The speech made by the Deputy Chief, however, seems to question whether advanced training does possess such a deep sediment of acquiescence. Within his remarks there emerges an air of repression, notably in the passages regarding the inadmissability of 'destructive' comments. Here the implication is that a formal chain of sanctions may be invoked against anyone failing to heed this advice. Indeed, even the forum for critical comment is strategically formalised, through stipulating that any 'general views' must be presented at the discussion session of which he, the D.C.F.O., is to be chairman, i.e., at the end of the course. Thus, the training package is secured with the seal of explicit authority at both ends. Such visible displays of coercion, would not then, seem characteristic of any process that we might wish to call hegemonic. Indeed, the need for such measures would seem to suggest that the basis for hegemony is tenuous. There are, however, contextual reasons to explain the need for the D.C.F.O.'s remarks.

With one recent and notable exception, H.Q.I.S. instructors had been well founded in taking voluntary compliance for granted. However, for reasons which are explained later (see 'Providastation'), there emerged on the I.C.C. (February, 1982) an open challenge to the instructors from one of the participants. Because of this incident not only have measures been taken against the participant, but, moreover, as the incident represents a rupturing of the hidden curriculum, secondary measures have been employed

to support the Advanced Training system. Due to this incident, the insistence by the D.C.F.O. (above) that only 'constructive' criticism will be tolerated, is part of a necessary recourse to coercion in response to a threat to voluntary compliance.

We will expand this case later in order to illustrate the mechanisms employed to deal with such a problem. Let us now, however, having illustrated how the course is introduced, turn to the actual teaching itself. Here we will first describe the type of teaching materials used, before illustrating the actual process of using administrative science in Cadre training.

#### 5.4.5 Teaching Mediums and Administrative Science

In teaching leadership and command and control, principles from administrative science are presented through three mediums: 1) lectures; 2) practical exercises, and 3) structured discussions using training films and feature films. The material is obtained from; firstly, the behavioural sciences (e.g., 'functional' theories of leadership, theories of communication), secondly, the Armed Forces (e.g., trait theories of leadership, autobiographical accounts of man-management), and thirdly, management consultancy (i.e., packages of exercises on leadership and organisation).

#### Lecture Material

Leadership training at H.Q.T.S. (and also at the Fire Services Technical College, Moreton-in-Marsh) is based on Adair's (1968, 1983, 1984) need theory approach of 'functional' (or 'action centred') leadership. Adair's work was chosen because it forms the basis for leadership training in the Armed Forces, and is thus thought applicable to the para-military Fire Service<sup>14</sup>. Indeed, Adair's theory specifically blends social science

principles (e.g., Maslow, 1954; Stodgill, 1948; Tannenbaum and Schmidt, 1958; Bass, 1960), with military examples (especially biographical; e.g., Field Marshall Montgomery, Lt. Col. W.F. Stirling, R.S.M. John Hunt in Adair, 1968), in order to "bridge the gap between non-military and military leadership (1968, p.87)<sup>15</sup>. As such, Adairs work is very much "the gospel" (I.O.3) for Advanced Training, and not only forms the basis for teaching leadership, but also for training in 'communication skills' (i.e., 'non-verbal communication', 'effective speaking', 'better listening', 'clear writing')<sup>16, 17</sup>.

### Management Exercises

While Adairs work forms the theoretical basis for leadership, this is complemented by exercises in which problems from industry are applied to the Fire Service setting. The exercises used are obtained from a consultancy firm specialising in packages of simulated management problems. Here, despite the fact that many of the exercises revolve around issues of productivity and profit, the package was chosen because it is adaptable to non-manufacturing and public sector organisations.

The section used for the leadership and command and control involves exercises in 'motivation', 'participation', 'leadership', 'performance' and 'control', with diagram formats illustrating: 'The Process of Systematic Management', 'The Performance Spiral', 'Results-Centred Management', 'Reconciling People and Organisations', 'Boss and Subordinate Relations', and 'Leadership Style'.

The exercises are marketed as a 'self-contained' package designed to provide 'managers and supervisors' with the "opportunity to explore theories and practical approaches for solving a wide range of managerial problems" (p.1). However, not only does the package outline the

exercises/problems, but also practical details such as room layout, the arrangement of class members (e.g., "very outspoken, or assertive people should be seated together", p.5), and notably, strategies for avoiding challenges to the authority of the instructor<sup>18</sup>.

### Films

Both commercial training films and full length feature films are used as aids to teaching leadership. Here the films are shown in segments with breaks being occasioned at points where a relevant problem has been signalled. Participants are then divided into syndicates to assess the problem and suggest viable solutions.

The training films are like the management exercises in portraying industrial problems which are resolvable through following certain 'management principles'. The titles of these films tend to indicate their training objectives, e.g., 'Who's in Charge?', 'Common-sense Motivation', 'I'd Like a Word With You', 'Coping with Conflict'.

H.Q.I.S. uses two feature films for leadership and command and control training. These films - 'A Gathering of Eagles' (Rock Hudson, Rod Taylor) and 'Cockleshell Heroes' (Trevor Howard) - are shown on the C.Sub course, with each film, together with the integral discussion sessions, occupying a complete afternoons instruction. Both films concern the military and are used - in conjunction with the Sandhurst leadership package (see Adair: 1968, 1983, 1984) - to illustrate the necessity for establishing firm discipline in military/para-military contexts.

As with the training films, feature film exercises depend on the stereotyping of characters and situations in order to bring out certain messages. Figure 27 for example, illustrates the 'Character Assessments' for Cockleshell Heroes, with Figure 28 giving the problem guidelines

(i.e., the "problems expected from syndicates"), together with the pre-determined solutions. These images serve as models for assessing what is considered acceptable or unacceptable behaviour. In so doing the messages reflect values and traits considered desirable or otherwise in the Fire Service (cf. use of 'loner', 'casual', 'hard', 'strict' etc.).

I.0.3: They go through the meat of the film, but they look at the way the personalities are applied in leadership training. If you like the hard man-soft man approach, the new broom sweeping clean, and how individuals respond to various kinds of discipline. And they can see by discussion and arrive at their own theories. And it's surprising once we've got them thinking upon certain lines how they respond.

In both films the central problem concerns a lack of discipline and its effects on efficiency, with solutions being offered via the removal of inefficient personnel and an increase in control over subordinate actions. Prior to the researcher viewing 'A Gathering of Eagles' I.0.2 described the film and invoked some analogies for the Fire Service.

I.0.2: Now in the higher command structure with Gathering of Eagles, what you've got there is a complete station, er, that is run down, a complete area that is run down because of 'Cockleshell Heroes' type lax, you know, training. The blokes should be on eight hour stand-by shifts, but because they want to see their wives, [and] the boss wants to be looked on as being a good bloke, so he cuts them down to four hour stand-by. Which means they only drill four hours instead of eight; which means they're only half as efficient as they normally should be; which means they fail an efficiency test; which means they're blown out. Strategic Air Command they've just disappeared, they're ineffective. So therefore the Station Commander's removed and in comes Rock Hudson as the fresh man. His number 2, which is his big friend from Korea, he thinks this is great, me and my mate now running the station sort of thing. And ultimately it turns out as he gets rid of different people - Rock Hudson moves through them like a clinical scalpel - he cuts off the dead weight and the tree starts to grow. Never mind about all the kicking of the roots, [because] they start complaining, they start to grow, which is what he's there for. And he suddenly finds out that the biggest restriction is his number 2, and he gets rid of him. And he shows himself as having to be ruthless and again its a sort of higher command structure, but a very similar thing. So they're two excellent films they are<sup>19</sup>.

Figure 27

ADVANCED TRAINING - INSTRUCTORS NOTE

Leadership:

'Cockleshell Heroes'

Character Assessments - 1st Syndicate Session

Major Stringer

A specialist - A 'loner'  
1st impression was scruffy  
No identification  
Too relaxed and casual  
No discipline  
Too trusting without foundation  
Didn't take No.2 into his confidence  
Didn't lay out his aims or his reasons to Captain Thompson, with regard to the type of men he wanted or why, nor how he wanted them trained  
He did not seek advice from his No.2  
He is effectively removing the authority of Captain Thompson

Captain Thompson

A strict professional soldier  
Works by the book, has a chip on his shoulder  
Has taken an instant dislike to his O.i.c.  
Does not respect his O.i.c. because he does not know what he is expected to do or why  
He is giving no assistance to the O.i.c. and is making his disrespect shown to the men

Leadership - Instructors Note

(2)

Sergeant Craig

Strong character  
Honest, hard and straight down the line  
A Professional  
He has let all the men know his standards, and they know exactly where they stand with him  
They respect him

Marine Clark

The natural leader  
The comedian and the motivator  
Outwardly a cynic but is basically a good professional soldier  
He holds the team together

There is no team as such yet but the men are now aware of the friction between their officers and would very soon be exploiting him.

Figure 28

Instructors Note - Problems expected from Syndicates

1. Major Stringer has not yet established himself as the O.i.c.-
2. He has not provided any incentive or reason to gain his No.2's co-operation or respect
3. He is trying to assume responsibility for everything and does not delegate
4. He has imposed relatively no standard of discipline on his men
5. He has not moulded them into a team

Solutions

1. Must introduce strict training and discipline
2. Must communicate down the line the task, and what he expects of them.
3. He must become a leader
4. He must let his No.2 know exactly what he wants and why to gain his co-operation - or alternatively get rid of him

1. MOTIVATE,
2. COMMUNICATE,
3. TRAIN,
4. DISCIPLINE

### Microteaching Interviews

While not involving material from Administrative Science, the use of microteaching also serves to familiarise participants with typical 'situational problems'. These interviews (which are included under 'command and control') are short (seven minutes) face to face discussions recorded on close circuit television, and are used as the basis for assessing a candidates success in dealing with watch issues.

The problems cited (see Appendix 6) are devised by H.Q.T.S. instructors and again involve stereotypes of individuals and situations. Within these interviews an H.Q.T.S. officer poses as one of the firemen causing the problem, the participant being rated on his method of handling the complainant. Some examples of the type of problems devised are as follows. Firstly, the 'old soldier' with '16 years in the job' who is 'not helping you one bit' and has a 'whole attitude of apathy and sarcasm' which has 'gone far enough' (problem 1). Secondly, the problem of the bar, either of men wanting after hours drinking, or of money missing from the till (problems 2, 10). Thirdly, of men who are 'talking' either about 'you' or the 'gaffer', and ways to confront them (problems 2, 8), or 'do something about' what has become the source of 'jokes' (problem 4). Finally, the problems of 'motivating' men especially 'into wanting to take exams' (problem 5).

The main thrust of these exercises, however, is establishing how the Cadre Officer can be potentially susceptible to personal ambiguity over 'loyalty'. This is especially problematic at the C.L.F. level, and as we shall see later, not only remains the main concern for the C.L.F.'s themselves, but likewise, is the central problem for H.Q.T.S. instructors:

i.e., to secure a belief in loyalty to the command structure when confronted with ambivalence at the frontier of control.

Let us, then, turn to the main section of research in this chapter, that of the C.L.F. session where the crucial 'question of loyalties' is first broached. That is, in the first leadership session.

#### 5.4.6 Leadership Training

Having noted how course members are selected, the course is introduced, and the materials are chosen; let us now analyse the process whereby C.L.F.'s are actually taught leadership. Below we highlight how problems of ambivalence regarding the 'question of loyalties' are addressed and explained. Here the session is marked by the attempts of T.O.3 to secure acceptance for official prescriptions of common-sense, especially with regard to the authority system.

#### Day 2, 9 am: 'Leadership Theories'

The researcher entered the lecture room at 8.57 am to find all the group present. Shortly before 9.00 am the group were seated, most members with arms folded. The scheduled leadership sessions were to take up the whole morning, with periods prior to break focusing on 'leadership theories', while those following given over to a short film entitled 'Who's in Charge?'.

The theoretical session was taken directly from Adair's 'Training for Leadership' (1968), and commenced by T.O.3 outlining early theories of leadership. The first of these was the 'qualities approach' (Adair, 1968, pp.11-13) suggesting that 'leaders are born not made'. After discussing some of the qualities a leader might possess, T.O.3 divided the group into three syndicates - yellow, red, green - and asked them to develop their own lists of the necessary qualities for a leader in the Fire Service.

After forming their lists a spokesman from each syndicate came forward to a flip-chart and recorded the traits they had considered. Fowler, as the yellow syndicate spokesman, was the first to come forward citing 14 traits and giving explanation for each: 1. 'Decisive' - 'he must be able to make decisions'; 2. 'Knowledgeable' - 'he must know the job'; 3. 'Lead By Example' - 'he must look smart', and so forth.

After each syndicate had presented its list, and the group had subsequently discussed the merits of different qualities, T.O.3 then demonstrated how the qualities approach was largely redundant. He projected several lists from differing authorities (all Armed Forces - i.e., Adair, 1968, pp.141-2) to demonstrate their lack of consistency; albeit, noting that in each there was an 'element of truth' as, "people with certain qualities have a good platform for leadership providing they recognise this and build on it accordingly".

The qualities exercise was followed by a description of the 'situational approach' (1968, pp.13-15) in which, "the person leading the group depends on the particular task". Here T.O.3 offered an example (i.e., Adair, 1968, p.14) of how in a group of individuals - sailor, doctor, carpenter, chef - shipwrecked on a desert island (the boat being sunk by an "Argentine torpedo") each in turn adopts the role of leader as differing situations require different expertise. This approach, however, was not suitable for leadership in the Fire Service as, "in the first instance it would be unacceptable for leadership to change hand in this manner and, secondly, there would remain a number of individuals within the environment who would possess a leadership quality which could be applied to the vast majority of cases".

The main body of the lecture, however, was devoted to Adair's theory of functional leadership (see note 16). Here the theory was interspersed with practical examples linking military and Fire Service contexts. Commonly the military examples were related to actions in the Falklands War as for example, in the use of 'Aitch' Jones to illustrate positive fire ground leadership.

I.0.3: He ['Aitch' Jones] took his tactical headquarters, his staff officers, and his bodyguards, and senior N.C.O.'s [and said] 'we'll have to do it lads, come on'. And he ran and they had to keep up with him; 'there's 'Aitch' Jones, we'll have to go where the gaffer goes'<sup>20</sup>.

Further work on the Adair theory continued until after break when the film was commenced, this being designed to show some of the practical implications of the theories. The film was shown in two parts with discussion taking place during the break and also after the film's completion.

#### 'Who's in Charge': Part One

'Who's in Charge' is used to highlight the problems facing a young fireman promoted to L.F. The film concerns the problems of a young lorry driver (Mike Hammett) who is promoted to foreman but receives little assistance from either management or workforce. As the narrator states, Mike's problems are typical of problems occurring in 'any company, anywhere, anytime'.

In order to convey its central message, the film depends on caricaturing certain types of worker and manager. Indeed, through this process both the plot, and the nature of the central characters, are established in just 125 seconds. Appendix 7 reproduces the script and illustrates these typifications.

While in the script the narrators interjection signals the commencement of the film proper, many themes have already been introduced unannounced. Distant voices suggest that there is conflict among the workers, with one worker (Mike Hammett) objecting that goods have not been packed in time to beat the morning traffic jam. When this worker asks the reason for the delay he is told by the foreman (Bert - approximately 60 years old) that the men can cope, despite the impression that the correct number of employees are not present. The manager (Mr. Probert) arrives and calls Mike to his office. The narrator interjects to suggest that despite an 'optimistic forecast' from the Chairman, high turnover has not occurred.

While a background of inefficiency and absenteeism has already been signified, it is only when the scene switches to Probert's office that the central problem of 'dispatch delays' is openly addressed. Much of the problem lies with Bert, the 'acting' foreman, who is not functioning efficiently. A 'younger man' is seen as the answer. As Mike's attitude has already been signified as conscientious it is he who is offered the post. Mike ('lad') is 'congratulated' by Probert ('Mr.') as he is now in 'management' and no longer a mere 'hourly paid employee'.

The majority of the film simply expands themes raised in the first two minutes but notably by outlining the disapproval of the workforce that a lowly lorry driver has been appointed foreman. Indeed, the conspicuous nature of this appointment is highlighted when the narrator defines the 'critical' work issue.

Narrator: October 8th. Six days ago Mike Hammett was still only a lorry driver. The key to Blackitt and Marshall's staying alive as a company depends on its ability to get its goods to its customers on time. The failures in dispatch to do just this are commulative and critical for the firm.

Here, the central factor is that Mike has been given the foreman's job despite being both young and holding a relatively unimportant position. As the film progresses Mike's uneasy position is exacerbated, not only by Bert's unwillingness to teach him the job, but more vividly by a new character, Roy; who turns out to be the worker unaccounted for earlier and subsequently the one fiddling the clock. Roy is indeed the main miscreant and openly confronts Mike's new authority on several occasions.

The first part of the film ends after Mike, in failing to persuade the men to work overtime, is late for the Managing Director's meeting. The Managing Director then tells Mike that he 'wants a word' with him. As Mike has failed to resolve the problem in dispatch the company is signified as in danger of liquidation.

#### Discussing Problems

When the lights were put on T.O.3 equated the themes in the film to the Fire Service suggesting the similarity between the main personalities and typical examples of firemen.

S.O.1: Ah, well there you are. There's the situation. Now can anyone in the room tell me that it wouldn't happen in the Fire Service. One day a fireman, one day your best mucker, all night at the bar with him, best snooker player on the watch. The next day he's the Leading Fireman on the watch. No doubt about it, he's there, he's got it, all the badges of office, hasn't he ... (and conversely) there's a bloke [i.e., Bert] a temporary L.F. if you like, twenty year fireman, temporary L.F. on the Watch. All of a sudden its swiped off him and given to the youngster on the Watch. (And) Roy there's a classic character isn't he, eh. There's a Roy on every watch ain't there, 'you don't frighten me, my son, no, not in this man's Fire Brigade. When your signatures dry you can come back'. Isn't it. There's a Roy everywhere isn't there. He's full of himself, smarmy little bastard, wait till it's dark one night I'll drop the dividing-breech on him. And Mike, he's going from bad to worse ain't he. He's going to pieces, ain't he. You can see the problems, you can identify the problems. What I want you to do is to go into syndicates and in your own way identify the problems, and perhaps, pose solutions to the problems. It's twenty five-to by my clock now, so we'll do it for fifteen minutes, O.K.

The personalities and themes developed are considered relevant examples for explaining, firstly, the nature of conflict at the frontier of control, and subsequently, the rules of authority a first-line supervisor must accept to be successful in conflict resolution. Here the development of Bert (incompetent, lacksadaisical) and Roy (untrustworthy, malingering) as representative workers promotes the reaching of anticipated solutions ("you can see the problems, you can identify the problems"), especially in terms of the necessary enforcement of discipline. The role of such training films is to aid this difficult promotion transition by outlining how these situations are normative ("who can tell me it wouldn't happen in the Fire Service"), while the conclusions reached, valid ("identify the problems, and perhaps pose solutions").

Therefore, during discussions the syndicates were asked to consider the relationships depicted as most important, i.e., 1. Mike and Bert; 2. Mike and Roy; 3. Mike and Mr. Probert. Here the groups were to suggest a foreman's optimum strategies for dealing with these relationships, in order that their solutions can be compared with the rendering of the problem in part two.

#### 'Who's in Charge: Part Two

The shorter second half of the film reveals how Mike's problems are resolved when, on admitting to the Managing Director a feeling of personal ambiguity ("I feel I've changed sides, but I don't know whose side I'm on ... it's like I'm not one of the management, and I'm not one of the workers anymore"), the Managing Director redresses the situation by advising Probert (Mike's immediate supervisor) of the appropriate tactics for securing Mike's authority. Here, the breakdown of authority is repaired through temporarily reasserting management prerogative ("you have to apply all the rules all the time and you're seen to apply them") and in

so doing allowing Mike the necessary gestation period ("Give him time. Be available to advise him. Train him then trust him") to come to terms with his new authority:

Barnes (M.D.): Now I want you to go down to the shop floor with him.  
(to Probert) Help him sort it out but don't look as if you're going over his head. Let the boys know he's got the confidence and the authority of the company, and your personal backing just the way you've got mine.

Not only must Mike be assured that he is part of management, but the workforce must be aware of it also. When his authority is most vulnerable, the visibility of management prerogative should be most evident ("rules") in order to nullify any potential for conflict ("the lads aren't that difficult to handle"; "be reasonable but be firm").

Therefore, after Probert carries out Barnes' instructions, when Mike calls a meeting to confront the overtime issue, the workers capitulate. Following this, when Mike calls Roy to the office to 'tell him straight' about the clocking-on fiddle, Roy also capitulates.

The scene changes and the narrator remarks that it is "four-thirty (clocking off time) October 31". A worker, signified as previously siding with Bert and Roy, suggests to Mike that they have completed six loads and asks if they can leave the last until morning (i.e., the main issue). Mike refuses. There is no disagreement and the worker acknowledges "you're the boss". Mike's control of the men is finally clarified when a worker signified as neutral in the conflict (worker 2 - Steve) and thus impartial, states "Well, I never thought you'd do it but you've got this lot moving" (emphasis added). The narrator, who now suggests that Mike is a 'manager', closes the film by illustrating the "guiding principles to follow if you want people to follow you".

### A Question of Loyalties

Appendix 8 reproduces relevant sections from the debrief and discussion relating to the film.

Within this section the crucial question of loyalties is confronted, the issue being, as noted, paramount in preparing participants for crossing the authority threshold. Here, however, we note particularly the participants' concern over giving exclusive loyalty to the command structure in situations where watch officers may be at fault. Indeed, the session in many ways mirrors a contest in which T.O.3 stresses the analogy between Mike's success and a necessary loyalty to management, while the C.L.F.'s suggest instances where a Leading Fireman's loyalty might lie justifiably with the men. As such, the discussion reflects a polemic in which both parties seek to establish their interpretation as common-sense. Let us examine this debate in more detail.

Although the film suggests that firemen should be 'loyal downwards' as well as 'upwards', for the Fire Service context T.O.3 explains the need for primary loyalty to the 'command structure'. The reasons given for this preference are not, however, exclusively 'technical', but range from considerations of career prospects, to questions of honour, to the retaining of personal credibility.

T.O.3: I can tell you that the only loyalty you should consider above all else is the loyalty to the command structure. That's got to be your prime consideration and any other loyalties you have should come second to that.

Indeed, as T.O.3 notes the film implies that Mike was found wanting because of his ambiguous loyalties and that it was only on realising the essential relations of the position, and thus becoming strict with the workforce, that he was considered successful.

Despite this assurance, the most striking feature of the discussion session is the persistent reluctance of C.L.F.'s to comply with T.O.3's model of automatic command structure allegiance. Indeed the first question raised, like Fowler's query of the day previous, focused squarely on this central theme.

C.L.F. 2: For arguments sake say you are a Leading Fireman on a particular watch and you've got a cracking bunch of blokes, and the two officers above you, you know, are a right bunch of w---ers. Any problem that you get as a result from your blokes has directly arisen because of these two, then where's your loyalties then?

Here the equivalence between the Fire Service context and film stereotypes is temporarily suspended, as C.L.F. 2 suggests that watch problems may often arise, not through the actions of the men, but because of the shortcomings of the officers. The 'realistic' answer given by T.O.3, however, aroused notable indignation:

T.O.3: Well first of all think realistically about the situation. Out and out w---ers or not, who's going to give you your next rank - the firemen, or the S.O. and Sub.O? Who's going to recommend you as being, showing the potential to hold any further rank?

T.O.3 in suggesting this rather Machiavellian solution runs up against the experiences of the C.L.F.'s who, in being firemen themselves, are the hypothetical subjects of such 'realism'. Here, the process of validating these arguments may be more easily achieved intellectually than affectively; especially as it asks participants to distance themselves from both the group of which they are still (as basic rank firemen) apart, and from situations they are familiar with.

In appreciating this general disquiet T.O.3 subsequently adopts a more defensive, if contradictory stance, by suggesting that the issue is in fact nebulous, that he 'couldn't draw the line', and that C.L.F.'s must

'decide on the question of loyalties themselves'. This equivocation is, however, qualified with the pejorative image that "it would be wrong for you to go bleeting with the blokes and go agreeing with them that the S.O. and the Sub.O are a pair of w---ers". Here, in an attempt to be consistent with the film T.O.3 again qualifies that, "this is a question of avoidance, not a cop out. Avoidance of a declaration ... of loyalties, but its not a cop out". However, despite this qualification there remains the suggestion that if loyalties are declared 'downwards', then this, in common-sense terms, would be either 'bleeting' (if declaring to the firemen) or, as later, 'vomiting' (if to senior officers).

Therefore, although several different logics are employed to demonstrate the justification of loyalty to the command structure, the debrief illustrates how establishing this proves difficult, even after the issue has been confronted several times and differing arguments given. At the end of the session, C.L.F.8, in face of T.O.3's arguments, still tries to impress the difficulty of accepting what seems an unethical stance:

C.L.F. 8: M'm I think that whats being said though is that there are some situations where your loyalties will be reversed because of your superiors, if you like, your loyalties have got to be to the watch.

As the session culminates, the question is left, neccesarily, in limbo, with T.O.3 adopting a neutral stance, albeit though suggesting conversely that lessons from the film and discussion will aid their future practice as Leading Firemen.

T.O.3: These are problems you can't sort out until they manifest themselves, and the best way of dealing with the problem is your way. But, you've been given the guidelines haven't you. What you've done you've sat there for two days now and all of a sudden this morning, now, now you've broadened your horizons. Next time you go up to a Leading Fireman's rank you'll be better armed, you'll have the ammunition. But I make no bones about it, I've left you the grey area. I can't deal with specifics, I can't do

it, it would be wrong of me to do it. And I'm sure that you're intelligent enough people to appreciate that.

Remarks

T.O.2: What is esteem nowadays, what does that word mean? What is status, what does that mean, you know?. I mean you can have a dustman driving a Rolls Royce now, and you can have an executive managing director redundant. So where is esteem nowadays, it's such a terrific world, a terrible world in that sort of vein ... So we've found a terrific comparison in terms of Maslow's ladder. That (i.e., Maslow's ladder) needs updating. So we do our own.

The teaching session above not only demonstrates the process of applying administrative science in the Fire Service, but also how synergic may be the relationship between an administrative theory and an organisation whose ideology it is seen as supporting. In the work of John Adair we see a theory of leadership developed for the Armed Forces by a member of the Armed Forces. As such, Adair's work can be seen, to borrow Nord's (1974) phrase, as in symbiotic relationship with the organisation from which it originated and in which it has been employed. Indeed, as Adair's theories have been well received in the Armed Forces, so they have in turn been applied as training guides for organisations with similar authority systems - such as the Fire Service. Thus, Adair's work continues to foster the reproduction of dominant ideology in both institutions.

However, while H.Q.T.S. uses Adair's 'key functions' exclusively for its theoretical input, this training is also reinforced by practical examples and exercises. Exercises such as the one outlined above are very much part of a programme that continually reaffirms official policies regarding loyalty and discipline. In this session we see not only central messages of leadership training, but also some of the difficulties experienced in first accepting a logic of uni-directional loyalty. However, although the group question many of the justifications offered by T.O.3, never does the discussion stray beyond the bounds of 'reasonable' dissatisfaction. It is

still a training session 'going right' and T.O.3, despite the counter arguments raised, is still able to conclude that C.L.F.'s now have the 'ammunition' needed for resolving frontier problems.

Indeed, in-house management training enables organisations to keep tighter control over both the material used and the mediums of presentation. While participants are temporarily removed from their normal work routines, they nevertheless, in staying within the bounds of the organisations influence, remain subject to the same contextual restraints and sanctions. Not only is W.M.F.S. able to select materials which support its mode of operation (e.g., Adair, 1968, 'Who's in Charge'), but also, to present such material within an atmosphere conditioned by rules established in the organisation. Therefore, while teaching sessions permit a certain amount of open discussion, even to the point of repeated doubt about a certain theme, the established codes tend to emasculate potential for conflict, especially challenges to the legitimacy and credibility of the course. As noted earlier, with H.Q.T.S. courses one step being towards securing promotion it has been generally taken-for-granted for participants to seek an acceptable report from the course.

Due to this process, in the first two years that Advanced Training courses had been run, no member had ever failed; and indeed up to the I.C.C. course of February 1982 there had been no provision for failure and no failure grade. All members of previous courses had simply complied to this 'acceptable' (Silverman and Jones 1975) strategy and successfully completed the training. Therefore, when one member of the 1982 I.C.C. course openly confronted the H.Q.T.S. instructors, not only did the case serve to illustrate the difficulty for H.Q.T.S. of dealing with such a situation, but moreover, to demonstrate some of the wider implications of the political alignment of the organisation. When this threat to the

credibility of H.Q.T.S. was made, it provoked for the first time the use of explicit measures to both re-establish authority and emasculate any further potential for conflict. It thus illustrated the many implicit control processes available when tacit compliance is breached.

The events of exercise 'Providastation' (below) were first relayed by T.O.2 and then later assembled after discussion with other H.Q.T.S. staff. Here, we analyse accounts relating to the case, and then illustrate some of the wider repercussions stemming from it. The data was collected during the initial stages of observation at H.Q.T.S.

### 'Providastation'

T.O.2: Now if a child could understand [then] here's two factors here. Either the bloke is not capable of understanding, which is not possible because he's obviously got where he is [i.e., S.O.], or he simply doesn't want to for whatever reasons he looks at. You know he simply doesn't want to get motivated because he's anti-establishment, he's anti-authoritarian, he's anti-everything. And in that light this is the one case that we've just recently had, that was probably the most difficult that we've ever had on the courses. But we accept that we've learnt from it and his assessment will bear resemblance to that. But if he wants a future in the Service he will definitely have to alter because he's the one who was commented to be ranked above his command capacity, and he won't get promotion at all unless he changes.

On visiting H.Q.T.S. to confirm arrangements for the C.L.F. course, T.O.2 informed the researcher that on the I.C.C. course the previous week the instructors had found a 'belligerent' whose attitude had proven 'unsatisfactory'. T.O.2 was actually writing a report on the course member in question - S.O. Hookes - at the time of the researchers visit and explained what had happened.

The main problem had occurred over a budget planning exercise: 'Providastation'. Hookes, who was leading the exercise, had apparently become angry when it was revealed that T.O.3 had forgotten to inform him of one of the central financial parameters of the exercise. Although

T.O.3 tried to amend the error, Hookes apparently refused to continue. When Hookes and T.O.3 began to argue, T.O.2 entered and became involved. Hookes apparently approached T.O.2 as if to strike him, but refrained.

While explaining the incident T.O.2 passed across the course evaluation for Hookes. The scores from all H.Q.T.S. instructors were low. In the space reserved for comments from the course member himself, Hookes outlined his criticisms of the course, notably in terms of poor presentation. Hookes stated that the course was of little value and that he would not be putting any of the course maxims to use when returning to station. T.O.2 remarked that Hookes was the only one of over 500 ("the one fifth of one percent") previous students who had ever criticised the course in this way.

When T.O.2 disclosed the incident, it had been four days since the finish of the I.C.C. T.O.2 said he had deliberately delayed writing Hookes' report in order to look at the position 'coldly and more objectively'. However, time had not altered his mind and although he had tried to make excuses for the man's behaviour he had still come back to the same conclusion - Hookes was a 'psychopath'. As T.O.2 had read many books on 'psychology and leadership' he was certain that by Hookes sudden changes in character - from being 'quiet and acting normally', to becoming 'pale, shaking and becoming aggressive' - this signalled he was psychopathic and thus unfit to lead. T.O.2 passed the researcher the report he had written on Hookes. The two A4 sides openly questioned Hookes' competence for holding Station Officer rank. The report had also been signed by T.O.1 before being sent to Hookes' Divisional Commander. T.O.2 suggested that it was lamentable that I, the researcher, had not been observing as I could have helped 'confirm' some of T.O.2's 'theories'.

Although the researcher did not openly discuss the Hookes case with T.O.3, and indeed was sure that T.O.3 was unaware of the researchers knowledge of the incident, later discussions highlighted a major reason for the breakdown. Throughout the I.C.C. T.O.3 had been aware of a growing uneasiness resulting from T.O.2's suggestions that he, T.O.2 (i.e., an A.D.O.), was not the sole assessor, but that participants were also being evaluated by T.O.3, a Station Officer like themselves. The challenge by Hookes had been primarily an expression of the uneasiness felt by course members in being examined by an officer of their own rank. This discontent had been augmented in that not only was T.O.3 younger than the majority of course members, but had achieved Station Officer rank through an administration position rather than through operational firefighting.

T.O.3: (It) was very embarrassing for me on the Internal Command Course because they were all Station Officers and the A.D.O. was constantly suggesting that I would in turn be assessing them, and I in turn was resistant to the theory that I should make any assessment on colleagues who are of a similar rank ... It was very unfair of him to suggest that I as a Station Officer should be assessing other Station Officers.

As the Hookes incident had exceeded the limits of acceptable criticism, this meant that formal measures were necessary to account for what had happened. Therefore, instead of submitting a straightforward assessment the incident prompted T.O.3 to write an objective 'report'.

T.O.3: In one instance, an individual made threats that disturbed me and I felt that I should put this down in writing. He made statements that disturbed me coming from another Station Officer, and I felt I should record that as an observer more than as the person to whom they were being made.

The very fact that Hookes had felt able to make this challenge, however, raised another issue, this in fact serving to promote further the need to consolidate course credibility: this was the question of political alignment. Although Hookes' dissidence would, in the long term, be

probably ill-advised, the political nature of departmental relations gives Hookes' critique a court of appeal.

Here, the relationship between Training School and the Divisional Commander's office makes for an implicit questioning of the usefulness of Advanced Training. This questioning is based on a structural incompatibility arising from the fact that whereas the primary task of the Divisional Commander is to secure the correct manning of stations, the primary task of H.Q.T.S. is to acquire operational personnel for training courses. Thus, when training courses are in progress the manning of stations becomes increasingly difficult.

This structural discord is enhanced by the fact that, traditionally, Divisional Commanders are line administrators whose career histories are almost exclusively based on operational experience. As such, their sympathy for staff functions such as the Advanced Training can be limited.

I.O.2: The Divisional Commander for some reason is the sort of animal who suspects every thing that we try to do to help. If we try and research into something, he wants to know what the motives are [and says] 'why do we need these statistics?' You know, if we try and improve something, then we are trying to do it because he can't do his job. He takes it very personally a D.C., I don't know why, but he does.

In the present case this asymmetry gave rise to a tactical process whereby as Hookes' comments would be read by the Divisional Commander, there was a need to prepare a detailed report on his behaviour endorsed by the Head of H.Q.T.S. (I.O.1 - a Divisional Officer). Following this, and in order to prevent further threats to courses, a stricter code of conduct was to be employed to offset any potential for conflict. Thus, while course members would still be encouraged towards a psychology of voluntary acquiescence (through, for example, explanations of their special status) they would,

nevertheless, be made aware, also, of the formal sanctions accruing from non-conformity.

I.0.3: In our brief for a course we tell the students in no uncertain terms that we expect to see a favourable response. And if at any time we would experience a belligerent then he would be reprimanded and may even be sent back. Now that is the ultimate punishment, sending them back to Division with a note for case saying this man so and so. Now in the long term that would have a most damning affect on any mans career regardless of what level of course he's on.

Therefore, in seeking to secure the credibility of junior management training, the outlining of 'ultimate punishments' is reinforced by bringing authority into high profile, especially through visits by the Deputy Chief Fire Officer. Moreover, after experiencing this break with compliance H.Q.T.S. has needed to alter its assessment system by introducing a failure grade to account for the evaluation of S.O. Hookes:

I.0.2: And we have in fact produced one failure on the last Internal Command Course. We had one really peculiar character on the last Internal Command Course and he has actually become unsatisfactory, his grading is F. Er, the final comment was put by the D.C., er by the D.O. says that the man is in our opinion, the man is ranked beyond his command capacity which is a strong word which says to the D.C. that he shouldn't be a Station Officer. So in the light of that I shouldn't think that this man's career has a terrific future unless he changes. And if he changes he's changed because we've trained him. Albeit that he hates what we've said to him, albeit that he's got upset and angry at what we've said. But if he now realises that he's not going to get on until he changes, then he changes. So training will have changed him and that's what its all about (Emphasis added.)

### 5.5 Further Mediums of Hegemony

Above we have highlighted practices enacted within the organisation. We now consider how the organisation itself is typified and accounted for by other hegemony media.

Here we offer brief assessments of the output of two mediums, which like the workplace, are commonly cited as crucial elements in the hegemony

process - school education and the mass media. This part of the research, while only subsidiary, is included in order both to comply with Gramsci's analysis of the plurality of hegemony agencies, and to illustrate the research opportunities for organisational analysts therein. The pieces below, therefore, are presented not as full blown enquiries, but merely as illustrations of the type of research available. Again the examples relate to our focal organisation of the Fire Service.

### 5.5.1 The Portrayal of the Fire Service in Children's Literature

#### Background and Data Collection

To assess how images of the Fire Service are understood in school education the researcher examined the portrayal of the organisation in school texts. It was felt that such analysis may aid the understanding of common-sense propositions used for socializing children in the everyday reality of large organisations<sup>21</sup>.

To this end, data was collected by way of a literature search in which the staff of the Children's Section of Birmingham Central Library assisted the researcher in assembling texts used in Birmingham schools. This search yielded 15 books whose contents related directly to the practice of firefighting, the books covering target age ranges from infant to middle-secondary bands (See Appendix 9). In addition to these texts the writer obtained copies of two books in the Ladybird series devoted to the Fire Service. These were included because of the vast yearly sales of Ladybird books (approximately 25 million copies published per year: T.U.C. Media Working Group, 1979) and their wide use in infant teaching.

#### Theory

To help assess this data the researcher sought academic literature relating Gramscian theory to the analysis of school education. However,

throughout the research he was unable to find any works of direct relevance. In lieu of this, the most proximate field of gender and racial stereotyping in child socialization was examined, and especially the role of children's literature.

Here contact with the Women's Research and Resources Centre (London) led not only to materials on gender imagery, but also to correspondence with other relevant bodies: notably the Curriculum Development Centre (London), the Schools Library Service (Hounslow), and the Campaign to Impede Sexual Stereotyping in the Young (London). Subsequently, a literature search revealed further relevant material; with representative of work here being Dixon (1977, 1982), Stinton (1979), Weitzman et al. (1972) and Wignell (1976).

While this literature highlighted how children's textbooks promote gender socialization, it did not, however, explore this in terms of reproducing ideology. The closest the literature came to such inquiry was in the assertion that sexist writing acts as a medium through which the sexual division of labour is realised, i.e., by perpetuating separate domestic and industrial role orientations. It was therefore of only marginal use in preparing the observations below.

Indeed, in the next section while instances of gender stereotyping are presented inter alia, the analysis mainly takes the form of introductory notes concerning how the Fire Service is explained in terms of social consensus and functional utility (at both intra- and inter-organisational levels). Thus, the material offers brief notes regarding the type of messages that may be examined by a more full-blown inquiry.

### Notes on Themes

The books obtained through the search were a varying mixture of fact and fiction. Factual accounts tended to stress the occupational role of the firefighter and the primary work activities of the Service, these often being outlined via an analysis of firefighting 'through the ages'. The majority of the fictional pieces were aimed at the younger junior age ranges (7 - 9 years), and concerned, for example, boys dreaming of (Clewes, 1972) or pretending to be (Keeping, 1980) firemen. As texts were aimed at varying age ranges the contents tended to progress from the largely picture dominated format for infants (e.g., Braithwaite, 1975; Usborne and Swallow, 1971) to detailed, often historical, accounts for juniors (e.g., Richards, 1971), to finally, outlines of the job of firefighter and the career structure of the Fire Service for secondary level students (e.g., Flemming, 1974).

Many of the factual accounts were in a 'series' on occupations and organisations. Frequently a series would possess an overall title in which either the reader or the topic (the Fire Service) would be situated as part of the existing social fabric, e.g., 'New Citizen' (Rule 1973) 'Living in Britain' (Owen, 1976), 'Serving Our Society' (Hobley, 1970) 'People who Help Us' (Ladybird, 1982).

Here the volumes would commonly outline the work of state controlled institutions (e.g., Police, Hospitals, Armed Forces, Lifeboat Service, Railways, Post Office - Ladybird 'People at Work' series) depicting these as public utilities and often as functionally interdependent. This was frequently the case for volumes dealing with firefighting, where descriptions of activities commonly highlighted certain functional relationships with other state activities. Most notable here were those with the Police who were seen to aid firefighters by, for example,

diverting traffic (Adams, p.9), keeping onlookers at bay (Owen, p.6) or by acting as rescuers themselves (Owen, p.22)<sup>22</sup>.

Where texts contained descriptions of operational functions, then levels of hierarchical discretion would be differentiated not only by formal rank (e.g., "At a small fire a Leading Fireman might take charge. At a bigger fire the orders might be given by a Station Officer or a Senior Officer" [Ladybird, 1962, p.6]; or "A Divisional Officer [in the white helmet] is in charge of firefighting operations" [Flemming, p.64]), but also by social nuance. In Rule (1973) for example, when the central figure ('Harry'), explains the Service, he refers to all members below his own rank (i.e., Sub-Officer) by first names, while those above by use of 'Mr.' ('that's Jim, he drives the machine. And over there's Jack the fourth man in the crew ... Mr. Turnbull is an Assistant Divisional Officer').

Gender stereotyping was also evident, this appearing in both factual and fictional accounts. In the Macdonald starters 'Fire' we find that; "Daddy makes a camp fire. The camp fire keeps us warm. Mummy cooks on the camp fire" (p.6). Similarly for the junior age band Day and Bowler's (1980) 'A Day with a Fireman' begins with 'Fireman John' getting ready for work: "His wife Shelagh takes great care to see that John's uniform ... is always well pressed and cleaned". The picture shows the Fireman drinking tea while his wife fastens down one of his shirt epilets.

While none of the post-Sex Discrimination Act books mentioned the possibility of firewomen, a recent infant text called 'The Witch on Holiday' includes a passage where a Chief Fire Officer is rebuked for suggesting that only men can be firefighters. In terms of racial awareness, all photographs in the sample were of Caucasians with only Owen (1976) presenting an illustration including a black firefighter.

Finally, while the sample was essentially of material written about the Fire Service, in many cases (especially the factual material) the books were either written by, or had been produced with the assistance of, a high-ranking Fire Officer (e.g., Ladybird, 1982; Adams, 1971; Pollard, 1974; Richards, 1971; Flemming, 1974), and thus were subject to official interpretation.

#### 5.5.2 Press Coverage of the 1977 Firemen's Strike

Finally, let us discuss the role of the mass media in the ideology process. Here, we examine material from the press coverage of the 1977 Firemen's Strike and illustrate how the images of the different parties are signified by 'differential legitimacy' (Hartmann, 1976).

#### Research Focus

In seeking to document the media's portrayal of the Fire Service, an immediate problem was the scarcity of day by day coverage. To overcome this problem it was necessary to reject a possible analysis of contemporary coverage and instead search for a period where the Fire Service regularly made the headlines. In recent years the Firemen's Strike (November 1977 - January 1978) has represented the period of greatest media coverage and so this was chosen as the primary research focus.

#### Data Collection

With the assistance of the University of Aston's Communications Research Group the researcher was able to obtain copies of twelve national newspapers (Daily Express, Sunday Express, Guardian, Daily Mail, Daily Mirror, Sunday Mirror, Observer, Sun, Daily Telegraph, Sunday Telegraph, Times, Sunday Times) and four provincial newspapers (Birmingham Mail,

Birmingham Post, Coventry Evening Telegraph, Leicester Mercury) for the period of the strike.

On obtaining this material the researcher assembled 635 cuttings (news articles, leaders, cartoons, letters, adverts), organising the data firstly by developing individual folders for each newspaper, and then filing each paper cutting in date order. The articles were next photocopied in triplicate to establish three overall reference files. Of these, the first file was simply a representation of the sixteen original folders in one overall file (i.e., sections in alphabetical newspaper title order). The second file, however, was the opposite, that is an assembly of cuttings according to date of appearance, but still retaining cuttings in alphabetical newspaper order. The third file involved ordering cuttings according to various themes from the literature (see below), with here a cross indexing system being developed to relate articles pertinent to several themes.

#### Gramsci, Media Images and 'Common Sense'

Despite the recent prominence of literature demonstrating political bias in news reporting (esp. Glasgow Media Group, 1976; 1980) the work of Gramsci has not obtained the visibility one might expect. While the concept of ideological hegemony may seem of particular relevance for understanding the political dimension of media presentations, frequently discussions of anti-union/anti-socialist bias have failed to address issues of embedded selective meaning, instead offering material discussions of ideological power (e.g., Westergaard, 1977; Elliott, 1980; Murdoch, 1980). Indeed, in Britain it has only been work by the Centre for Contemporary Cultural Studies (University of Birmingham) that has forged any notable appreciation of hegemony in understanding the media's ideological effects (see Hall, 1977; Hall, 1982; Hall et al., 1978; Morley, 1980).

From this group Hall (1977) uses Gramsci to explain the hegemonic code of media significations by developing an interface between semiological analysis and Marxist theory of ideology. Here, he is able to demonstrate how the primary cultural function of the modern media is, "the provision of the selective construction of social knowledge, of social imagery". As events on their own cannot signify, an essential 'encoding' process must operate whereby events can be 'made intelligible', this process of social intelligibility consisting of practices which, "translate 'real events' ... into symbolic form" (p.343). Therefore, despite ideological reproduction being constantly characterised by 'unstable equilibrium' (Gramsci, 1968) the media are able to display, 'systematically', "the ideological field of a society in such a way as to reproduce also its structure of domination" (p.346). Thus, the media serve through this process, "ceaselessly ... to perform the critical ideological work of 'classifying out the world' within the discourses of the dominant ideologies" (p.346).

Hall (1982) attributes the development of this form of analysis to what he terms the 'rediscovery' of ideology in media studies: this rediscovery being representative of the 'paradigm shift' consequent upon the decline of 'mainstream American pluralist positivism', and the emergence of an alternative 'critical' paradigm (p.56). What is notable for us, however, is not merely that this paradigm is influenced by Gramsci's concept of 'common sense', but that it is deemed useful in depicting the 'politics of signification' employed in explaining industrial disputes, i.e., the focus of data below.

Initially, Hall draws on Gramsci, and also the structural anthropology of Levi-Strauss (1967; 1969), to argue for the necessity of historicizing the forms of signification in order to explain their 'deep structure'<sup>23</sup>. It

is indeed these deep structures which serve as taken-for-granted inventories of traditional ideas and thus provide the practical knowledge of Gramsci's 'common-sense'. As such, each social stratum has its own 'common-sense' because every 'philosophical current' leaves a legacy of common sense 'sediment' as the 'documentation of its historical effectiveness' (see Gramsci 1971, p.326). Thus, only through an appreciation of such historicism can notions of 'cultural inventory' be available to explain the ideological embeddedness of common-sense statements.

Therefore, in relation to the reporting of industrial disputes, the sedimentation of such codes illustrates how, "a statement like 'the strike of Leyland tool-makers today further weakened Britain's economic position (is) premised on a whole set of taken-for-granted propositions about how the economy work(s), what the national interest (is) and so on". As with Nord's work earlier, we see here how for media analyses to win credibility, the whole logic of capitalist accumulation has to be assumed to be true, for, "without a whole range of unstated premises or pieces of taken-for-granted knowledge about the world, each descriptive statement would be literally unintelligible". In being founded on such sedimented hegemonic premises news statements - such as that above - are able to appear as, "proposition free, natural and spontaneous affirmations about reality" (p.74).

Morley (1980) also seeks to outline "the ideological structures embedded in the language of the ... (news) message" (p.246), this time by identifying the 'generative set' of ideological categories which supply the proposition relating 'codes'. Morley argues that the crux of ideology is not the often quantitative listing of overt misrepresentations (cf. Atkinson, 1982; A.C.I.T., 1971) but, after Gramsci, analysis of the

"matrix of thought grounded in the forms of our social life ... which constitute a network of established 'given' meanings embedded in the structure of language and common sense" (p.248). He argues that the signifying role of the media is to be found in, "the assignment of events to their 'relevant' contexts within these pre-established cultural 'maps of meanings'" (p.248). Here, through an analysis of 69 television news/current affairs programmes he catalogues a set of categories which he claims constitute the basic elements in the medias signification of industrial conflict. These 'Fragments of an Ideology' are outlined in Figure 29.

Morley argues that the medias prevailing image of society is 'one of basic social equality', that is, a portrayal with 'no irreconcilable structural conflicts of interest'. However, he also notes that when society's large institutions are signified, although the government is presented as being motivated in a 'non-sectarian' way (in line with the 'national interest'), and the state depicted as non-aligned in class terms, trade unions are presented as 'motivated by a narrow minded concern for their own sectional interest. Morley supports these categorisations with constant examples from tape recordings, here highlighting significations such as the 'unrepresentativeness' of union leaders and their 'militancy', and how conflict occurs "because of people's 'attitudes' rather than because of structural contradictions" (p.253).

He suggests that media ideology consistently reinforces a concept of the 'proper British response' to crisis, this being characterised by cooperation with the authorities, but contrasted with the 'moral wrongness of strikes and the moral obligations of strikers'. Commonly strikes are defined as 'irrational forms of behaviour' ('individuals reason but mobs chant') the coverage signalling the 'pettiness' of the causes prompting

## Figure 29

### Fragments of an Ideology: The Structure of the Fragments

1. The main actors and the stage
  - (a) the image of society
  - (b) the image of trade unions
  - (c) the image of employers/the state
  - (d) the image of the price/wage system
2. 'Explanations' of conflict
  - (a) conspirators model
  - (b) 'intransigent attitudes'
3. Moderation and extremism
  - (a) dedicated workers/irresponsible strikers
  - (b) moral obligations and exhortations
4. The definition of politics
  - (a) the limits of acceptable protest
  - (b) subordinate ideology and the opposition
  - (c) violence and irrational protest
5. The 'national interest', the consumer, and 'business as usual'
  - (a) the media, the public and the myth of the two giants
  - (b) normal working/the issue of peace
  - (c) disruption: strike cause 'chaos'

(Source: Morley, 1980)

the stoppage. Frequently such 'irrationality' is signified as particularly regrettable as the events "cause special hardship to the young, and the old 'who don't have the power of the unions'" (p.259). Once a dispute is in progress, however, it is the issue of restoring 'normal working' which becomes the major issue. Morley notes the remedial orientation common in reports such as that of 'Nationwide' (13.3.77), which suggested, 'In Leeds, things are getting worse in an atmosphere of increased militancy', whereas 'In Barnsley, good news, the workers have called off their strike' (p.259, emphasis in original). Finally, as television predominantly concentrates on immediate events this is seen to

aid the mystification of causal context. In only presenting a de-historicized and collapsed account, essential background information (usually introduced only by union representatives) is deemed as going 'off the track'. As such, "the overall tendency of the media (is) towards a fragmentation of the internal connections of 'events' and a concentration on the isolated details of their most 'spectacular' forms of appearance" (p.202).

The conclusions reached by Hall (1977) and Morley (1980) are generally corroborated by other media analysts (see Glasgow Media Group, 1976, 1980; T.U.C. Media Working Group, 1979; Hartmann, 1976). Amongst these, Hartmann's suggestion that, "the actions of trades unions and trades unionists are ... presented ... as having less legitimacy than those of employers and government" (p.16), serves a basic summary of research regarding the media's signification of 'differential legitimacy'.

In describing the press reports below we refer to some of these themes, and especially Morley's taxonomy, in order to illustrate how ideology is displayed in the coverage. We will not, however, offer a detailed media analysis, but instead give descriptions of how issues within Strike press equate with points raised above. Appendix 10 gives examples of cuttings referenced in the text.

### The Strike Press

The first national strike of British firemen commenced on the morning of Monday 14 November 1977 lasting sixty-three days until work was resumed on Monday 16 January 1978. Details of the contextual issues leading up to the strike are presented in Chapter 6, and we will concentrate here solely on the press reports for the strike period<sup>24</sup>.

In the case of the Firemens' Strike the remedial function of the (capitalist) press is witnessed in the very earliest reports. Indeed, in concert with arguments noting how moral exhortations (Morley, p.255) signal strikes as crisis, the Daily Mail of the Saturday prior to the stoppage (12.11.77, cutting 1) carries the front page headline, "As talks fail ... a message to the Firemen WOULD YOU LET THEM DIE TODAY?" The report offers two pictures of young children rescued by firemen (albeit in one case three years earlier), both pictures holding the same subtitle: 'A strike could have cost his life'.

The article indeed signifies not only the pettiness ('technical industrial relations problem') of the reasons for the strike, but also the calculating nature of the strike leaders. Although the central strike issue was pay, the report suggests it is the relatively pettifogging issue of hours (reduction) that is the crux ('centred') of a dispute which may lead to child fatalities.

"Negotiations centred around the question of a cut in the working week from 48 hours to 42 and when it could be introduced. [Sub-heading 'Trapped']. That was the technical industrial relations problem at the front of the negotiators mind. At the back of their minds and everyone else's, was the knowledge that these were not ordinary industrial relations - that the implications of were unthinkable. Unthinkable because of the lives that would be at risk. Lives like those of six-year-old Jason McCanne, or five-year-old Leslie Ryan."

The Daily Mail was not alone in making moral exhortations, with similarly the Daily Express (14.11.77: front page) headline reading: "The boy who was saved and the children at risk ... A fathers plea to striking firemen HAVE A HEART" (cutting 2). In heavy type the opening paragraph suggests: "The face of a little boy snatched from tragedy confronts Britain's firemen as they down tools today". Again children are pictured as the 'Victims' (sub-heading), while firemen are here categorised similar to

manufacturing workers. On page two the report is expanded, with the concept of big union battalions contrasted with the "Thin Green Line" of the "3rd Bn. Green Jackets equipped with Green Goddesses, ladders and lots of enthusiasm". In the piece that follows, a comparison can be seen between the character of strikers and non-strikers. Under the sub-title 'Union suspended him' runs an account of a 'defiant' fireman 'punished' by the union in being suspended from the F.B.U. In quoting the fireman the paper focuses on the potential violence and intimidation that 'defiant' men face: "I'll go back to work even if the pickets try to kill me". When the pro-strike view is cited it is an anti-monarchist statement that is quoted: "I wouldn't even turn out if I knew the Queen was trapped in her castle".

Several published letters also raised pleas to the fireman's conscience. Basil Humes 500 word letter in the Times ('Firemens' Strike: problems for the Christian conscience', 16.11.77) stressed the threat to the national interest, and how this withdrawal of labour was unacceptable to a Christian conscience:

"could not the firemen and their leaders reconsider urgently the possible consequences of their total withdrawal of labour? These consequences - in as much as they involve grave danger to human life - surely outweigh the economic benefits to be gained from industrial action".

Elsewhere, Church officials stressed the inbalance of 'priorities' in which firemen considered their weekly pay packets above human life, with a Daily Express (6.12.77: page two) headline noting: "On the day more children die, a vicar pleads to firemen ... **Lives before money**". The article offers a collection of quotes from the vicar such as: "Will you take this opportunity to get your priorities right?"; "Is it pay or people

that matter?"; "Is it money or mankind?"; "Call it a day"; "other peoples families matter just as much as yours".

While the stressing of moral obligations is the most notable theme of initial press reports, examples of the majority of Morley's 'fragments' can be seen in the coverage. Especially notable is the signifying of the 'image of society'. George Gale (Daily Express, 22.12.77) for instance suggested how, "a fireman's strike is very much a strike against the local authorities, the Government, and above all, the public". Similarly the concept of "wartime spirit" (Birmingham Mail, 31.12.77) pictured a mood in which "The public will stand firm ... The firemen should get back to work - and soon" ('Opinion', Daily Express, 14.11.77, cutting 3). Short cameo articles emphasised this public resilience, notable here being reports of neighbourhood firefighting groups ('Exclusive brigade is ready', Birmingham Mail, 11.1.78), of dissenting ex-firemen being 'ready for the call' ('I'll go to blazes - Pensioner George', Birmingham Mail, 16.11.77) and of specific examples of public opposition ('Ted's Rebel Picket', Birmingham Mail, 16.11.77, cutting 4). Cartoons also added to the signifying of indignation, as in the Birmingham Mail sketch of 17 November illustrating the moral superiority of the strike breaker (cutting 5). Here the striker/union official is 'accidentally' sprayed with water as the caption reads, "I'm sorry Arthur - I didn't notice you there taking the names of firemen who are working".

In typifying the character of the main actors a contrast is often made between trade unionism and good citizenship, as, for example, in the Daily Mail's (19.11.77) reporting of N.A.F.O.'s decision to reject strike action: "We are human being first, unionists after says a fire chief" (cutting 6). The Birmingham Mail front page headline of 1 December similarly reports of, "SECRET HEROES - No name firemen snub strike and

save life" (cutting 7). Frequently, union rules and procedures are portrayed as having questionable social validity, with some practices being openly condemned. The closed shop in particular is depicted as a repressive instrument serving to prevent the exercise of personal freedom:

"It appears that the union aims to ensure maximum support by threatening members who may wish to answer an emergency call with the blunt cudgel of the closed shop ... If a fireman answers an S.O.S. call he could find himself out of membership and out of a job. It is a definitive judgement on Labour's campaign to legitimate the closed shop and make it respectable that it could now be a direct instrument of death" (Sunday Express, 13.11.77).

With regard to the other main actors - the soldiers posted for fire fighting - they were regularly signalled as innocent victims of the dispute, notably in being kept from their families at Christmas. Here, they replaced the firemen as a ready source for affectionate portraits, especially in the provincial press (e.g., "IN THE LAP OF THE GODS", Birmingham Mail, 14.11.77; "Uncle Sam on the front line", Birmingham Post, 21.11.77; "Dan's new 'hot spot' is back in Brum", Birmingham Mail, 17.11.77; "Marines Get a Mum", Birmingham Mail, 16.11.77; "OUR SANTA IS AWAY FIGHTING THE FIRES", Sun, 15.12.77).

Both feature articles and letters characterised Army Firemen as self-sacrificing in being lowly paid but refraining from complaint. The Sun (15 December) in an article on the family life of one such firefighter, quoted the soldier's wife on the pay issue: "Most of us get about the same on less pay than the firemen. Give us a break, firemen, get back to work". A further quote was used as a secondary headline: "Have a thought for us, firemen, instead of being so selfish". The absence of Army husbands is not signalled as a result of structural factors, but because of firemen seeking a possibly gratuitous pay increase<sup>25</sup>. Indeed, a Sunday Times editorial (13.11.77) indicated the type of reasoning serving to

mystify such wage issues. Pay levels are portrayed as relative and intangible, although in general reflecting a justifiable common sense hierarchy of occupational status:

"Firemen are not villains or layabouts. They have a case for more pay. They work long hours. They are not generously paid. But the same can be said of many other groups: the police, for example, or servicemen who have had their charges increased while the pay has been frozen. Pay is not an absolute matter but a relative matter, not a question of black and white but many shades of grey. There is no clear right or wrong about it" (Sunday Times, 13.11.77, cutting 9).

For Morley's 'explanations of conflict' category, examples of both the 'conspiratorial' and 'intransigence' themes are discernable, especially with regard to impressions of 'politically motivated' (conspiratorial) militants refusing to acknowledge the 'reality' of the situation:

"There are the militants who want to stick it out to the bitter end, whenever that may be, and there are the realists who now appreciate that the Government are not going to give way" (Birmingham Post, 9.1.78)

"The hard core opposition to a settlement is now confined to London, parts of Scotland and Merseyside" (Daily Mail, 11.1.78).

Explanations in terms of intransigent attitudes were also legion as for example in the Daily Express (17.11.77) front page headline, "As the fire strike anger grows and the dangers increase ... STILL THEY CAN'T AGREE" (cutting 10), or for the Guardian of the same day; "Attitudes Harden in fire dispute". Such obduracy, especially on the part of labour, may be linked to injuries to 'innocent' third parties, as in the Daily Mail (16.11.77) report that: "Striking firemen stood by and watched yesterday as flames destroyed 12 years of Harry Guterman's life", (cutting 11).

As the theme of 'moral obligations' dominated the initial stages of the stoppage, it was the defining of 'acceptable' industrial action, and

especially the presentation of "violence and irrational protest" (Morley, p.257), which captured the later stages. The reporting of the 'unreasoning mob' is mirrored in several reports, but notably in accounts of flying pickets at Epping Fire Station on 12th December, in which: "MILITANT firemen from all over Britain fought with police ... as they [i.e., pickets] imprisoned part-time firemen inside" (Daily Telegraph, p.1, 13.12.77).

This incident was subject to wide reporting variations in terms of both detail and emphasis of events. Whereas in the Daily Telegraph (p.1) the headline read 'Firemen fight with police', and in the Sun 'FIRE PICKETS IN BATTLE'; in the Daily Mirror the content is broadened to 'Picket Fury as car hits two firemen'. Similarly, whereas in the Sun the essence of conflict is documented as: "THE month-old firemen's strike sparked into violence last night when flying pickets surrounded a station still operating", the Mirror begins explanation by suggesting: "STRIKING firemen's anger exploded into violence last night after two men were hurt on a picket line".

The Mirror reports how the anger of the 'over 150' ('100': Guardian, 'up to 200': Daily Telegraph 19.12.77, '300': Sun) strikers erupted because two pickets were knocked down by an Epping fireman (later questioned by police for dangerous driving) and needed hospital treatment. In the Telegraph and Sun, however, the emphasis is placed more upon the spontaneity of the fighting which, according to the Sun, simply "broke out". While the knocking down of the pickets is reported by the Mirror to be the cause of the incident, this issue is relegated to the fifth paragraph in the Sun, and then signified as largely unrelated to the taking to hospital of two pickets in paragraph three. Indeed the Sun uses the sub-heading 'Collided' to account for the incident. The Telegraph

explains the event solely in terms of spontaneous violence, and gives no cause for the trouble. No mention is made of the firemen taken to hospital, as instead, two fire officers describe damage to an appliance. In the fighting between the police and pickets the latter were seen to receive just deserts, "nursing bruised limbs and some reports said 'bloody noses'". On the 19th December the Telegraph used the incident as the focus of a leader on "FIRE STATION THUGGERY": (cutting 12)<sup>26</sup>:

"once again the unmistakable face of trade unionism is being exposed in this strike. Bands of cruising thugs are circulating to terrorise those who have remained on call, and their dependents. The union speaks loftily about instructions it has issued for picketing to be peaceful. But since its own vehicles are being used to transport the bully-boys, it cannot deny all implication in intimidation. The right to work is a favourite parrot-cry of the union leaders until it happens to conflict with their own authority. It is up to the employers now to ensure that those who have for whatever reason declined to join the strike, are not deprived of that right".

The 'limits of acceptable protest' were signified by press guidelines as to who could, or could not, legitimately participate in demonstration. Several papers highlighted the role of 'Trotskyist agitator(s)' (Daily Telegraph, 22.12.77) who had assisted the firemen at demonstrations (e.g., "Fake firemen whip up strikers fury", Daily Mail, 22.12.77). The Daily Express highlighted one of the activists for its headline story "JACK OF ALL DISPUTES", in which not only was the photographer able specifically to pick out the man, but moreover, the reporter to give details of age, education, past and present employment, and visits abroad (cutting 13):

"At the heart of the firemen's dispute yesterday appeared the so-familiar figure of Jack Dromey, street politician extraordinary. He may be fiery but he is no firemen: Yet that did not stop him, amid scenes of violence, giving advice to strikers".

The highlighting of violence was most pronounced, however, in reporting demonstrations outside the F.B.U. recall conference at Bridlington on 12th

January, during which firemen displayed anger in blaming certain officials for accepting defeat. The Daily Express ran the demonstration as its headline story: "The bitter end - fire leader blasts demo MY STRIKING ANIMALS" (cutting 14). Here, the previously castigated F.B.U. leader Terry Parry was now signified as 'PEACEMAKER'.

In Birmingham, the Evening Mail localised the violence theme in their lead news article: "FIREMEN TURN ON THE HATE", here reporting that: "the life of one fire officer has been threatened in a slogan daubed across the fire headquarters at Oldbury" (cutting 15). The Evening Mail leader reflected on the Bridlington issue, suggesting that although there remained a 'lingering feeling' that the firemen were a 'special case', that nevertheless:

"the biggest threat to goodwill towards the firemen was undoubtedly the disgraceful activities of the militant minority yesterday. Once again we saw rent-a-mob of left-wing extremists in action ... Though these fanatics were not representative of firemen as a whole they did the firemen's cause a great deal of harm".

The Daily Express (14.1.76) leader expressed similar sentiments in distinguishing 'moderation and extremism' (Morley, p.253) and suggesting, "as far as firemen themselves are concerned, the great majority of them should not be confused with that charabanc - load of hard boys whose brutal behaviour on Thursday was so disgusting". The reason for the irrational behaviour was explained by a philosophy first outlined on the 14th November 1977, i.e., that "we behave so much worse collectively than we do privately".

1. Or following Poutantzas (1975) analysis of 'political' class parameters, training from a non-authority to an authority level positions.
2. Albeit never completely - 'unstable equilibria', Gramsci 1971.
3. This question of the legitimation of consciousness, is similarly a topic for the Frankfurt School. The problem of the 'legitimation crisis' outlined by Habermas (1976) deeply questions the potential for 'orthodox' basal crisis - in any classical Marxist form - due to the expediency of available state economic mediations. In suggesting that it is the problem of 'legitimation' that faces mature capitalism, Habermas's analysis, like those of Gramsci and Lukacs, focuses primarily on superstructural forces and not on the economic determinism of orthodox Marxist research. With regard to our methodological theme, despite Habermas's (1963) assessment of phenomenology as essentially 'speculative', Dallmayr (1973) notes that in 'Knowledge and Interests' (1968), the framework of 'interests' underlying cognitive effects has marked similarities with Husserl's 'life-world', in that, "cognitive endeavours were depicted as rooted in a 'life context', a context conditioning the character and validation of knowledge claims" (p.318).
4. In this process Gramsci distinguished between two forms of intellectual: 'traditional' and 'organic'. At it's most basic, the traditional intellectual performs the role of disinterested neutral polymath, while the 'organic' intellectual is intimately tied to the ruling class, the latter having understood the direction in which history is moving.

5. Especially as a growing rationalism on the part of capital was emerging parallel a greater period of capitalist consolidation and an upsurge in European fascism.
6. Here, the threats are seen as being greater from non ex-Armed Forces personnel as they have not been formally instilled with an ethic of 'discipline'.
7. A recent issue within the Fire Service concerned the dismissal of a fireman for such a technical issue. The case of alleged racism by Senior Officers in the Lancashire County Fire Service [Times, 22.1.82; B.B.C. Radio 4 'Checkpoint', 21.1.82 and 16.6.82 ] revolved around the sacking of the only black fireman in the Lancashire Brigade for 'failing to salute an officer'. The fireman was later reinstated following tribunal evidence from members of his watch and an investigation by the B.B.C. The Senior Officers concerned were moved to other units in the Brigade.
8. In obtaining access to H.Q.T.S. the researcher was not only permitted to participate on the courses but also given copies of materials used for class teaching.
9. The concept of Cardre training was adopted because of similar schemes in the Armed Forces, for "developing a permanent establishment or nucleus of trained personnel capable of assuming control" (p.1).
10. Although the Fire Service has continually refrained from adopting a 'two-tier' entry system (as in the Armed Forces), Cardre courses are nevertheless seen as a form of accelerated promotion. In designing

the courses, Training Officer 3 outlined how this rapid promotion system worked, Cardre training being:

T.O. 3: A poor mans alternative to 'Accelerated Promotion'. The man that can come here and do the courses in two years - that is start at the Cardre L.F.'s course and finish at the Internal Command Course for Station Officers - at the end of two years then in theory what he's done is gone from fireman rank to at least temporary Station Officer in two years.

Until the mid-1970's the Fire Service operated a formal 'Accelerated Promotion' scheme. The scheme functioned by senior officers selecting firemen, considered suitable for rapid career development, and then sending them for a years supervision and appraisal at the Fire Services Technical College. Following this training, the participants emerged at Station Officer rank. The scheme was, however, abolished in the mid-1970's following pressure from the Fire Brigade's Union who argued that the practice fostered elitism within Brigades. Several present W.M.F.S. senior officers including the Chief Officer were former 'A.P.' students.

11. Although the C. Sub course is only half the duration of the C.L.F. the proportion of material related to administrative and organisational science is greater: with, apart from the above, there also being inputs in; 'planning and organising' (6), Finance (1), Budgetary Control (1), Communications (8), Health and Safety at Work Act (3), Written and Oral Skills (4) and Discipline Procedures (1).
12. One may reflect here on the recent case of the Kilburn Polytechnic lecturer who, while teaching on the Police Cadet Training course at Hendon, revealed examples of recruits' racist attitudes to the media.

13. The remarks by T.O.3 informing the course that more restrained behaviour was required at Sutton is part of a general awareness that different forms of behaviour are considered 'acceptable' for working in inner city and suburban areas. The following remarks from interviews at Sutton illustrate the conscious awareness of how modes of behaviour are justified according to the nature of the area.

Richards: We're inclined here to be a little bit reserved, really, if you like, because you can't just ( ) the machine here in Sutton, and you've got to look the part for the public that you're mixing with.

... or more vividly,

Haynes: I was at Central for seven years. They're attitude well the vicinity itself gives you that impression, you know. I mean theres a lot of coons and all that, and a lot of slums around there so your whole attitude is kick the door in, get in, put it out, and lets go. Here (i.e., Sutton) you turn out, you've probably got a bloke with a hundred thousand pound house, you know, carpets knee deep. So you walk in there and you think, 'well, I've got to watch what I do here'. And more firemanship comes into it at this station than at Central because you're thinking 'right I've got to look after this blokes wotsit, because he's paid a lot of money for that'. And you know, 'oh, look at that, he's got a tapestry on the wall, I won't put any water near that wall, you know leave that alone'. You're thinking, you're more conscious of the place you're going into here than you are at Central. Central is more of a blunder in, and spray it out, and come out.

14. Indeed the military influences in training are pervasive. On interviewing members of the Supervisory Studies Department at Moreton it was noticeable that even 'civilian' (i.e., not former firemen) social service lectures were predominantly from military backgrounds. Indeed the head of the Department wore a tunic emblazoned with military decorations at interview. Similarly, John Adair (now Professor at the University of Surrey) is himself an ex-Army Officer having worked at Sandhurst between 1960 and 1967. He divides his

professional writing between the fields of leadership and military history (see his 'Roundhead General: A Military Biography of Sir William Waller' and 'Hastings to Culloden').

15. Notable for the C.L.F. course is Adair's attempt to illustrate the suitability of the 'Sandhurst approach' for, "Leadership Training for Junior Managers" (Ch.8, 1968 - several examples of Adairs consultancy at this level are demonstrated, e.g., Dorothy Perkins Ltd., Wilson Holdings Ltd., Wates Ltd.).
16. Put basically, Adairs 'functional' leadership is a 'need theory' approach, stating that for effectiveness a leader must maximise three need areas of 'task', 'team' and 'individual'. Unlike the "leaders are born not made" (1968, p.11) emphasis of the 'qualities' approach, and the 'environmental' imperitives of the 'situational' (p.13) approach, 'functional' leadership suggests that although individuals can be trained to control a 'situation', that nevertheless, "the personality of the leader is not ignored" (p.19). To obtain the optimum fit of these three needs, Adair maintains that the leader must ensure performance of 'six key task functions' - planning, initiating, controlling, supporting, informing, evaluating (1968, pp.150-1) - either through completion himself or by the group under his control.
17. Apart from Adairs books the only other document used in formal teaching is a Sandhurst pamphlet entitled 'Serve to Lead'. This is mainly a set of readings taken from works of military leaders such as Montgomery, Hackett, Slim, Wellington, etc.

18. The following advice is given for avoiding awkward situations: "if someone challenges an answer or score, firstly ask other people in the seminar group for their views. If the person challenging a score receives significant support, then say something like this: "this exercise was written by a leading management theorist and he's been developed through use with many groups like ours over several years. However, no answer can be valid in all situations and it may be that your experience is significantly different from that of the author and earlier participants. If the majority of you concur, we will amend the answer or scores".
19. The analogy between the fiction of 'Gathering of Eagles' and everyday routine of the Service has in fact been carried as far as the suggestion of S.A.C. - type inspections being implemented in W.M.F.S.:

I.O.2: Within Gathering of Eagles there's what they call an O.R.I., Operational Readiness Inspection, where a plane flies in, unannounced B.52 comes in, and its full of five star generals, colonels and everything else. And they're there for 24 hours, they test everybody on everything from structures top and bottom, terrific. And I've suggested, the boss [I.O.1] is starting it off, that we should do a very similar thing. That we should go out with a high powered team, unannounced for the sake of the division and the brigade ... we will be looked upon in the brigade as the high powered inspection ... yes the benefits that they will have had from our high powered inspection, because we've got our team right. You know, if we're saying we're the best, then we've got to be the best, there's no use just having anybody. We can say 'you're not doing that procedure right, how about this'. Or 'when you do that, why don't you try doing that.' And get all those collated together and put them on that one day, and great, you know, and bingo we're gone again, and they're working more efficiently. The D.C. can have an indepth report if he doesn't want to attend himself, 'look at how my stations (are) doing', you know. And in the end we will be treated as part of the brigade instead of just a sort of nebulous unit stuck on the side, and thats what we've got to fight to do".

20. A later session by T.O.4, however, appeared to directly contradict this proposal of a "come and do" leadership style:

T.O.4: You'll probably find that, if you go back to your station now and judge various station officers when they get involved in incidents, you'll probably find that the station officer that you've got the most respect for, the one that you know is a sound bloke, that you'd sort of do anything for, and who fights the fires the right way is probably the one who's standing out on the front pavement hardly moving. Because he's got everybody else working for him.

21. The writer considered as an additional research focus an analysis of the children's television programme, Trumpton. This was contemplated in respect that recent research has not only demonstrated the hegemonic process in television entertainment generally (e.g., Gitlin, 1979), but with Goldman's (1982) analysis of 'Mork and Mindy', the embedded cultural meanings available within a single programme. Although an analysis of relationships within Trumpton was begun, this was discontinued in light of the wide range of empirical investigations already in the schedule.
22. In story of Fire Brigade Willie (Clewes, 1972), Willie turns his attentions to firefighting after previously deciding to become a 'special branch detective' (p.46).
23. For Hall the deep structure of a statement has to be conceived as the, "network of (ideological) elements, premises and assumptions drawn from the long-standing and historically-elaborated discourses which (have) accreted over the years, into which the whole history of the social formation (has) sedimented and which now constitute(s) a reservoir of themes and premises on which, for example, broadcasters (can) draw for work of signifying new and troubling events" (p.72, brackets added).

24. Although this analysis is restricted to press coverage of the strike, research into the dispute was more wide ranging, with interviews being concluded with firemen who had manned the picket lines, and union officials who had been involved at branch, regional and national levels (including the present General Secretary).
25. The Birmingham Mail in fact launched the 'Evening Mail Forces Fund' (cutting 8) to 'thank the troops' and 'pay for their comforts and entertainments'.
26. The Daily Express editorial of 14.12.77 uses the incident to support the philosophy that, "it is a bitter paradox that the firemen who are individually decent and courageous men, can collectively act so immorally".

CHAPTER SIX: INDUSTRIAL RELATIONS AND THE LABOUR PROCESS  
IN BRITISH FIREFIGHTING, 1833 - 1979.

## 6.1 Introduction: Time, State Employment and The Labour Process Debate

"Time is now currency: it is not passed but spent"  
Thompson, 1967, p.61

Having analysed the Fire Service, using, firstly, functional-behavioural; secondly, phenomenological-ethnographic; and thirdly, critical-ideological precepts, we now move to a structural-historical analysis.

For this study, we enter the area of 'Marxian' or 'Radical' structuralism (Bottomore, 1975; Burrell and Morgan, 1979), and therefore work informed by the political economy of the 'mature' Marx, and notably the exemplar of the three volumes of Capital (1867, 1885, 1894). Here our critique of totality centres not on consciousness or 'cultural revolution' (Brown, 1973), but on the economic relations of contradictory elements in the capitalist 'world system' (Wallerstein, 1976). Instead of focusing upon superstructure and the sedimenting of hegemony, we examine the concrete actions of labour, capital and the state in the labour process.

### 6.1.1 The Labour Process

The past ten years has seen a resurgence of interest in the labour process, and here a revival that has come to dominate Marxian analyses of political economy. While debate has long reigned over both the reproduction scheme of Capital Volume 2, and the falling rate of profit thesis in Volume 3, as Buroway (1978) notes, only since Braverman (1974) have Marxists been shaken from a passive acceptance of Volume 1 and been incited to examine, "changes in the productive processes ... (and) ... changes in the occupational structure of the working population" (Braverman, p.9). In the wake of Braverman, much research has focused on case study analyses relevant to his de-skilling thesis (e.g., Wood, 1982; Zimbalist, 1979), although increasingly the labour process debate has

widened its scope, with in Britain for example, recent attempts being made to relate questions of gender (Grieco and Whipp, 1984; Podmore and Spencer, 1984; Tinker, 1984), the state service sector (Fryer, 1983; Cousins, 1984), and new technology (Lane, 1984; Storey, 1984), amongst others.

Despite this widening of focus one trend has been especially notable, that is, the increasing employment of longitudinal accounts and especially craft histories. Here, in response to Braverman's critics, researchers have progressively sought to explain not only the development of deterministic management strategies, but also (and in some cases dialectically) the initiatives of labour (Storey, 1983; Gospel and Littler, 1983). Increasingly, such labour process reports have come in the form of periodized accounts of specific issues in individual firms or industries<sup>1</sup>.

To be in line with the forms of analysis conducted by such researchers, we will, below, adopt a methodology typical of that used in such work. In our subsequent empirical assessment we examine the specific issue of work time reduction in British firefighting by way of a periodized longitudinal analysis.

#### 6.1.2 Work Time

Our archival research offers an historical analysis of events impinging upon the establishing of working hours in firefighting. As such, the analysis has as its exemplar a central feature of Marx own analysis, i.e., his documenting of employer, labour and state activities within the 'struggle for a normal working day' (Capital, Vol.1, p.375 ff). Indeed, many commentators (e.g., Aglietta, 1976; Palloix, 1976) have noted the importance of this issue for labour process analysis, due to its

centrality to Marx labour value theory of value and, thus, to the origins of labour process theory itself.

The importance of the time-reduction issue arises from its place in Marx analysis of the 'valorisation' process, which emerges consequent upon moves to progressively reduce, through the Factory Acts, the duration of factory hours from the mid-19th century onwards. Given such legal reductions it became necessary, increasingly, for capital to realise the production of 'relative' rather than 'absolute' surplus value, and therefore to progressively develop methods of 'machinofacture'. For Marx it was only in terms of time that the crucial demarcation in labour value theory could be appreciated, i.e., that between value and surplus value.

As Marx noted, in order to appreciate the nature of the exploitative wage relationship, we must note how 'necessary' and 'surplus' labour times are calculated in production, for here, "if we ... compare the process of creating value with the process of valorisation, we see that the latter is nothing but the continuation of the former beyond a certain point" (Marx, 1867, p.991). Marx illustrated how the success of reform bodies such as the 10 Hours Movement forced upon capital the necessity of developing work methods permitting an 'intensification' or 'condensation' of labour, and thus, systems imposing upon the worker, "an increased expenditure of labour within a time which remains constant, a heightened tension of labour power, and a closer filling up of the pores of the working day" (Marx, 1867, p.534).

The logical conclusions from Marx analysis have been found in methods such as Taylorism and Bedauxism. Within labour processes of western capitalism, refinements in clock manufacture (see Landes, 1983) have not only served to promote the finer quantification of time, but increasingly

to facilitate work systems in which activities can be temporally accounted for in the most fractional terms. By such processes the use of time has increasingly served to impose discipline upon labour (Thompson, 1967) with, in the 20th century, the most successful manufacturing capitals being those who have optimally commodified time and therefore effectively reduced porosity (Clark et al., 1984).

However, such analysis relating work-time reduction to the labour process has traditionally concentrated upon the manufacturing sector. The notable aspect of the present research is that it seeks to illustrate the process of events consequent upon reductions in a state service occupation, and thus a sector not addressed by Marx. As Marx labour value theory accounted for elements of 'productive' (O'Connor, 1973) labour, the question has remained moot of whether we can actually speak of labour processes in service, and especially state service, industries: this despite researchers' efforts to show that examples of neo-Taylorism can be found in the public services (cf. Clark et al., 1984; Cousins, 1984; Fryer, 1983). Before we embark upon our empirical assessment, then, we need to examine this problem and seek to situate the labour processes of state services.

### 6.1.3 State Service Sector Labour

Although conceptual explanations of the state have been legion within Marxian/Marxist literature, the appreciation of labour processes in state sectors, and especially state services, has long been neglected. As Cousins (1984) has noted, recent analysts of state service employment have either concentrated on the 'class location of unproductive labour', or on 'the restructuring of state organisations' (p.1), to the neglect of appreciating services as contingent structures in the accumulation process proper. Fryer (1983), similarly, stresses this oversight, and also

highlights the need for a "substantial programme of research including detailed empirical enquiry and theoretical sophistication" (p.1). Only by such a programme, he feels, can we realistically evaluate the applicability of Braverman's thesis to the public services, and avoid the tendency to 'squeeze' state services into the conspectus of 'degradation'. Let us then, look towards some of the possibilities for situating state services.

Recently, writers considering state employment in the labour process (e.g., Clegg, 1981; Clegg and Dunkerley, 1980; Cousins, 1984; Dunleavy, 1980) have begun to consult works by sectoral analysts such as Offe (1975), O'Connor (1973), Habermas (1976), and Carchedi (1977). Here the appeal has not merely been their ability to relate state production/services within the general accumulation process, but, moreover that some have also suggested that while sectoral interactions do result in polymorphic economic rationalities (Offe, 1975), that nevertheless, the basic experience of labour vis-a-vis such realities, is essentially uniform. Using this rationale, the work of Carchedi (1977) in particular has offered openings for situating labour processes in services such as firefighting<sup>2</sup>.

In terms of sectoral linkages Carchedi (1977) offers three main elements in the totality. Here, in complement to the private competitive sector, he gives a division of state organisation between, firstly, 'capitalist state activities' (C.S.A.'s) such as state owned steel works and railways; and, secondly, 'non-capitalist state activities' (non-C.S.A.'s) such as state run hospitals, fire services and police. While the former are characterised by producing surplus value, and are thus profit oriented, the latter are characterised by welfare goals and as such towards spending an allocated budget.

It would seem from this that little structural difference exists between, for example, 'productive' private enterprises and 'productive' C.S.A.'s, as "both behave according to the laws of capitalist ... accumulation" in reproducing a logic of profitability through seeking to "advance money in order to increase it" (p.130). Similarly, 'unproductive' private or 'unproductive' C.S.A. organisations (e.g., private or state banks), while not by definition involved in the production of surplus value, are nevertheless engaged in production for surplus value through, for example, the advancement of loans to productive sectors at market rates. As such, the rationalities of the above seem easily contrastable with non-C.S.A.'s, in that questions of productivity remain difficult for state welfare activities as their services, "cannot be calculated in money terms since they are not sold on a market" (Offe, 1975, p.145). In terms of accumulation then, it would appear that non-C.S.A.'s, whose primary objectives involve creating 'use values' for meeting social needs, are clearly detachable from sectors whose basic rationalities are for increasing profit<sup>3</sup>.

This, however, overlooks one crucial feature of the totality, i.e., that if we openly accept this logic of disparate 'sectoral cleavages' (Dunleavy, 1980), we may also undermine any appreciation of the remedial functions of state services within the accumulative totality.

Carchedi reminds us that welfare organisations, although a depreciation from surplus, are nevertheless elements within the matrix of capitalist totality, and, thus, still imbued with capitalist economic criteria and rationality. Therefore, in terms of the everyday reality of labour processes there exists a collective experience of labour in non-C.S.A., C.S.A. and private-competitive sectors, this being reflected in a surface indifference to the social relations of production faced. As non-C.S.A.

labour, the fireman, in being 'labourer/exploited/non-owner' (i.e., 'collective labourer', p.130), is just as subject to means of production. He similarly remains rewarded at the relative cost of reproduction. Conversely Senior Fire Officers and Local Authority Officials, "whose function it is to oversee the labour process ... who ensure that labour is provided continuously and ... with the needed degree of efficiency and skill" (p.68), fulfil the 'global functions' of capital. Non-C.S.A. workers do not differ from those in other sectors in losing control over their labour. They simply provide service wage labour within the accumulative matrix, which is rewarded through re-allocation of surplus value produced in private or C.S.A. sectors. They are subordinated within and by a labour process whose surface relations at the point of (service) production essentially reflect those in the total competitive system.

## 6.2 Methodology and Data Collection

Having illustrated the role of the time-reduction issue in classical labour process theory, and also speculated on the situating of Fire Services within a labour process framework, let us now turn to the collection of research material itself.

As with previous studies the research commenced with a familiarisation with the literature; initially broaching landmark texts, and then progressively narrowing the focus to a research issue relevant in the Fire Service context. In this process the researcher began by turning to the classic exposition by Marx in 'Capital' Volume One as a preparation for reading Braverman's (1974) 'Labour and Monopoly Capital'. Here familiarisation with the Braverman thesis meant subsequently being required to consult, not only other landmark texts such as Chandler (1977) and Pollard (1968), but, moreover, a body of contemporary works generally regarded as standard literature (e.g., Burawoy, 1979; Clawson, 1980;

Edwards, 1979; Friedman, 1977; and Littler, 1982). Finally, to gain familiarity with the style of case study research here, the writer turned to the edited volumes by Littler and Gospel (1983), Wood (1982), and Zimbalist (1979).

Having consulted both general labour process theses and actual research cases, the writer turned to the collection of documents specifically relating to firefighting labour history. Initially, this concerned literature searches at both Aston University and Birmingham Central Library. Of these the latter was the more useful as it highlighted certain key texts (e.g, Blackstone, 1957; Holloway, 1973; Jackson, 1966; and Vince, 1975) which proved not only vital sources in themselves, but also as crucial referents for collecting further archival material<sup>4</sup>. It was this initial familiarity with historical texts such as Blackstone and Holloway, that illustrated how the question of hours reduction had been consistently the crucial issue in firefighting labour history<sup>5</sup>.

A second phase of data gathering concerned the collection of archival materials relating to the history of firefighting in Birmingham. Here access to primary documents of early Birmingham Fire Services was made available through the Local Studies Section of Birmingham Central Library, this material having been denoted by W.M.F.S. on formation of the Metropolitan Brigade in 1974. W.M.F.S. was, however, able to supply two further sources of data: firstly, copies of short histories of Birmingham Brigades and Stations (Klopper, 1954; Birmingham Fire and Ambulance Service, 1971; W.M.F.S., 1973; W.M.F.S., 1974); and secondly, access to policy reports/documents at both national (e.g., Holroyd Report, 1970; Cunningham Report, 1971) and local (West Midlands County Council; Policy Committee, Fire Committee, Personnel and Administration Committee) levels.

The final main data source was the Fire Brigades Union. Permission was obtained from the General Secretary for the researcher to consult archives held at F.B.U. headquarters in Putney. During this research a Union administrative officer assisted the writer in locating relevant documents. Material here came in the form of policy documents (F.B.U., and other bodies, e.g., N.A.F.O. and C.A.C.F.O.A.), executive council annual reports, and back numbers of the union's magazine 'Firefighter'. As the issue of the reduction to a 42 hour week was of primary interest, the researcher was allowed to retain copies of executive reports/periodicals of specific relevance. Besides collecting archival data, the researcher held formal interviews with F.B.U. officials to gain insights into contract issues during the 1970's and early 1980's.

The research material was finally assembled in terms of a chronological history of events relating to the establishment of working hours; with, as noted earlier, special reference being made to the strategic relations of labour, employers, and the state<sup>6</sup>. Indeed, the analysis below, in the wake of Braverman's critics, seeks to document the "dialectical interplay of control and resistance" (Storey, 1983, p.11) between these agents. Here, as "the problem of the determination of working hours ... poses the question of the trade union movement" (Aglietta, p.130), the development of organised labour is highlighted.

While we have noted the relationship between the time-reduction issue and labour value theory, we do not, however, seek to relate the research to a micro-economic analysis. Instead, we wish to emulate labour process historians in unfolding the events central to the time reduction issue, and then demonstrate their wider implications for labour process analysis<sup>7</sup>.

### 6.3 The Struggle for a Normal Working Day in British Firefighting, 1833-1979

"What is a working day? ... The working day contains the full 24 hours, with the deduction of the few hours of rest without which labour is absolutely incapable of renewing it's services".

Marx, 1867, p.375

#### Organisation

In British firefighting analysis of work-time reduction necessarily commences with the emergence of 'whole-time' work in London in 1833. With the establishment on 1st January 1833 of the London Fire Engine Establishment (L.F.E.E.) we witness the first attempt at 'full-time' firefighting in Britain, the L.F.E.E. representing an amalgamation of the capital's ten Insurance Company Brigades, and a measure designed specifically to reduce firefighting outlay. The L.F.E.E. was modelled on the successful amalgamation, in 1824, of the four part-time Edinburgh brigades, who on forming the Edinburgh Fire Establishment (E.F.E.) rationalised firefighting by dividing the city into 4 sectors, allocating each brigade a particular district. The E.F.E. had indeed represented the first major organisation of fire fighting in Britain, not only by divisionalising its structure, but also in developing set drill practices and specific selection criteria.

The development of whole-time firefighting, however, meant a decisive alteration in terms of employment practices and relations. In London instead of being engaged on a part-time 'call-out' basis, firemen were now full-time employees, and subject to a system of 'continuous duty'. Under this system, instead of living in the wider community, firemen had actually to live at, and later inside, the workplace. Initially this meant accommodation in houses (later 'quarters') around the station, the system dictating that when not attending fire calls or maintaining equipment, firemen were to be confined to the satellite houses with

negligible leave periods. Later, with the development from the mid-19th century of purpose built stations, quarters were actually built into the structure, thus facilitating faster mustering, greater visibility of labour, and reduced building expense.

Continuous duty, with its isolation and confinement, also resulted in an alteration of selection procedures. The E.F.E., had tended to base its recruitment on craft skill suitability. For example, it had only selected firemen from amongst slaters, carpenters, masons, plumbers and smiths; because of the necessity for pooling technical knowledge of building construction and water management, with a practical faculty for enduring heat and working at heights. With continuous duty, however, in place of craft suitability, the criterion changed to the ability to endure time ladenness, and to do so in a 'disciplined' manner. Instead of recruiting tradesmen, the L.F.E.E. adopted a policy of employing ex-naval (Royal Navy and Merchant) personnel, as they were used to being confined in small spaces for long periods, but while 'keeping discipline'.

#### State Employment

Forming the L.F.E.E. had been but one step in a drive by Insurance Companies (from the beginning of the 19th Century) to jettison the once profitable enterprise of saving property through firefighting<sup>8</sup>. It was not, though, until 1865 that their repeated threats to abandon direct responsibility were finally accepted, and the plant and equipment sold - under the Metropolitan Fire Brigades Act, 1865 - to the London County Council. However, with the formation of the Metropolitan Fire Brigade (M.F.B.), and thus with local authority control, instead of reducing work time, the average working day was actually increased, through reductions in off-duty time. Initially, the extension of already 'continuous' duty was a direct result of the change of ownership, in that on selling the

L.F.E.E., Insurance Companies again sought to lessen fire losses through establishing a salvage corps. In forming the London Salvage Corps the Insurance Companies successfully recruited many former firemen and thus reduced M.F.B. manning levels. As reductions in labour power resulted in the contraction of 'off-duty' time, a cycle developed in which manning levels remained well below 'establishment' simply because of public awareness of the extensiveness of working hours. Indeed the off-duty time for M.F.B. firemen in 1869 was only 4 hours per week.

The problem of recruitment, which in turn posed problems of fire cover, resulted in the government setting up a Parliamentary Select Committee in 1876. The minutes of evidence offer a vivid documentary of fire service labour conditions in the last quarter of the 19th Century. M.F.B. firemen described working duty shifts of 120 consecutive hours, of being a week without the opportunity to remove uniforms (including boots and hatchet), and of duty-men undertaking 60 hour shifts. Men on escape duty through the night were still required to answer calls during the morning. However, the Select Committee Report while noting the derisory conditions, did not result in any legislation for improvement. Instead, blame for low recruitment was attributed to fire officers, and their insistence upon extensive machine maintenance at the cost of greater rest provision.

Despite such conditions, the exclusive recruitment of ex-naval personnel had resulted in a labour market with no tradition of combination and thus workers slow to develop effective trade unionism. Therefore in terms of labour initiatives, opposition to the continuous-duty system was minimal until the immediate post-W.W.1 period. From the mid-19th to the early 20th century protests were made simply in the form of 'memorials' sent to the Employers via the Chief Officer. These memorials were essentially obsequious petitions in which firemen 'humbly begged' to make suggestions;

albeit generally to little effect. Thus, at the turn of the century firemen were still engaged on continuous duty while other trades had been reduced to 50 hours (see Table 16). In terms of national duty systems, even in the immediate pre-W.W.1 era we find for London a leave period of only 24 hours every fourteenth day, in Manchester 24 hours every eighth day, in Salford 24 hours every fifteenth day, in Glasgow 16 hours every thirteenth day, and in Birmingham 30 hours every fourteenth day. Although a correspondent to 'The Fireman' (1902) noted the "undercurrent of discontent" regarding hours, the letter comments that, "Firemen themselves dare not seek to improve their conditions" because "any man leading an agitation to that end might as well resign, because his position would be made untenable"<sup>9</sup>.

#### Organised Labour

Despite this trepidation towards combination, in 1906 a group of London firemen formed a branch of the Municipal Employees Association. The activity of the M.E.A. seems, however, to have been negligible with the first notable advance towards combination, and subsequently work time reduction, being the establishment of a firemen's branch of the National Union of Corporation Workers (now N.U.P.E.) in 1913. On formation, the branch submitted a 'union' memorial via the Chief Officer demanding that working hours be reduced from one day's leave in fourteen to one days leave in eight.

Table 16

Average Working Hours in Great Britain: 1880 and 1890

(figures in parantheses refer to the number of towns and areas on which averages are based).

Industries	Average Normal Hours		Percentage Change
	1880	1890	
engineering	53.9 (65)	53.7 (67)	-0.4
shipbuilding	54.1 (39)	53.7 (57)	-0.7
coach-building	54.8 (38)	54.6 (42)	-0.4
iron & steel	58.1 (26)	57.1 (30)	-1.7
ironfounding	54.5 (26)	53.6 (24)	-1.6
building (general contractors)	54.1 (18)	53.8 (22)	-0.6
cabinet-makers	55.8 (20)	54.7 (21)	-2.0
brickmaking	56.5 (35)	55.4 (41)	-1.9
pottery	56.8 (29)	56.3 (30)	-0.9
glass	54.0 (41)	53.7 (41)	-0.6
chemicals	58.4 (35)	57.3 (39)	-1.9
printing	53.9 (57)	53.6 (59)	-0.6
bookbinding	54.1 (19)	54.1 (19)	0
boot & shoe	55.1 (32)	54.9 (35)	-0.4
tailoring	56.6 (29)	55.9 (28)	-1.2
cigar & tobacco	52.6 (32)	52.4 (35)	-0.4

(Source: Bienefeld, 1972, p.122)

This N.U.C.W. demand had the effect of prompting the Employers to attempt the creation of in-house representation to emasculate extra-organisational influence, this being a policy attempted on several future occasions. The L.C.C. developed plans for three 'staff committees' one each for firemen, sub-officers and station officers. Unlike the N.U.C.W. no contributions would be required for the staff committee. All committee expenses would be paid for by the Employers, and time off would be given to attend

meetings. The Secretary of a staff committee would have direct access to the Chief Officer. Although sub officers and station officers acceded, rank and file firemen declined and instead forwarded a second petition, this time directly to the Employers. The Employers now deployed a policy of inaction towards the demands through refusal to recognise the N.U.C.W. branch, a measure kept intact - albeit with qualifications (see below) - until 1941.

The firemen's demands of 1913 were nullified (as were similar industrial protests by the miners, dockers and railway workers) by the onset of world war, through which a large proportion of the labour force enlisted in the Armed Forces. Nevertheless, by August 1918 the low living standards that had refuelled industrial unrest towards the end of W.W.1, together with a similar refusal for union recognition, prompted a strike by a body to whom firemen had traditional links - the Metropolitan Police. Since the formation of local police forces from 1829 many authorities had reduced outlay by using police in a dual role as firemen<sup>10</sup>. Thus, when Police won advances in pay and conditions this served as a catalyst for the N.U.C.W. to submit a further list of demands. Here, the branch demanded; firstly, that questions of pay and conditions be conducted exclusively between its own Secretary and the Employers; secondly, that leave be extended to one day in ten immediately, and then to one day in seven at the end of the war; and finally, that Employers should introduce three eight hour duty shifts from twelve months after the declaration of peace, i.e., a working week in line with the majority of industrial workers. The demands were accompanied by the threat of a strike ballot if the points were not conceded.

The Employers responded by meeting the Union representatives at a joint conference on 13th September 1918. N.U.C.W. Branch Secretary Bradley

withheld the strike ballot in an attempt to press for recognition - this being the main demand pressed for at the ensuing conference. The Employers, however, still moved for a staff committee, and in the resulting impasse the Government intervened in the form of the Ministry of Labour, meeting Union representatives and suggesting arbitration under a Chief Industrial Commissioner, Sir George Askwith. Through arbitration, Bradley agreed to the establishment of a 'representative body' provided that the 'Spokesman' need not be a member of the London Fire Brigade, thus preventing encapsulation. Askwith's award while establishing the right for firemen to join a union, nevertheless, restricted recognition for the L.F.B. in the form of the London Fire Brigade Representation Body (L.F.B.R.B.), with Bradley (a full time N.U.C.W. Executive member) as spokesman. Thus, an anomalous compromise was reached in which although a national firemen's union was soon formed, the position of Secretary was to be held by the Spokesman of the L.F.B.R.B.; which had a separate existence, although being the largest unit in the national union. Further, the Askwith Award while establishing the right to combine, had bound the L.F.B.R.B. with considerable restrictions. Notable here was prohibiting involvement in disputes outside the L.F.B., and permitting it to negotiate only on conditions of service and employee welfare - thus keeping Employer and Senior Officer perogatives intact over issues of discipline and methods of management. Although in December 1918 the L.F.B.R.B. succeeded in securing an increase in leave time to one day in ten, the other demands were followed by an Employers' announcement that the Government was to set up a committee to consider hours, wages, and pensions.

The Police Act, 1919, had soon confirmed the advances won by the police through the Desborough Commission. Here the police Employers, backed by

Central Government, had in return for concessions in pay and conditions, been able to disburden themselves of the Police and Prison Officers Union. They had also been able to establish an in-house body (the 'Police Federation') within an agreement forbidding any policeman, or police-fireman to join a trade union or political association.

However, as several larger wholetime brigades had established a practice of equal pay rates for police and firemen, this raised the question of retaining pay parity. Although pay was not as great an issue as continuous duty, the L.F.B.R.B. in the wake of the Police award, was to use the Police/Firemen relationship to apply further pressure for an end to continuous duty and for an eight hour day. In London the Employers again asked the L.F.B.R.B. to await the promised Government Committee that would consider conditions nationwide. The L.F.B.R.B. pressed home for concessions, and still holding the threat of a strike ballot reached an agreement with the Employers for police pay parity plus a two shift system of 72 hours (9 hour day shift, 15 hour night shift); albeit with the proviso that there was no further 48 hour week demand before July 1922.

Although in London continuous duty had been broken by the beginning of 1920, the 72 hour week was considerably greater than the eight hour day demanded. The implication had been that for any concession lower than 72 hours, police pay parity, plus nine months outstanding back pay, would be lost. Therefore the 72 hour week, with one day off in seven, was commenced in selected London stations during the Summer of 1920, the L.F.B.R.B. also negotiating for firemen below station officer rank to be free to live off-station. This new system for London would require almost a doubling of manning levels when fully installed.

### Internal Division

The concessions won by the L.F.B.R.B. very much influenced the work of the Government's Middlebrook Committee which began sessions on 20th February 1920.

The four man Committee were anxious, initially, to recommend for the provinces a duty system of eight hours work, eight hours standby, and eight hours leave. This would involve an increase in manpower of only one half, instead of double under the two shift 72 hour system, and treble under a 48 hour week. The system, however, received little support from brigade representatives. Although the Firemans Trade Union and the Municipal and General Workers Union representing the majority of firemen in London, Manchester and Birmingham pressed for the eight hour day, 48 hour week, they nonetheless stated that they would agree to the two-shift 72 hour week already won in London. However, a national case for 72 hours was frustrated when some provincial brigades expressed reservations about changing from continuous duty. Against a background of acute housing shortages, representatives from Glasgow, Aberdeen, Edinburgh and Leicester stated their approval of continuous duty. Here, the need for increased manning levels consequent upon a 72 hour week was perceived by provincial (especially married) men as a possible threat to keeping quarters.

Thus, the Middlebrook recommendations of the end of May (1920) emphasised the views of Glasgow, Aberdeen, Edinburgh and Leicester, in suggesting continuous duty to be not only the most efficient and economical system, but one on which firemen would be willing to continue providing sufficient leave be granted. Where any changes were desired they recommended the eight hours duty, eight hours standby, and eight hours leave - albeit that the majority of witnesses had declared it impracticable. The final report

was forwarded by the Home Office to all national Employers, but with no statutory requirement to implement any of the findings.

In August, 1920, came the first provincial reaction to Middlebrook. In Manchester the Employers offered one day off in four in place of changes to the continuous duty system. Through the M. & G.W.U. the men refused the offer. Instead they demanded an eight hour day and gave twenty-eight days notice of a withdrawal of labour if the demand was not met. Although Manchester's Chief Fire Officer advised that some revision of duty hours was inevitable, the Employers turned instead to the Chief Constable of Manchester, Sir Robert Peacock. Peacock suggested amalgamating the Fire Service in to the Police two shift system, but with an agreement for firemen to turn out to all serious fires if required. This, Peacock felt, would be beneficial in economic terms as well as in having the 'advantage' of having the Police Federation to ventilate welfare matters instead of the M. & G.W.U.. Despite subsequent representations all members of the Manchester Brigade were sworn in as constables in November 1920 and Manchester became a Police Brigade.

### State Regulation

Although duty systems remained generally static throughout the depression, when Labour gained control of the L.C.C. in 1934 the L.F.B.R.B. immediately renewed its demand for the 48 hour week. One of the conditions for granting the 72 hour two shift system (in 1920) had been that firemen would not table another demand for the 48 hour week before July 1922. Although it was twelve years hence, the case put to the L.C.C. was rejected. In a drawn out debate between F.B.U. General Secretary (and L.F.B.R.B. Spokesman) Kingdom, and L.C.C. leader Herbert Morrison, the latter argued that the Union had submitted an unreasonable demand as only

7 other authorities had duty systems comparable with London, and not a single British brigade had a week of less than 72 hours.

In 1936, however, in light of the rise of Nazi Germany, the Government appointed the Riverdale Committee to evaluate fire service provision. Riverdale reported large inadequacies in fire cover, especially, in terms of response to possible air attacks. This led to mounting pressure to improve fire services and in turn, first, to the Air Raids Precautions Act, 1937, authorising local authorities to organise Auxiliary Fire Services; and second, to the Fire Brigades Act 1938 which for the first time required provincial local authorities to provide a fire service. As fire services had, due to the worsening international situation, increased their own strategic significance, the F.B.U. was able to increase the potency of its demands. In 1938 the L.C.C. offered a weekly duty system of 60 hours, but as this was tied to restrictive conditions the L.F.B.R.B. rejected the offer. Further L.F.B.R.B. pressure resulted in Morrison in early months of 1939 offering a straight 60 hour week to come into force from 1st January 1940. The L.F.B.R.B. then accepted an offer which in fact left the dual system untouched, the reduction in hours being facilitated by an extra leave day accommodated in the rota.

The start of the new duty system was postponed, however, due to the outbreak of war in September 1939, with the Government imposing a return in London to continuous duty (albeit with an Employers promise that the 60 hour week would be restored at the cessation of hostilities). After the first week of the war the duty system was agreed to be reduced to a 120 hour week of 48 hours on/24 hours off as the expected air raids failed to occur. In many provincial brigades, however, continuous duty with one day off in seven continued to be practiced, although the 48 on/24 off system became standardized with temporary nationalisation from May 1941.

Nationalisation in witnessing the removal of Police Brigades, had seen police-firemen transferred into the National Fire Service and thus now eligible for union membership. Indeed, a major coup for the F.B.U. had been its success in recruiting A.F.S. firemen in face of Home Secretary Anderson's attempts (during 1940) to debar Civil Defence membership on grounds that combination threatened the 'national interest'.

Nevertheless, when Anderson was replaced by Labour's former L.C.C. leader Morrison, the latter announced in his nationalisation package proposals for a National Fire Service Federation in line with that of the Police Federation. Again this was to have separate sections for differing ranks, although with representation directly to the Home Secretary. In response to this latest encapsulation attempt, the F.B.U. called upon the General Purposes Committee of the T.U.C. and demanded a meeting between F.B.U. General Secretary Horner, T.U.C. leader Citrine, and Home Secretary Morrison. In face of T.U.C. opposition Morrison withdrew the provision for rank and file firemen, with Horner using the situation to obtain official recognition for the F.B.U. which Morrison granted in May 1942.

The end of the blitz saw a renewed fight to reduce hours prior to the promised 60 hour restoration at the end of the war. During September 1941 at the National Conference in Birmingham, the F.B.U. launched the 'Fireman's Charter' calling for a national 72 hour week - exclusive of enemy action - and for a 'just' discipline code. Although the Union won a pay increase and an amendment of the discipline code, no reduction in working hours was gained until after the passing of the Fire Services Act 1947. The Act handed back the Fire Service to the local authorities and thus de-nationalised the Service. Furthermore, it finally abolished Police brigades, while establishing a National Joint Council for Local

Authorities Fire Brigades (N.J.C.) to negotiate conditions on a national basis between the Employers Associations and the Unions.

As the brigades were handed back to the Employers, the pre-war situation was similarly to be restored in that the 60 hour week promised for London was to be finally commenced in May 1947. Although this was seven and a half years late, the system was nonetheless to be a national standardized duty. However, although the 60 hour week was purported to be a national system, brigades with low establishment still operated more extensive duty systems such as the 84 hour week in Birmingham and Coventry. Moreover, even prior to the N.F.S. changeover there had been renewed conflict over manning levels between Union and Employers. While the Employers' associations requested no more than 12,500 whole time firemen, the F.B.U. argued that twice that figure would be necessary to make the 60 hour week a national possibility. Although the Home Office proposed an established figure of around 20,000, many County Councils sought to prevent adoption of the 60 hour week by offering extra allowances for longer shifts.

Attempts to deflect the 60 hour week were intensified after the defeat for the F.B.U. under the Ross Award of 1952, which finally removed police and firemen pay parity. Following the Ross Award, not only did F.B.U. membership fall in wake of a recruitment drive by the National Association of Fire Officers (NAFO), but during this vulnerable period Employers and Chief Fire Officers attempted once more to moot the idea of a Fire Service Federation. The 60 hour issue came to a head in 1954 in the Glamorgan County Brigade. When a number of men agreed, in exchange for increased pay, to undertake 'whole-time retained' duties, the F.B.U.'s Welsh District Committee asked Glamorgan Brigade members to modify their duty rotas to offset the practice. Although the Employers reacted by sacking 43 F.B.U. members, the men were reinstated following a wave of public

meetings in Glamorgan (N=60) and backing from the mineworkers. The F.B.U. continued to mount a national campaign of demonstrations against the extension of working hours, and on gaining T.U.C. backing for a 48 hour week, forced a N.J.C. review of all duty systems. However, whereas with the 1956 Duty Systems Agreement the Employers agreed 'in principle' to the 48 hour week, it was the 56 hour week - already adopted by some brigades in 1955 - that became accepted, the F.B.U. claiming that agreeing to 56 hours was but the first step towards the 48 hour objective.

### Skill Hours and Pay

Renewed pressure was mounted in the F.B.U.'s 'A Service for the Sixties' campaign launched at the 1960 Annual Conference.

The campaign had been triggered by the proposal of Chief Officers' to form an Officer Cadet Force, the plan being based on the premise that normal recruitment practices were not producing men of 'officer material' at a sufficient rate. The F.B.U.'s reply was that in order to attract quality recruits, there was a need to establish hours and pay scales consistent with skilled work, while also upgrading the skill content of the job (i.e., by replacing cleaning chores with fire-prevention work). To develop a more skilled and professional labour force the Union argued for the establishment of a Directorate of Training, whose aim would be to improve both junior management training and rank and file station training. Indeed, within eighteen months of the campaigns launch, a joint training committee of the Central Fire Brigades Advisory Council (including F.B.U. representatives) made recommendations for establishing a Fire Services Technical College, with also a ruling being gained at N.J.C. level for the 48 hour week to be implemented nationally<sup>11</sup>. The campaign which had included a 6,000 strong lobby of Parliament, also succeeded in deflecting an Employers' attempt to break up the national pay rate. By

April 1 1965 the great majority of British brigades were on the straight 48 hour week, albeit that such a system had first been demanded 47 years earlier.

Fiscal Crisis

From early 1966, however, there began a train of events which, although eventually culminating the reduction of the working week to 42 hours, established this only after a nine week withdrawal of labour.

In the first months of 1966, N.J.C. negotiations resulted in an Employers' offer of a 7.5% increase in basic pay, the offer to be coupled with arrangements to increase working hours by bonus scheme agreement from 1st August. On 20th July, though, the Government announced a national prices and incomes standstill, with the agreed pay issue being referred by the Government to the National Board for Prices and Incomes. In May 1967, the Board's Paper No.32 recommended the 7.5% increase to last for two years, but this being coupled with an offer of an extra £170 per annum for firemen willing to extend working hours from 48 back to 56. As firemen's pay rates had only increased by 11% since 1962 - in comparison with an average 21% for industrial wages - the majority of brigades accepted the extended hours (see Table 17).

Table 17

Numbers of Men Below Sub-Officer Working Main Duty Systems: 1971

	1967	1971
56 Hour system	1,673	18,838
48 Hour system	19,862	2,018
Day manning	883	1,088

(Source: Cunningham Report, 1971 p.15)

Although acquiescence had been gained for the increase in hours, conflict increased in the early 1970s due to; firstly, attempts by Employers to extend day manning; and, secondly, some renewed attempts to break national pay rates. When the Essex Employers sought to introduce two differing pay ratios, the resulting 'emergency calls only' action resulted in a suspension of 80 firemen. An F.B.U. Conference recalled to discuss the recently published Holroyd Report, instead focused on the Essex situation. The Conference resolved, firstly, to invite the Government to appoint an independent Committee of Inquiry into firemen's pay and hours, while secondly, in order to give this request weight, to call for a weeks national ban on all non-emergency duties from 28th September 1970. Home Secretary Maudling whilst declining to set up an inquiry, nevertheless, agreed to consult the Employers. After consultation he invited both sides of the N.J.C. to discuss the question at a tripartite meeting on 17th November, the result being a decision to discuss the question of valuation (of the fireman's job) at N.J.C. level. The N.J.C., however, had previously agreed to such an examination as part of the December 1969 pay settlement. This had also included agreement to reduce from January 1970 (for pay calculation only) the basic working week from 48 hours to 46 hours, together with a further reduction of two hours scheduled for 1st April 1971. By early December 1970 implicit N.J.C. agreement had been reached for a pay increase of £130 p.a., with also the April 1971 reduction in (pay calculation) hours being brought forward to 1st January. However, the day previous to the scheduled N.J.C. meeting of 11 December, Maudling contacted the Employers to discuss the increase. When the N.J.C. met, the Employers stated that in the national interest they were now only prepared to offer a 10% increase. This was to include the monetary effect of the further two hours reduction, with payment being made in two stages:

5.5% on 1st January and the remainder on 1st April 1971. The Union rejected the offer. However, when further attempts at improvement failed, a recalled union conference on 12th January decided to accept the proposals as an interim measure - but only on the condition that an independent Committee of Inquiry be appointed to evaluate the fireman's job.

The Cunningham Committee was subsequently appointed in March and reported in November 1971. The report accepted the F.B.U. argument that firemen's pay should be assessed in relation to a normal basic working week of 40 hours, recommending also that hours above 40 be paid at enhanced rate of one and one third of basic rate. Furthermore, the Report reiterated the Holroyd recommendations for introducing fire prevention work, while also suggesting the concept of 'fully qualified' status for men who had served four years and met certain assessed skill requirements.

Although hours had been reduced for pay calculation, those actually worked during the early 1970s were still for the vast majority the 56 hour week. In November 1973, though, and in the wake of a strike by Glasgow firemen, the F.B.U. were not only able to win a pay settlement outside the Tory Government Stage 2 pay policy, but importantly, were able to base the settlement upon an 'unsocial hours' agreement; here establishing a framework for returning to the 48 hour week through increasing national manpower by 4,000. When a recalled conference to discuss a pay adjustment was called in November 1974, the 48 hour week had been established nationally. Here, not only did the F.B.U. consolidate its position through proclaiming a continuing overtime ban (other than casual), but using the Cunningham 40 hour pay calculation concept, actually moved to claim a standard 40 hour working week.

The Employers subsequent refusal to consider the 40 hour claim led, however, to a decision at the 1975 Annual Conference to propose a 'Programme of Action', whereby 'emergency calls only' were to be undertaken for the three months from 12th May. Although the Home Office sought to intervene by conducting a 40 hour Feasability Study, the Union refused to participate when the Government made clear that its intention was to avoid any increases in manpower.

The hours issue was now well entwined with pay considerations, as through the restrictions of Stages 1 and 2 of the Government's 'Attack on Inflation', firemen's earnings, like those of other public services, had worsened through wage drift. The F.B.U. pressed for a continuation of the evaluation, and secured at N.J.C. level an agreement to create a 'Working Party on Job Evaluation'. As the subsequent job description - 'The Qualified Fireman's Job' - contained no reference to pay, the F.B.U. Annual Conference voted to seek immediate negotiations to relate the job description to actual pay rates, and thus not to support Stage 3 of the Government's pay policy. The Conference, however, was attended by Merlyn Rees the Home Secretary. When the Conference reaffirmed its demand for a 40 hour normal working week - albeit that the hours question was now very much secondary - the issue was perceived by Rees as of major significance.

In July the N.J.C. at the F.B.U.'s request agreed to set up a Joint Evaluation Working Group under Lord McCarthy, its brief being to relate, in pay terms, the fireman's job to comparable work in industry. As the Working Party sat, however, the Chancellor announced that the general level of national wage settlements should be moderate enough to secure that the nation's earnings increase should be no more than 10%. At the same time the Home Office Study Group on hours were recommending a

reduction to 42 hours, albeit at an 'appropriate' future time when 'economic circumstances permit'.

McCarthy's Evaluation Report was published in September 1977. On being accepted in principle by both sides of the N.J.C., the F.B.U. lodged a claim based on McCarthy's findings for average adult male earnings plus 10%, the new wage level to operate from 7th November. At the N.J.C. meeting of 25th October the Employers made an offer of 10% under the Government's guidelines but with continuing talks on a future pay policy. They wished, though, to reserve their position on the Home Office recommendation for a 42 hour week.

The subsequent Union rejection of the offer had repercussions in that on the day prior to the next scheduled N.J.C. meeting (for the 31st October) both sides received a Home Office letter stating that, "Ministers responsible would now be prepared for a reduction in hours to be negotiated with a consequential effect on hourly rates of pay". The reduction in hours could not, however, be implemented before Autumn 1978; although as the Government stated, preparations could begin before. The proposed pay increase was not, though, to be affected. At the meeting of 31st October the Employers now stated that they were prepared to accept future discussions on a reduced working week, but that the position on pay was unaltered. After further meetings led simply to reaffirmation of the established proposals, a subsequent F.B.U. Recall Conference on 7th November resolved to "commence strike action as from day shift Monday 14th November 1977", unless the claim for average adult male earnings plus 10% was met in the interim period. Further negotiations proved fruitless and strike action commenced on 14th November.

Following further deadlocks with both Rees and the Employers, the Union Executive met Prime Minister Callaghan on 29th November. Callaghan, while stressing that no deviation from the terms was possible, nonetheless gave an understanding that if a reduction in hours could be settled upon (for phase-in during November 1978), then the Government would make every effort to ensure that such an agreement would not be thwarted by adverse economic circumstances. After the meeting with Callaghan the F.B.U. Executive Council agreed to seek T.U.C. support for a campaign throughout the Trade Union movement against the Government's pay policy. However, an initial meeting with the T.U.C. Finance and General Purposes Committee; and subsequently an approach to the full T.U.C. General Council, both failed to gain backing.

On 8th December Home Secretary Rees met with both the Employers' Secretary, and the F.B.U.'s General Secretary to advise of a Commons statement proposing the definition of a relationship between the pay of qualified firemen and that of other manual workers. Although the Government would not agree to an increase beyond the 10% in the year beginning 7th November 1977, it would agree to the full implementation of an improved pay formula - linked to other occupations - by two approximately equal stages in November 1978 and November 1979. Such a formula would not be affected by changes in economic circumstances. Furthermore, it would suggest that negotiations continue on the reduction of the 48 hour week, such a reduction being on the basis of more productive working routines permitting a more cost effective use of time not spent in fire fighting. Thus, on December 9th the F.B.U. Executive received an offer from the Employers, the main points of which were, firstly, an increase in basic rate of 10% from 7th November 1977; secondly, the introduction of a 42 hour week without loss of pay from

November 1978; but thirdly, an agreement that the basic rate for a qualified fireman be fixed at the level of the adult male manual 'upper quartile' figure<sup>12</sup>.

Although Union regions by the 14th December had reported that the offer did not merit a Recall Conference, when further negotiations in the New Year failed to breach the 10% limit, the F.B.U. Executive - now convinced that no improvements could be made - decided to ask for a recall of conference on 12th January. The Recall Conference agreed to accept the offer of the 10% plus reduced hours and upper quartile parity, and voted for a return to work from 16th January. However, despite the N.J.C. return to work agreements (17th January) stipulating 'immediate' negotiations on the 42 hour week, it was not until 2nd June that the Employers produced proposals. When the proposals did finally emerge they, furthermore, included unexpected arrangements: firstly, to replace the two-shift by a three-shift system, secondly, to consider extending day-manning, while thirdly, to review the established system of appliance manning. The programme proved unacceptable to the Union and the matter was put to the Central Arbitration Committee through which the present two-shift system was negotiated. After amended proposals were ratified at a Union Recall Conference on 28th November 1978, an implementation date for the 42 hour week was set for 1st April 1979 - albeit that certain brigades commenced the system before the end of 1978.

The 42 hour week now represented a period of weekly working only 1.7 hours above the national average for the 1970s, albeit that it was only 6 hours per week less than the claim for an eight hour day originally made in 1918.

#### 6.4 Implications and Conclusions: The Question of Productivity

"In the Fire Service there will always be some time spent waiting for calls or 'insurance time'; but there is evidently scope for better manpower utilisation, for example in fire prevention. The large proportion of stand-by time explains the fact that it is possible to cope with the tremendous variation in the hourly incidence of calls, and it appears that there is still considerable spare capacity, in spite of the increases in the trend of fire calls before increases in manpower levels are necessary".

Cunningham Report, 1971, p.19

Although the essential relations of non-C.S.A. subordination reflect those of other sectors, sectoral analysts have noted how the accumulation process serves, during periods of inflation (e.g., the 1970's), to promote potential for conflict in state services.

O'Connor (1973) and Offe (1975) have both identified contradictions in the accumulative processes of private-competitive/state capitalist production which act as indicators of oncoming periods of fiscal crisis. Both writers have suggested how the monopoly (private) sector (characterised by capital intensive production and a position of price-maker) is, as a result of relatively low labour costs, able to pass on price increases, and thus displace conflict, to other sectors. Here the state sectors, in functioning as labour intensive price-takers, and characterised by either low levels of surplus productivity (C.S.A.'s) or simply welfare production (non-C.S.A.'s), have witnessed a situation whereby for any given level of inflation their costs rise in comparison to the private sector. Such relative increases have acted as the crucial elements in the state 'fiscal crisis' described by O'Connor, the tendency being for state expenditure to rise more rapidly than means of funding. A major symptom of fiscal crisis has been the development of mechanisms to redress the increased propensity for militancy in unproductive state sectors.

During the 1970's, Britain in fact witnessed a rapid increase in militant trade unionism in the state service sector. Dunleavy (1980b) has noted how between 1969-1974 seven times as many public service workers went on strike as in the whole of the twenty years previous. Cousins (1981) has similarly documented the emergence of militant unionism in the N.H.S. during the 1970's. Indeed, her description of a workforce, "acquiescent, weakly unionized and oriented towards ... a 'public service' ethic", and to whom "government incomes policy, inflation, and high wages amongst ... private sector workers led to a sense of grievance" (pp.20-21), adequately describes the feelings of perceived discrimination experienced by public service employees in the 1970's - amongst whom were the firemen<sup>13</sup>.

In the Fire Service the method for temporarily redressing such unrest has been the 'upper quartile', this albeit an arrangement which has twice (1979, 1983) been the subject of Government attempts to dismantle. Here, recent contract negotiations have seen that with Fire Service hours increasingly approaching the national average, that despite holding non-C.S.A. status, questions of productivity have been brought sharply into focus. As the length of the working week becomes no longer a signal characteristic of firefighting, emphasis has now been displaced from 'covering' to 'using' time.

Therefore, in suggesting that firemen's pay should be assessed in relation to a normal 40 hour week, Cunningham stressed the 'scope for better manpower utilisation' within non-operational sections of the day. Indeed, this was especially pressing in that the Cunningham researchers found that (in terms of national mean averages) only 3.3% of available time on whole-time stations was spent on emergency calls (see Table 18). Cunningham therefore followed Holroyd in recommending 'improving productivity' by replacing 'unskilled' chore centred work, with 'skilled' inspection work

('work of value': p.22). Unskilled cleaning work would in future be carried out by auxilliary cleaners or porters on lower incomes.

With the implementation of the 42 hour week pressure to justify time has been increased, with moves to illustrate greater productivity being necessary in order to stave off threats of losing 'quiet' whole-time stations (e.g., Sutton Coldfield) to day-manning; the system highlighted by Cunningham as yielding the greatest utilisation of capacity<sup>14</sup>.

Therefore, the reduction to 42 hours has been contingent upon a move to greater 'professionalism', in which stand-down periods have been reduced. Previous systems had allowed not only for statutory evening stand-down from 8.00 pm (with some variations), but also free time on weekend rotas from mid-day on Saturday and all day Sunday. With the 42 hour week, however, weekend stand-down has officially been pushed back to midnight. During the day itself, not only has inspection work been increased, but also training schedules have been made more sophisticated; with elaborate (itemised) quota inventories being devised for daily drills, and a yearly planner mandated for each firefighter. Indeed, station officers are now encouraged to cover three hours drill on every day shift, with usually 1-2 hours allocated for practical training and the remainder for a 'technical' session.

To conclude, in concentrating upon conditions of employment, we have seen that until the early-1970's extensiveness of work time remained the focal issue in relations between labour, employers and government. Although union demands for a 'normal' 48 hour week were first tabled in 1918, by manning levels being consistently kept below 'establishment' employers have been able to counteract campaigns to achieve marked hours reductions. Here, primary strategies for avoiding manpower increases have been the

Table 18

Time Spent on Emergency Calls as a Percentage of Total Time: 1971

Station	Calls as percent of total available man hours	Calls and Maintenance time as percent of total available man hours
	%	%
<u>48-hour shift</u>		
1 City	6.8	16.5
2 City	4.1	7.7
3 City	4.7	12.2
4 City	4.7	10.7
<u>56-hour shift</u>		
5 County	0.8	2.3
6 County	1.9	5.4
7 County	1.0	2.2
8 City	3.2	10.7
9 City	5.4	13.3
10 County	1.1	2.3
<hr/>		
Average	3.3	8.3
<u>Day manning</u>		
11 County	4.0	10.9
12 County	2.9	5.2
13 County	1.0	2.4
14 County	-	-
15 County	1.3	3.6
<hr/>		
Average	3.1	7.6
Range	0.8-6.8	2.2-16.5

Note: Day-manning figures have been expressed as calls received and attended during normal duty hours.

(Source: Cunningham Report, 1971, p.21)

offering of pay increases for extending working hours, and the threat of converting less active whole-time stations to day-manning. Indeed, it was not until November 1974 that a nationally operative week of under 50 hours

was established. As firefighting represents a labour-intensive service with no tangible production process, it has been in the fundamental interests of employers to retain extensive hours in order to offset manpower expense. In fact, it is only during the 1970's, with national duty hours being reduced to a level approximating those for other manual occupations, that questions of productivity have become prominent; that is, through completing more highly skilled work within the time available.

1. E.g., those from the Business History Unit, L.S.E.
2. Larson (1980) similarly documents how private and state sector labour both undergo essentially similar subordination processes when selling labour power.
3. Carchedi clarifies the production of 'use values' by noting the differences between private and state hospitals. While the latter is "neither production of surplus value nor production for surplus value" (p.131), the former provides use values (health services) only as a means to produce surplus value. While the state hospital is primarily concerned with 'meeting needs', and thus tends to expand with increases in patient numbers, the private hospital will only expand depending on the profitability of so doing.
4. While the Aston computer search revealed a host of research papers, these mainly concerned contemporary conditions of employment/ industrial relations in U.S. fire services. Several of these are listed in the bibliography.
5. Indeed, while Aglietta (1981) suggests that the struggle to reduce working hours was the dominant issue facing labour in the 19th century (p.130), in firefighting this remained the central question up to the 1970's.
6. From this data, references most apposite to the study were: firstly, for work conditions and negotiations in the 19th Century - references developing from historical sources such as Blackstone (1957), Holloway (1973) and Klopper (1954); secondly, for the establishment of employment conditions from W.W.I through to the mid 1960's - Government Reports (e.g., Middlebrook, 1920;

Riverdale, 1936), Acts of Parliament (e.g., Fire Brigades Act 1938, Fire Service Act 1947), Blackstone (1967), and histories of the F.B.U. by Radford (1953) and F.B.U. (1968); and thirdly, for events from the mid-1960's onwards - F.B.U. annual Executive Council Reports, Home Office Reports (e.g., Holroyd, 1970; Cunningham, 1971), policy documents from local government (West Midlands County Council), policy reports from F.B.U., N.A.F.O. and C.A.C.F.O.A., and also interviews with F.B.U. officials.

7. The starting point for the analysis is 1833 with the establishment of the first full-time fire brigade in Britain - the London Fire Engine Establishment. Ironically, Marx notes that, "a normal working day for modern industry dates only from the Factory Act of 1833" (p.390). Here the irony is in that while Marx analysis commences (in the same year) by outlining legislation to reduce textile working hours to 15, this vividly contrasts with the full-time employment of firemen who, by the 'continuous-duty' system, put their labour at the employers' disposal for the 'full 24 hours' of Marx theoretical exposition. (See 'Organisation' below.)
8. Here, we can note the primary orientation of the early Insurance Company Brigades with saving property rather than life. Klopper (1954) notes how the sole reason for these brigades was to, "save insured property as much as possible and lessen their own liability ... No humanitarian reason was involved and it was many years before the first attempts were made to provide some sort of escape for saving lives. Anyone trapped by fire ... had to rely on rescue attempts by courageous neighbours" (p.7).

9. The Manchester Courier of 1902, for instance, suggested that Salford firemen were, "Municipal Slaves condemned to the most rigorous imprisonment" (Blackstone, 1957).
10. Albeit that in many areas this had been resisted by rank and file police - eg in 1853 all Chester policemen resigned as firemen due to the effects of the extensiveness of hours on health).
11. But again apart from areas where manpower levels made it 'absolutely impossible' such as the Thomas Basin.
12. The level at which 75% of all adult male manual workers earn less and 25% more.
13. A process notably culminating in the 'winter of discontent' of 1978/79.
14. Indeed, the question of the possibility of converting Sutton Coldfield to day-manning was one of the issues of the Joint Report of the Chief Executive, Chief Fire Officer, County Personnel Officer, County Treasurer and County Secretary (September 1978): "Consideration was given to whether this station could be covered by a Day Manning system. Taking into account the fairly extensive station area and the new areas of B risk categorises the conclusion was revealed that the [full-time] shift system should continue to operate at this station" (p.26). Sutton was but one of eight stations given 'detailed consideration' with regard to possible conversion to day-manning.

CHAPTER SEVEN:

CONCLUSIONS

## 7.1 Conclusions: Toward Multiple Paradigm Research?

This thesis has examined the theoretical and empirical possibilities for conducting multiple paradigm research (M.P.R.) in the social sciences. It has attempted to question the argument of complete paradigm encapsulation while documenting empirical studies from a variety of quasi-exclusive paradigm positions. In so doing it has argued, at the level of social philosophy, for the possibility of logically doing multiple paradigm research, while in terms of empirical work illustrating the research opportunities available through using the Burrell and Morgan (1979) model. Let us, then, in conclusion, examine the future prospects for M.P.R. in terms of factors affecting its development.

Although a case has been made for the possibility of conducting M.P.R., the question of whether this will, in turn, translate into concrete research activity remains moot. Factors restraining development emerge from many corners, but initially with respect to difficulties encountered from both the central concept, and the debates to which it gives rise. In being so 'notoriously elusive' (Giddens, 1976), and indeed so much so that it may even 'believe precise definition' (Chalmers, 1978), the paradigm concept seems to make it difficult to actually get M.P.R. started. Researchers may give up before considering fieldwork when faced with such signal problems of operational definition.

Difficulties arise of course not only from the ambiguity witnessed in definitions from philosophy (cf. Kuhn, 1970; Masterman, 1970), but also with the concept's subsequent application to the social sciences (cf. Friedrichs, 1970; Ritzer, 1975; Bottomore, 1975). Here, not only are we faced with problems of concept clarity, but furthermore with identifying what is, or are, the major paradigm(s) held. The literature seems unable

to answer even the basic question of whether, for example, sociology is pre-paradigmatic, mono-paradigmatic, or multi-paradigmatic?

To actually effect M.P.R. we may, therefore, be forced in some ways to circumnavigate Kuhnian theory, or at least to bracket certain problems in the interests of conducting empirical work. Here, in the quest for completing research it may be necessary to adhere to certain aspects of Kuhnian theory but not others. For example, researchers may wish to borrow some of Kuhn's sociological tenets but avoid an adherence to the rather hermetic instant-paradigm thesis. At the level of social philosophy, some of the arguments put forward earlier regarding the incommensurability thesis may be appealing. However, we must qualify this by noting that the relation of such arguments to empirical practice is in fact indirect and can serve as an unnecessary deterrent. To argue that we should prevent empirical activity because philosophical debate seems to preclude it is largely a non sequitur. Whilst we have argued that these arguments do not, anyway, logically debar M.P.R., the issues are separate. As we can never solve philosophical arguments by empirical evidence, then we should not preclude ourselves tout court from any workaday knowledge that M.P.R. might give.

To gain such knowledge, however, we need to actually identify paradigms with which to tap our data sources. The literature in Chapter 2 has noted the plethora of paradigm proposals on offer, with choices for researchers being plentiful. We have argued, though, that whereas much confusion abounds over status and composition, that this is lessened when we consider paradigms as major theory positions holding theoretically separate problematics. Here, proposals by analysts with professional experience of theory developments, can offer authentic guides based (simply) on first hand knowledge of the status of differing communities -

especially where these have been notable in being apparently challengers of the 'orthodoxy'. The use of such positions will be enhanced, however, if we can identify some of the deeper shared values, or metaphysical models, which provide competing groups with a sense of community. While we have noted how we can invoke differing debates to account for alternative developments, the strength of the Burrell and Morgan model is that it offers guidelines which enable us to isolate communities as holding separable problematics.

If researchers can make sense of the major theory positions in a multiple paradigm discipline, then there seems no objection as to why they should not do what we know to be possible, i.e., learn the languages and practices of foreign theory communities, and in time conduct research reflective of their form of life. While we note that philosophical and empirical problems are, in the above sense, separate, the arguments made earlier may nevertheless offer a comforting rationale for researchers willing to use alternative problematics. Researchers may wish to consider the possibility of seeking a position of 'relativity without relativism' (Giddens, -1976), and thus a basic rationale for seeking to retain the rich quality of paradigm introspection but while avoiding the tendency for complete paradigm closure. The former may indeed, as Eisenstadt (1974) notes, represent a state of democracy for social science. Openly acknowledging multiple paradigms may signal that the social sciences will never serve one master, this being a position of healthy development rather than a state of crisis.

The position adopted in this thesis has tried to build on some of these M.P.R. possibilities, while advocating that, logically, this does not necessarily invite charges of relativism. However, while our recourse to the 'language-game of everyday life' may be appealing (for M.P.R.) we must

of course stress that such readings of Wittgenstein (cf. Disco, 1976; Phillips, 1977; and others) are particularistic. Nevertheless, these arguments do offer analytical openings between Kuhn and Wittgenstein, and, thus a fresh orientation to the incommensurability debate; as well as a recourse for researchers claiming that their studies can and even do represent true 'alternative' paradigm positions.

While this position may give a logical argument for M.P.R., when empirical work is broached there emerges the more concrete problem of deciding how we know that we have accomplished a paradigm study? How do we know, for example, that in the four studies above we have conducted work from four quasi-exclusive theory communities? Not only do these questions raise, once again, all the debates of chapters one and two, but more tangibly, invoke questions of establishing the criteria needed to meet community acceptance. Whereas we can, and will, speculate as to possible criteria, for the present thesis such assessments must be tempered by the fact that this is doctoral research, and, as such, subject to certain constraints. Let us digress momentarily. We have assumed from the outset that our studies will offer descriptive information relating directly to Fire Service work organisation. As such, it has been taken for granted that some form of empirical assessment would accrue from each stage of the research. This of course may be irksome for critics who feel this unnecessarily delimits the possibilities arising from the paradigms, if not at worst going against the ethos of certain communities. Here the charge may be laid that if this assumption lies at the base of M.P.R., then its claim to be seeking true alternative world views is specious: are not such studies at least approaching a positivist paradigm? It could be argued that while the studies of the present thesis may, in some respects, be open to such charges, that this is not a logical barrier to M.P.R. per se.

In being a doctoral thesis there are pressures to do empirical research, and as such the thesis, while seeking to conduct investigations in terms of differing paradigm problematics, may have, nevertheless, been drawn towards a more positivist emphasis than would otherwise have been desired. However, while in many ways the studies may be seen as functional, the researcher would argue that they are decidedly not 'functionalist', although there are naturally, with hindsight, areas that have given concern. Here, Kelly's work in Chapter 4 has caused reflection. What seemed initially as a novel exploration to widen a phenomenological paradigm became less convincing as the technical sophistication increased. While the research offered interesting insight into the explanation of work environment, the method was rather static in so doing. To have concentrated on a full-blown ethnomethodological approach may be wiser than grafting an ethnography onto personal constructs. Also, some of the work on the media's handling of the Firemen's Strike has heavy structuralist undertones. In using Gramsci and the hegemony concept perhaps this work in some ways runs up against a rather artificial break from mainstream Marxism. Indeed, we have already noted (Chapter 2) that there is a welter of Marxist theory stressing the conceptual unity in Marx' work instead of a gestalt switch from idealism to materialism. In these respects, then, Chapters 4 and 5 may be seen as being drawn towards the objectivist regions of the anti-positivist paradigms. As suggested, however, this is largely due to the work being a doctoral thesis, and thus a result of pressure to produce some form of tangible research output. This should not necessarily preclude other researchers displaying more flexibility in entering more esoteric regions of the four paradigms; although as we note below there may be institutional pressures to deflect this.

There still remains, then, the problem of 'knowing' we have accomplished M.P.R. and actually completed investigations representative of paradigm positions. Here is an area where we may again have to circumnavigate the philosophy and confront as a professional problem, i.e., as a question of community criteria. We have, as a premise of our thesis, stressed that we can be trained, in time, into producing work representative of a community's style of research; that is, if we are talented and resourceful enough. Having accepted this, our problem then becomes one of eventually justifying our craftsmanship to significant others. Although we are now faced by problems of paradigm identification, these may again be solvable given our argument that competent analysts will be aware of major problematics. Although we can allude to the constant flux of community scientists, by e.g., pointing to leaps of faith by Alan Fox or R.D. Laing, somewhat more enduring are the identities of those regularly invoked as being practicing community scientists (some obvious examples would be: Garfinkel - ethnomethodology; McCarthy - liberal/pluralist I.R.; Habermas - Critical Theory, and so forth). We can display an ability to work from differing paradigms through claiming acceptance by community standards through, for example, producing work that is not editorially vetoed when submitted to a paradigm-linked journal. Here again the actual citing of such journals raises further empirical questions. However, our thesis would argue that while many journals do display eclecticism, and thus a certain paradigm blurring (e.g., 'Insurgent Sociologist' - Interpretive/Critical?; 'Theory and Society' - Critical/Structuralist?; and even 'Administrative Science Quarterly' - Functionalist, or in the Weick era frequently Interpretive?), we can, however, posit journal locations with much stricter paradigm identities (e.g., 'Telos' - Radical Humanist; 'Capital and Class' - Radical Structuralist; 'Semiotica' - Interpretive; 'Organisational Dynamics' - Functionalist). We could argue that

publication within a journal with strong theory-community affiliation would be one criterion for establishing research as a paradigm contribution.

Before concluding, let us briefly address what is perhaps the basic design question associated with M.P.R., and in fact one we have discussed earlier (Chapter 2), that is: when we conduct M.P.R. how specific should the research focus be? Should M.P.R. concentrate upon one single research topic, or should it be used in a more bespoke fashion to tailor differing research areas to differing paradigm techniques?

Although the present thesis has adopted the latter position, future researchers might wish to consider a more careful specification of research topic. Here, the choice of a research issue that while clearly bounded, is nevertheless wide ranging, would offer more direct access to comparisons of differing paradigm contributions. A topic such as working time, for instance, would represent such a focus and be very 'do-able'. However, while on reflection, we may have preferred a more careful consideration of our initial research design, the individual studies still display rich contrasting insights into the work organisation of the Fire Service. The four studies represent a diverse range of both literature and method: from the questionnaire survey of job characteristics in Chapter 3; to the observational, biographical and document analyses of Chapters 4 and 5; to the archival/historical work on the labour process in Chapter 6. The pieces are self contained research studies and serve to demonstrate the breadth of opportunities available through alternative paradigm problematics. A final qualification, however, is that although we have employed the debates invoked by Burrell and Morgan, with regard to a representative schema, our theoretical argument would suggest adherence to an overlapping Venn diagram more than to the four quadrants; especially

for conceptualising the quasi-exclusivity of the paradigms used. This, it could be argued, would allow the degree of flexibility required in our thesis, i.e., in that we suggest paradigm movement through training. It also makes paradigm movement more plausible than by recourse to an instant paradigm thesis. A Venn diagram may offer a more acceptable visual presentation for conceptualising that 'unorganised experience cannot organise perception'.

Finally, let us consider the immediate future for explicitly designed multiple paradigm strategies. While we have highlighted some of the possible benefits from paradigm diversity, the question of whether M.P.R. can significantly develop comes up against problems of the institutional nature of theory communities. Whereas many writers have argued for 'breaking the mono-method monopoly' (Martin, 1981) or for realising 'multiparadigm inquiry' (Pondy and Boje, 1980) through, for example, 'theoretical blockage' (Driggers, 1977) or 'transpection' (Maruyama, 1974), as yet no significant research has emerged. Although researchers have occasionally employed 'triangulation' (cf. Jick, 1979) and brought together differing forms of methodology, this has rarely been extended into research based explicitly on the alternative metatheories held by major communities. While Allison's (1971) 'Essence of Decision' represented a major landmark in adopting alternative frameworks, this has rarely been capitalised upon in any formal social research.

An initial reason for this may be that in the latter we are not only interested in designing-in methodological diversity, but are involved at a stage prior to this, i.e., in specifying meta-methodological diversity in terms of the shared values and metaphysical models held by alternative communities. Although the Burrell and Morgan model gives guidelines for

managing epistemological variety, traditionally this has remained unaddressed in terms of being firmly tied to theoretical terrain.

With regard to research itself, a further reason accrues from the very membership of theory communities. When social science teams are engaged upon research, members commonly feel the need to be highly integrated in terms of a theoretical perspective, instead of openly displaying a range of paradigm orientations. Furthermore, in organisational research pressures serving to nullify diversity emerge from the nature of access agreements, the prescription of research goals, and especially from the need to produce hard generalizeable, and ultimately publishable, results. These forces tend to act as institutional barriers and generally result in orientation towards the more orthodox, positivist, and for organisational analysis, predominantly managerialist, positions.

For the individual researcher, the insitutional pressures are even more pronounced. Here, traditional training in, for example, organisational behaviour predominantly fails to yield the degree of perceptual awareness necessary for an ability to easily 'transpect' between paradigms. Morgan (1981) highlights the pressures facing researchers considering paradigm exploration, especially in that such diversity may bring about fears over, 'fail(ing) to get published and fail(ing) to get tenured' (p.24). He notes the reluctance of O.B. doctoral students to be adventurous, especially when faced with an ethos, widespread in such departments, that, 'here are few practical alternatives to orthodoxy' (p.24). This being so, the skills necessary for paradigm variety are unlikely to develop in the foreseeable future as, "the control systems developed by journal and university departments alike, exert a confining if well meaning hold on the jugular of scholarship" (p.24).

Therefore, at present, institutional pressures continue to emasculate the potential for diversity. Here mainstream organisational analysis tends to display a tendency for 'monopolarization' as thus towards, "psychological dependency on one authority, one right theory, one truth" (Maruyama, 1974, p.26, emphasis in original). Although researchers have argued that in organisational behaviour we require, "individuals who are specialists in more than one paradigm" (Pondy and Boje, p.93), institutional constraints serve to reinforce Russell's dictum that, 'what men want is certainty not knowledge'.

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APPENDIX ONE:  
THE JOB DIAGNOSTIC SURVEY

### JOB DIAGNOSTIC SURVEY

This questionnaire was developed as part of a Yale University study of jobs and how people react to them. The questionnaire helps to determine how jobs can be better designed, by obtaining information about how people react to different kinds of jobs.

On the following pages you will find several different kinds of questions about your job. Specific instructions are given at the start of each section. Please read them carefully. It should take no more than 25 minutes to complete the entire questionnaire. Please move through it quickly.

The questions are designed to obtain your perceptions of your job and your reactions to it.

There are no trick questions. Your individual answers will be kept completely confidential. Please answer each item as honestly and frankly as possible.

Thank you for your cooperation.

---

SECTION ONE

This part of the questionnaire asks you to describe your job, as objectively as you can.

Please do not use this part of the questionnaire to show how much you like or dislike your job. Questions about that will come later. Instead, try to make your descriptions as accurate and as objective as you possibly can.

---

A sample question is given below.

A. To what extent does your job require you to work with mechanical equipment?

1 ..... 2 ..... 3 ..... 4 ..... 5 ..... 6 ..... 7

Very little;  
the job requires  
almost no contact  
with mechanical  
equipment of any  
kind.

Moderately

Very much:  
the job requires  
almost constant  
work with  
mechanical  
equipment.

You are to circle the number which is the most accurate description of your job.

If, for example, your job requires you to work with mechanical equipment a good deal of the time - but also requires some paperwork - you might circle the number six, as was done in the example above.

If you do not understand these instructions, please ask for assistance. If you do understand them, turn the page and begin.

1. To what extent does your job require you to work closely with other people (either "clients", or people in related jobs in your own organization)?

1.....2.....3.....4.....5.....6.....7

Very little, dealing with other people is not at all necessary in doing the job.

Moderately; some dealing with others is necessary.

Very much; dealing with other people is an absolutely essential and crucial part of doing the job.

2. How much autonomy is there in your job? That is, to what extent does your job permit you to decide on your own how to go about doing the work?

1.....2.....3.....4.....5.....6.....7

Very little, the job gives me almost no personal "say" about how and when the work is done.

Moderate autonomy; many things are standardized and not under my control, but I can make some decisions about the work.

Very much; the job gives me almost complete responsibility for deciding how and when the work is done.

3. To what extent does your job involve doing a "whole" or identifiable piece of work? That is, is the job a complete piece of work that has an obvious beginning and end? Or is it only a small part of the overall piece of work, which is finished by other people or by automatic machines?

1.....2.....3.....4.....5.....6.....7

My job is only a tiny part of the overall piece of work; the results of my activities cannot be seen in the final product or service.

My job is a moderate-sized "chunk" of the overall piece of work; my own contribution can be seen in the final outcome.

My job involves doing the whole piece of work, from start to finish, the results of my activities are easily seen in the final product or service.

4. How much variety is there in your job? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents?

1.....2.....3.....4.....5.....6.....7

Very little; the job requires me to do the same routine things over and over again.

Moderate variety.

Very much; the job requires me to do many different things, using a number of different skills and talents.

5. In general, how significant or important is your job? That is, are the results of your work likely to significantly affect the lives or well-being of other people?

1.....2.....3.....4.....5.....6.....7

Not very significant; the outcomes of my work are not likely to have important effects on other people.

Moderately significant.

Highly significant; the outcomes of my work can affect other people in very important ways.

6. To what extent do managers or co-workers let you know how well you are doing on your job?

1.....2.....3.....4.....5.....6.....7

Very little; people almost never let me know how well I am doing.

Moderately; sometimes people may give me "feedback"; other times they may not.

Very much: managers or co-workers provide me with almost constant "feedback" about how well I am doing.

7. To what extent does doing the job itself provide you with information about your work performance? That is, does the actual work itself provide clues about how well you are doing - aside from any "feedback" co-workers or supervisors may provide?

1.....2.....3.....4.....5.....6.....7

Very little; the job itself is set up so I could work forever without finding out how well I am doing.

Moderately; sometimes doing the job provides "feedback" to me; sometimes it does not.

Very much; the job is set up so that I can get almost constant "feedback" as I work about how well I am doing.

---

SECTION TWO

Listed below are a number of statements which could be used to describe a job.

You are to indicate whether each statement is an accurate or an inaccurate description of your job.

Once again, please try to be as objective as you can in deciding how accurately each statement describes your job - regardless of whether you like or dislike your job.

---

Write a number in the blank beside each statement, based on the following scale:

How accurate is the statement in describing your job?

1.....2.....3.....4.....5.....6.....7  
Very      Mostly      Slightly      Uncertain      Slightly      Mostly      Very  
Inaccurate      Inaccurate      Inaccurate                      Accurate      Accurate      Accurate

- \_\_\_ 1. The job requires me to use a number of complex or high-level skills.
- \_\_\_ 2. The job requires a lot of cooperative work with other people.
- \_\_\_ 3. The job is arranged so that I do not have the chance to do an entire piece of work from beginning to end.
- \_\_\_ 4. Just doing the work required by the job provides many chances for me to figure out how well I am doing.
- \_\_\_ 5. The job is quite simple and repetitive.
- \_\_\_ 6. The job can be done adequately by a person working alone - without talking or checking with other people.
- \_\_\_ 7. The supervisors and co-workers on this job almost never give me any "feedback" about how well I am doing in my work.
- \_\_\_ 8. This job is one where a lot of other people can be affected by how well the work gets done.
- \_\_\_ 9. The job denies me any chance to use my personal initiative or judgement in carrying out the work.
- \_\_\_ 10. Supervisors often let me know how well they think I am performing the job.
- \_\_\_ 11. The job provides me the chance to completely finish the pieces of work I begin.
- \_\_\_ 12. The job itself provides very few clues about whether or not I am performing well.
- \_\_\_ 13. The job gives me considerable opportunity for independence and freedom in how I do the work.
- \_\_\_ 14. The job itself is not very significant or important in the broader scheme of things.

---

SECTION THREE

Now please indicate how you personally feel about your job.

Each of the statements below is something that a person might say about his or her job. You are to indicate your own personal feelings about your job by marking how much you agree with each of the statements.

---

Write a number in the blank for each statement, based on this scale.

How much do you agree with the statement?

1	2	3	4	5	6	7
Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly

- \_\_\_ 1. It's hard, on this job, for me to care very much about whether or not the work gets done right.
- \_\_\_ 2. My opinion of myself goes up when I do this job well.
- \_\_\_ 3. Generally speaking, I am very satisfied with this job.
- \_\_\_ 4. Most of the things I have to do on this job seem useless or trivial.
- \_\_\_ 5. I usually know whether or not my work is satisfactory on this job.
- \_\_\_ 6. I feel a great sense of personal satisfaction when I do this job well.
- \_\_\_ 7. The work I do on this job is very meaningful to me.
- \_\_\_ 8. I feel a very high degree of personal responsibility for the work I do on this job.
- \_\_\_ 9. I frequently think of quitting this job.
- \_\_\_ 10. I feel bad and unhappy when I discover that I have performed poorly on this job.
- \_\_\_ 11. I often have trouble figuring out whether I'm doing well or poorly on this job.
- \_\_\_ 12. I feel I should personally take the credit or blame for the results of my work on this job.
- \_\_\_ 13. I am generally satisfied with the kind of work I do in this job.
- \_\_\_ 14. My own feelings generally are not affected much one way or the other by how well I do on this job.
- \_\_\_ 15. Whether or not this job gets done right is clearly my responsibility.

---

SECTION FOUR

Now please indicate how satisfied you are with each aspect of your job listed below. Once again, write the appropriate number in the blank beside each statement.

---

How satisfied are you with this aspect of your job?

1	2	3	4	5	6	7
Extremely Dissatisfied	Dissatisfied	Slightly Dissatisfied	Neutral	Slightly Satisfied	Satisfied	Extremely Satisfied

- \_\_\_ 1. The amount of job security I have.
- \_\_\_ 2. The amount of pay and fringe benefits I receive.
- \_\_\_ 3. The amount of personal growth and development I get in doing my job.
- \_\_\_ 4. The people I talk to and work with on my job.
- \_\_\_ 5. The degree of respect and fair treatment I receive from my boss.
- \_\_\_ 6. The feeling of worthwhile accomplishment I get from doing my job.
- \_\_\_ 7. The chance to get to know other people while on the job.
- \_\_\_ 8. The amount of support and guidance I receive from my supervisor.
- \_\_\_ 9. The degree to which I am fairly paid for what I contribute to this organisation.
- \_\_\_ 10. The amount of independent thought and action I can exercise in my job.
- \_\_\_ 11. How secure things look for me in the future in this organization.
- \_\_\_ 12. The chance to help other people while at work.
- \_\_\_ 13. The amount of challenge in my job.
- \_\_\_ 14. The overall quality of the supervision I receive in my work.

---

SECTION FIVE

Now please think of the other people in your organization who hold the same job you do. If no one has exactly the same job as you, think of the job which is most similar to yours.

Please think about how accurately each of the statements describes the feelings of those people about the job.

It is quite all right if your answers here are different from when you described your own reactions to the job. Often different people feel quite differently about the same job.

---

Once again, write a number in the blank for each statement, based on this scale:

How much do you agree with the statement?

1	2	3	4	5	6	7
Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly

- \_\_\_ 1. Most people on this job feel a great sense of personal satisfaction when they do the job well.
- \_\_\_ 2. Most people on this job are very satisfied with the job.
- \_\_\_ 3. Most people on this job feel that the work is useless or trivial.
- \_\_\_ 4. Most people on this job feel a great deal of personal responsibility for the work they do.
- \_\_\_ 5. Most people on this job have a pretty good idea of how well they are performing their work.
- \_\_\_ 6. Most people on this job find the work very meaningful.
- \_\_\_ 7. Most people on this job feel that whether or not the job gets done right is clearly their own responsibility.
- \_\_\_ 8. People on this job often think of quitting.
- \_\_\_ 9. Most people on this job feel bad or unhappy when they find that they have performed the work poorly.
- \_\_\_ 10. Most people on this job have trouble figuring out whether they are doing a good or a bad job.

---

SECTION SIX

Listed below are a number of characteristics which could be present on any job. People differ about how much they would like to have each one present in their own jobs. We are interested in learning how much you personally would like to have each one present in your job.

---

Using the scale below, please indicate the degree to which you would like to have each characteristic present in your job.

NOTE: The numbers on this scale are different from those used in previous scales.

4	5	6	7	8	9	10
Would like having this only a moderate amount (or less)			Would like having this very much			Would like having this extremely

- \_\_\_\_\_ 1. High respect and fair treatment from my supervisor.
- \_\_\_\_\_ 2. Stimulating and challenging work.
- \_\_\_\_\_ 3. Chances to exercise independent thought and action in my job.
- \_\_\_\_\_ 4. Great job security.
- \_\_\_\_\_ 5. Very friendly co-workers.
- \_\_\_\_\_ 6. Opportunities to learn new things from my work.
- \_\_\_\_\_ 7. High salary and good fringe benefits.
- \_\_\_\_\_ 8. Opportunities to be creative and imaginative in my work.
- \_\_\_\_\_ 9. Quick promotions.
- \_\_\_\_\_ 10. Opportunities for personal growth and development in my job.
- \_\_\_\_\_ 11. A sense of worthwhile accomplishment in my work.

---

SECTION SEVEN

---

People differ in the kinds of jobs they would most like to hold. The questions in this section give you a chance to say just what it is about a job that is most important to you.

For each question, two different kinds of jobs are briefly described. You are to indicate which of the jobs you personally would prefer - if you had to make a choice between them.

In answering each question, assume that everything else about the jobs is the same. Pay attention only to the characteristics actually listed.

Two examples are given below.

---

JOB A	JOB B			
A job requiring work with mechanical equipment most of the day	A job requiring work with other people most of the day			
1.....2.....③.....4.....5				
Strongly Prefer A	Slightly Prefer A	Neutral	Slightly Prefer B	Strongly Prefer B

---

If you like working with people and working with equipment equally well, you would circle the number 3, as has been done in the example.

\* \* \* \* \*

Here is another example. This one asks for a harder choice - between two jobs which both have some undesirable features.

---

JOB A	JOB B			
A job requiring you to expose yourself to considerable physical danger.	A job located 200 miles from your home and family			
1.....②.....3.....4.....5				
Strongly Prefer A	Slightly Prefer A	Neutral	Slightly Prefer B	Strongly Prefer B

---

If you would slightly prefer risking physical danger to working far from your home, you would circle number 2, as has been done in the example.

Please ask for assistance if you do not understand exactly how to do these questions.

JOB A

JOB B

1. A job where the pay is very good.

A job where there is considerable opportunity to be creative and innovative.

1..... 2..... 3..... 4..... 5

Strongly Slightly Neutral Slightly Strongly  
Prefer A Prefer A Prefer B Prefer B

2. A job where you are often required to make important decisions.

A job with many pleasant people to work with.

1..... 2..... 3..... 4..... 5

Strongly Slightly Neutral Slightly Strongly  
Prefer A Prefer A Prefer B Prefer B

3. A job in which greater responsibility is given to those who do the best work.

A job in which greater responsibility is given to loyal employees who have the most seniority.

1..... 2..... 3..... 4..... 5

Strongly Slightly Neutral Slightly Strongly  
Prefer A Prefer A Prefer B Prefer B

4. A job in an organization which is in financial trouble - and might have to close down within the year.

A job in which you are not allowed to have any say whatever in how your work is scheduled, or in the procedures to be used in carrying it out.

1..... 2..... 3..... 4..... 5

Strongly Slightly Neutral Slightly Strongly  
Prefer A Prefer A Prefer B Prefer B

5. A very routine job.

A job where your co-workers are not very friendly.

1..... 2..... 3..... 4..... 5

Strongly Slightly Neutral Slightly Strongly  
Prefer A Prefer A Prefer B Prefer B

6. A job with a supervisor who is often very critical of you and your work in front of other people.

A job which prevents you from using a number of skills that you worked hard to develop.

1..... 2..... 3..... 4..... 5

Strongly Slightly Neutral Slightly Strongly  
Prefer A Prefer A Prefer B Prefer B

JOB A

JOB B

7. A job with a supervisor who respects you and treats you fairly.

A job which provides constant opportunities for you to learn new and interesting things.

1.....2.....3.....4.....5

Strongly  
Prefer A

Slightly  
Prefer A

Neutral

Slightly  
Prefer B

Strongly  
Prefer B

8. A job where there is a real chance you could be laid off.

A job with very little chance to do challenging work.

1.....2.....3.....4.....5

Strongly  
Prefer A

Slightly  
Prefer A

Neutral

Slightly  
Prefer B

Strongly  
Prefer B

9. A job in which there is a real chance for you to develop new skills and advance in the organisation.

A job which provides lots of vacation time and an excellent fringe benefit package.

1..... 2.....3.....4.....5

Strongly  
Prefer A

Slightly  
Prefer A

Neutral

Slightly  
Prefer B

Strongly  
Prefer B

10. A job with little freedom and independence to do your work in the way you think best.

A job where the working conditions are poor.

1 ..... 2.....3.....4.....5

Strongly  
Prefer A

Slightly  
Prefer A

Neutral

Slightly  
Prefer B

Strongly  
Prefer B

11. A job with very satisfying teamwork.

A job which allows you to use your skills and abilities to the fullest extent.

1 ..... 2.....3.....4.....5

Strongly  
Prefer A

Slightly  
Prefer A

Neutral

Slightly  
Prefer B

Strongly  
Prefer B

12. A job which offers little or no challenge.

A job which requires you to be completely isolated from co-workers.

1 .....2..... 3 ..... 4 .....5

Strongly  
Prefer A

Slightly  
Prefer A

Neutral

Slightly  
Prefer B

Strongly  
Prefer B

APPENDIX TWO:

NON-SIGNIFICANT KRUSKAL-WALLIS ANALYSES OF VARIANCE

Non-Significant Kruskal-Wallis Analyses of Variance

a) Kruskal-Wallis 1-Way Anova: Skill Variety

Group	Probationers	5-7 years	15-25 years
Number	11	41	31
Mean Rank	43.4	46.0	36.2
			Corrected for ties
Chi-Square	Significance	Chi-Square	Significance
2.9770	.2257	3.0358	.2192

b) Kruskal-Wallis 1-Way Anova: Task Identity

Group	Probationers	5-7 years	15-25 years
Number	11	41	31
Mean Rank	46.0	45.3	36.2
			Corrected for ties
Chi-Square	Significance	Chi-Square	Significance
2.8458	.2410	3.0697	.2155

c) Kruskal-Wallis 1-Way Anova: Dealing with Others

Group	Probationers	5-7 years	15-25 years
Number	11	41	31
Mean Rank	50.5	43.0	37.7
			Corrected for ties
Chi-Square	Significance	Chi-Square	Significance
2.4300	.2967	2.5247	.2830

d) Kruskal-Wallis 1-Way Anova: Experienced Responsibility

Group	Probationers	5-7 years	15-25 years
Number	11	41	31
Mean Rank	46.5	40.8	42.1
			Corrected for ties
Chi-Square	Significance	Chi-Square	Significance
.4851	.7846	.4880	.7835

i) Kruskal-Wallis 1-Way Anova: Social Satisfaction

Group	Probationers	5-7 years	15-25 years
Number	11	41	31
Mean Rank	46.2	44.3	37.5
			Corrected for ties
Chi-Square	Significance	Chi-Square	Significance
1.7935	.4079	1.8747	.3917

j) Kruskal-Wallis 1-Way Anova: Supervisory Satisfaction

Group	Probationers	5-7 years	15-25 years
Number	11	41	31
Mean Rank	42.9	44.6	38.2
			Corrected for ties
Chi-Square	Significance	Chi-Square	Significance
1.2673	.5306	1.3281	.5148

k) Kruskal-Wallis 1-Way Anova: 'Would Like' G.N.S.

Group	Probationers	5-7 years	15-25 years
Number	11	41	31
Mean Rank	36.4	46.1	38.6
			Corrected for ties
Chi-Square	Significance	Chi-Square	Significance
2.3716	.3055	2.3855	.3034

l) Kruskal-Wallis 1-Way Anova: Total G.N.S.

Group	Probationers	5-7 years	15-25 years
Number	11	41	31
Mean Rank	39.1	48.4	34.6
			Corrected for ties
Chi-Square	Significance	Chi-Square	Significance
5.9630	.0507	5.9648	.0507

e) Kruskal-Wallis 1-Way Anova: Knowledge of Results

Group	Probationers	5-7 years	15-25 years
Number	11	41	31
Mean Rank	38.2	42.5	42.7
			Corrected for ties
Chi-Square	Significance	Chi-Square	Significance
.3197	.8523	.3233	.8507

f) Kruskal-Wallis 1-Way Anova: General Satisfaction

Group	Probationers	5-7 years	15-25 years
Number	11	41	31
Mean Rank	44.5	45.9	35.9
			Corrected for ties
Chi-Square	Significance	Chi-Square	Significance
3.1965	.2022	3.2342	.1985

g) Kruskal-Wallis 1-Way Anova: Internal Work Motivation

Group	Probationers	5-7 years	15-25 years
Number	11	41	31
Mean Rank	46.7	43.2	38.8
			Corrected for ties
Chi-Square	Significance	Chi-Square	Significance
1.0614	.5882	1.0706	.5855

h) Kruskal-Wallis 1-Way Anova: Security Satisfaction

Group	Probationers	5-7 years	15-25 years
Number	11	41	31
Mean Rank	36.7	42.0	43.8
			Corrected for ties
Chi-Square	Significance	Chi-Square	Significance
.7037	.7034	.7283	.6948

APPENDIX THREE:  
REPERTORY GRID PROFILES

### Appendix Three

#### Fireman Dilley (Central)

Figure 30 gives the elements and constructs from the initial interview together with the final grid produced by FOCUS. There are no reversed constructs.

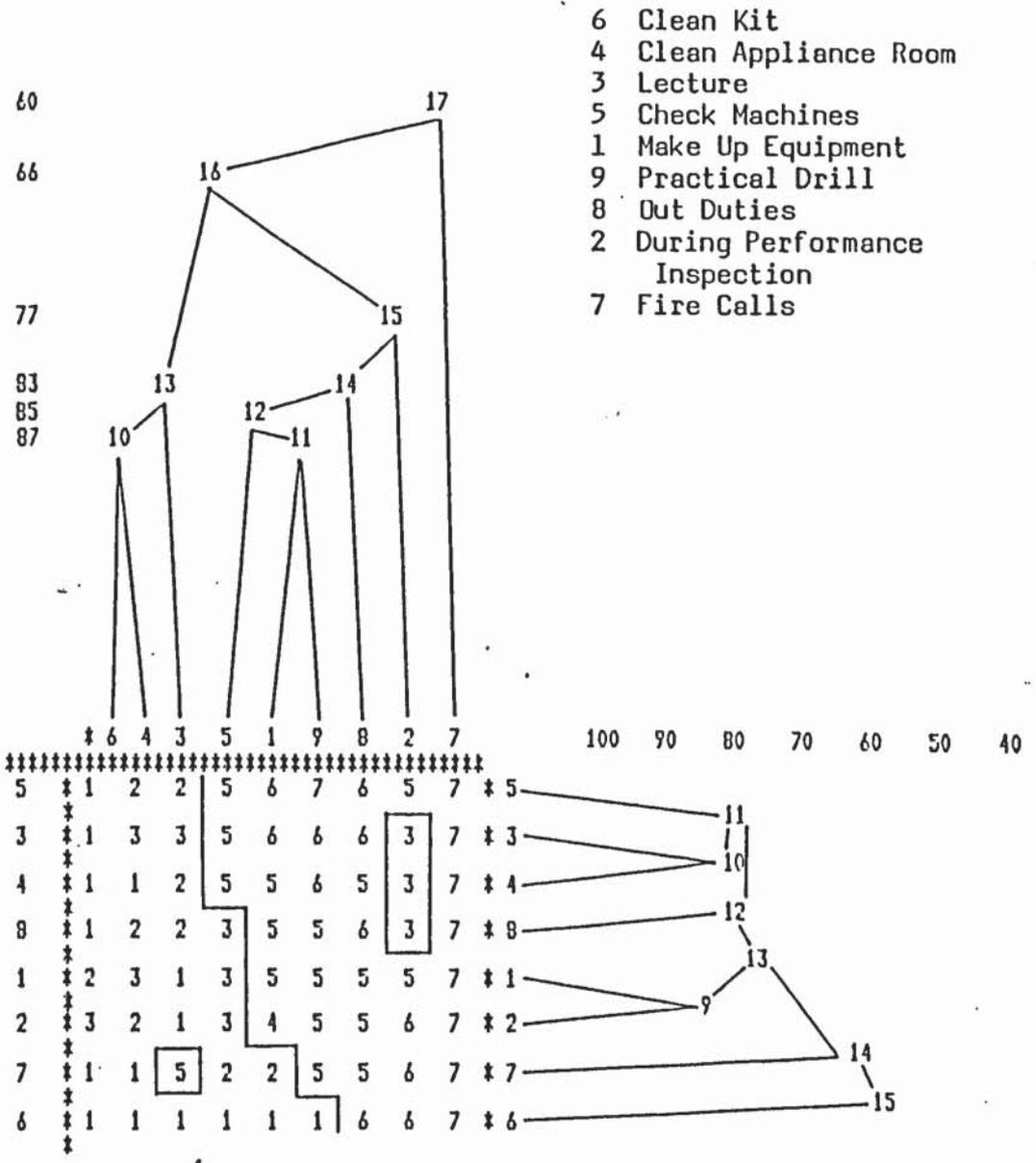
#### Elements

The output gives two tight element clusters above the 80% level, i.e., 13 and 14, with also element 2 expanding the latter into clustr 15 with a 77% match with element 8.

Cluster 13 comprises elements 6 (cleaning kit), 4 (cleaning appliance room) and 3 (lecture). The contour lines show how these events are construed differently from those in cluster 14 in that unlike the latter they 'don't help other parts of the job' (construct 5), 'don't help efficiency' (construct 3), and are 'less important parts of the job' (construct 4). These elements are also things Dilley 'doesn't like doing' (construct 2) and which are consequently 'bad for morale' (construct 8).

Cluster 14 comprises elements 5 (check machines), 1 (make up equipment), 9 (practical drill) and 8 (out duties). In contrast to cluster 13 these events are seen as 'helping other parts of the job' (construct 5), 'helping efficiency' (construct 3) and 'important parts of the job' (construct 4). However, whereas 'make up equipment' (element 1), 'practical\_drill' (element 9) and 'outduties' (element 8) are to different degrees 'like doing' (construct 2) and 'good for morale' (construct 8), 'checking machines' (element 5) is 'don't like doing' and 'bad for morale'.

FIGURE 30: FOCUSED GRID - CENTRAL NO.4 (DILLEY)



- 5 Helps Other Parts of Job - Doesn't Help Other Parts of Job
- 3 Helps Efficiency - Doesn't Help Efficiency
- 4 Important Part of Job - Less Important Part of Job
- 8 Good for Morale - Bad for Morale
- 1 Involves Appearance - Doesn't Involve Appearance
- 2 Like Doing - Don't Like Doing
- 7 Gives Knowledge of Working Practice - Doesn't Give Knowledge of Working Practice
- 6 Involves Meeting the Public - Doesn't Involve Meeting the Public

FIGURE 31: GRID SCORES - CENTRAL NO.4 (DILLEY)

RAW GRID

	1	2	3	4	5	6	7	8	9
1	5	5	1	3	3	2	7	5	5
2	4	6	1	2	3	3	7	5	5
3	6	3	3	3	5	1	7	6	6
4	5	3	2	1	5	1	7	5	6
5	6	5	2	2	5	1	7	6	7
6	1	6	1	1	1	1	7	6	1
7	2	6	5	1	2	1	7	5	5
8	5	3	2	2	3	1	7	6	5

ELEMENT MATCHING SCORES

	1	2	3	4	5	6	7	8	9
1		60	52	60	85	52	54	79	87
2	60		58	54	62	45	60	77	64
3	52	58		83	66	75	18	43	52
4	60	54	83		75	87	14	39	47
5	85	62	66	75		66	39	64	72
6	52	45	75	87	66		6	31	39
7	54	60	18	14	39	6		75	66
8	79	77	43	39	64	31	75		83
9	87	64	52	47	72	39	66	83	

CONSTRUCT MATCHING SCORES

	1	2	3	4	5	6	7	8
1		85	62	66	66	44	55	77
2	-3		48	59	59	51	62	70
3	3	3		81	81	22	40	77
4	0	0	-22		77	33	51	81
5	-14	-14	-22	-25		33	44	74
6	-29	-37	-7	-18	-18		59	44
7	-3	-11	11	0	-7	-44		55
8	-3	-3	-11	-14	-14	-29	-3	

Elements 2 and 7 have generally moderate element matching scores. As noted the only high match for during performance inspection (element 2) is with out duties at 77%. While this event is construed as 'giving knowledge of working practice' (construct 7) and something Dilley 'likes doing' (construct 2), it nevertheless 'doesn't help efficiency' (construct 3), is a 'less important part of the job' (element 4), and is 'bad for morale' (construct 8). 'Fire calls' (element 7) is construed essentially separately from the other elements, it's only notable match being with out duties (element 8) at 75%.

### Constructs

The dendrogram gives two main clusters - 9 and 12.

Cluster 9 matches constructs 1 and 2 at 85%. This gives a strong association between 'involves appearance' and 'like doing' and conversely 'doesn't involve appearance' and 'don't like doing'.

Cluster 12 offers close matches for constructs 5, 3, 4 and 8. Here we see associations whereby if something is 'important part of the job' (construct 4) it is generally also 'helps efficiency' (construct 3), 'helps other parts of the job' (construct 5) and is 'good for morale' (construct 8). Conversely where an element is 'less important part of the job', it is also 'doesn't help efficiency', 'doesn't help other parts of the job' and is 'bad for morale'. Two exceptions to the pattern are; firstly, checking machines (element 8) which although an 'important part of the job', 'helping efficiency' and 'helping other parts of the job' is nevertheless scored as 'helping other parts of the job', is nevertheless scored towards the 'bad for morale' pole; and secondly, 'during performance inspections' which although construed as a 'less important

part of the job', as 'doesn't help efficiency' and 'bad for morale', is nevertheless scored as 'helping other parts of the job'.

The construct matching grid shows how the two remaining constructs i.e., construct 7 ('gives knowledge of working practice' - gives less knowledge of working practice') and the rather restrictive construct 6 ('involves meeting the public - doesn't involve meeting the public') have no strong linkage and thus should be analysed individually.

### Feedback

Dilley was asked to clarify the meaning of the 'helps other parts of the job' construct. Here like for Fowler's 'informative' and Randall's 'confidence' construct, Dilley cites drill when seeking to interlink relationships between tasks. Drill is thus construed in different ways to indicate a general preparedness for firefighting:

Dilley: Practical drill, like, makes you efficient with the equipment you're using, even though you wouldn't use it everyday. And if we go out to a fire its very rare we use a roofing ladder, but we use it on drill; and I mean if ever we had to use it you wouldn't have to think about it, you know. And getting to know the patch your outduties and that. Doing your hydrants gets you to know where about the streets are and the hydrants in the street. So that when you turn out to a job you know exactly where you're going and where the hydrants are when you get thee, you know, in case you need water, that type of thing.

While drill is perhaps a rather convenient and obvious example for this construct, the discussion highlights a more obscure example, in the form of hydrants and other outduties serving to help topography. Topography is one of the statutory sections of the lecture programme - the 'theory' side of the work.

In the session immediately prior to Fireman Dilley's feedback, Fireman Randall had suggested that although in the lecture you're supposed to 'learn a lot' (construct 6) a more adequate typification was that it 'doesn't give knowledge to people' (construct 2). As Dilley had also given a rather unclear picture in which lectures were both 'gives knowledge of working practice' (construct 7) but also 'doesn't help efficiency' (construct 3) and 'doesn't help other parts of the job' (construct 5) he was asked to clarify.

As with Randall's clarification Dilley tended to draw upon other constructs in explaining his perception of the task, and especially here, affective constructs such as 'don't like doing' (construct 2) and 'bad for morale' (construct 8).

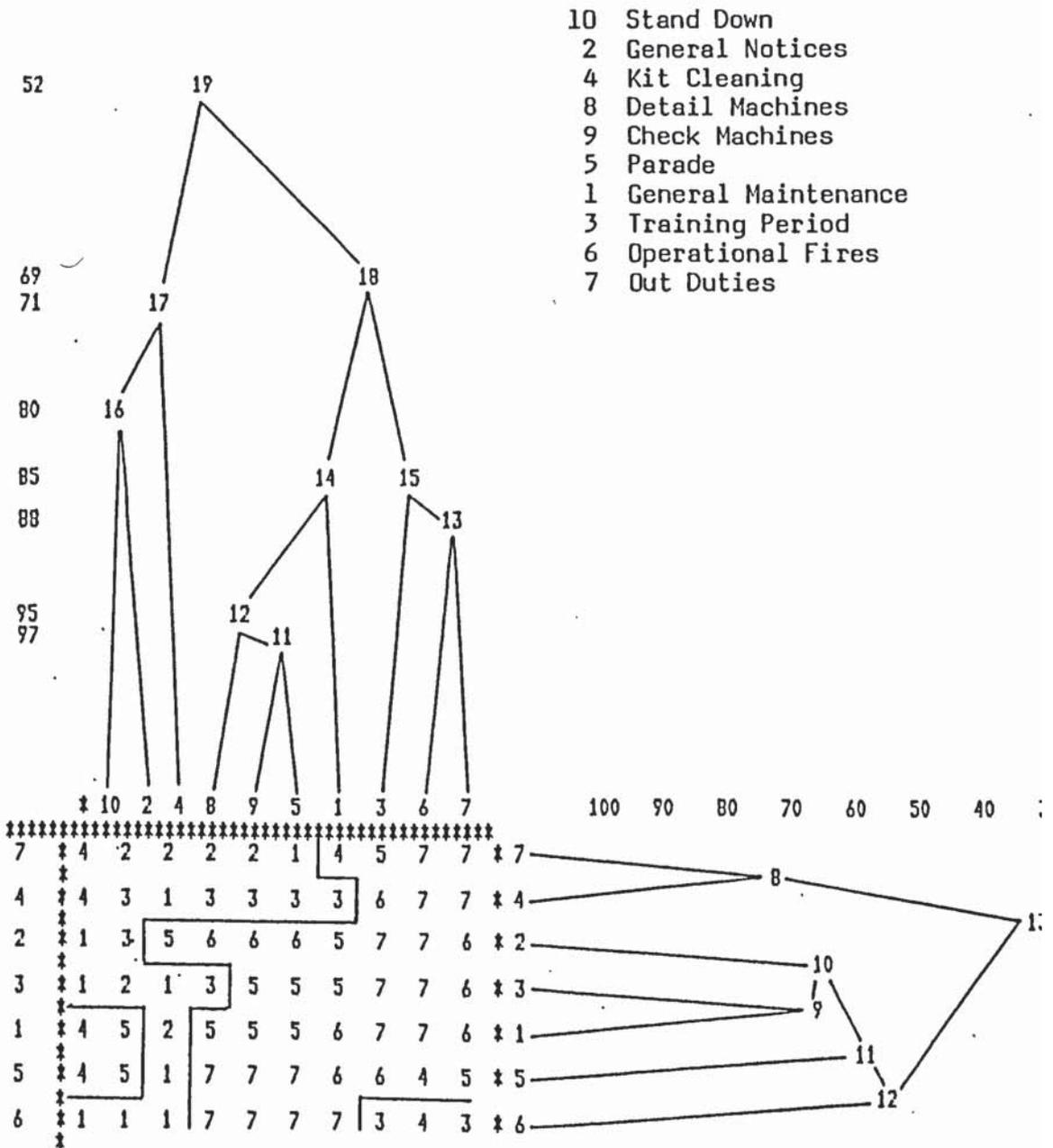
Dilley: A couple of weeks ago we had a fellow come down from the Central Electricity Generating Board, and he give us a lecture on that, and he was brilliant, everybody enjoyed it/

Researcher: Yeah, Dave said that/

Dilley: But the run of the mill lectures we have as you know are done by the leading firemen or the Sub O., and they're not trained lecturers, you know and everybody just gets bored. They seem to go over the same things over and over again. None of the firemen are really interested. But as I say that fellow from the C.E.G.B. was brilliant, we didn't want him to finish.

In being able to point to actual grid statements, and especially to those seemingly obscure or contradictory, the method offsets 'pat' responses. Here essentially prior to observation we have a grounding in perceptions of the lecture, both through grid scores and also through explicit and implicit (e.g. 'none of the firemen are really interested') feedback responses.

FIGURE 32: FOCUSED GRID - CENTRAL NO.5 (MILLER)



- 7 For the Public - Done For Ourselves
- 4 Enjoyable - Less Enjoyable
- 2 Working Period - Rest Period
- 3 Important - Slightly Less Important
- 1 Routine - Not So Much Routine
- 5 Repetitive - Less Repetitive
- 6 Daily Occurrence - Done When We Can

FIGURE 33: GRID SCORES - CENTRAL NO.5 (MILLER)

RAW GRID

	* 1	2	3	4	5	6	7	8	9	10
1	6	5	7	2	5	7	6	5	5	4
2	5	3	7	5	6	7	6	6	6	1
3	5	2	7	1	5	7	6	3	5	1
4	3	3	6	1	3	7	7	3	3	4
5	6	5	6	1	7	4	5	7	7	4
6	7	1	3	1	7	4	3	7	7	1
7	4	2	5	2	1	7	7	2	2	4

ELEMENT MATCHING SCORES

	* 1	2	3	4	5	6	7	8	9	10
1		64	69	45	85	59	66	83	88	54
2	64		52	71	64	42	54	71	66	80
3	69	52		33	59	85	83	57	61	47
4	45	71	33		45	28	35	52	47	66
5	85	64	59	45		50	57	92	97	45
6	59	42	85	28	50		88	47	52	42
7	66	54	83	35	57	88		54	59	50
8	83	71	57	52	92	47	54		95	52
9	88	66	61	47	97	52	59	95		47
10	54	80	47	66	45	42	50	52	47	

CONSTRUCT MATCHING SCORES

	* 1	2	3	4	5	6	7
1		60	66	53	60	16	40
2	-6		66	33	40	30	20
3	-6	-20		60	33	30	46
4	26	13	0		26	-3	73
5	-13	-13	-13	20		56	6
6	-10	-23	-23	10	-16		-10
7	13	20	-13	-13	33	23	

### Fireman Miller (Central)

Figure 32 gives the elements and constructs from the initial interview together with the final grid produced by FOCUS. There are no reversed constructs.

### Elements

Figure 32 indicates three main element clusters, i.e., 17, 14 and 15.

The tightest main cluster is 14 containing sub-clusters 12 and 11. The highest match here is between elements 9 (check machines) and 5 (parade) at 95% (we can note that Fireman Fowler had a similar high match between these elements which, although closely linked chronologically, seem otherwise diverse). Closely matched to these elements are element 8 (detail machines) which joins element 9 at 95%, and element 1 (general maintenance) which joins element 5 at 85%. The elements of the cluster are generally construed similarly with one exception: here, 'detail machines' (element 8) is seen as 'slightly less important' where the other elements are scored towards the 'important' pole. Despite the 'importance' of three of the four elements, the tasks as a whole are regarded as 'repetitive' (construct 5), 'routine' (construct 1) and 'less enjoyable' (construct 4).

Cluster 15 contains elements 3 (training period), 6 (operational fires) and 7 (out duties), these activities being construed similarly on all dimensions. The activities are perceived as 'done for the public' (construct 7), 'enjoyable' (construct 4), and 'important' (construct 3), but perhaps surprisingly described as 'routine' (construct 1). There are high matches for all the three events with elements 6 and 7 being matched at 88%, and element 3 joining element 6 at 85%.

The loosest of the three main clusters is 17 containing elements 10 (stand down), 2 (general notices) and 4 (kit cleaning) The looser matching scores reflect the varied patterning of responses here. Although elements 10 and 2 are joined at 80%, element 4 only matches at 71%. As a cluster, however, the tasks are construed similarly in being 'less enjoyable' (construct 4), 'less important' (construct 3) and activities that are only 'done for ourselves' (construct 7) and 'done when we can' (construct 6).

### Constructs

The construct tree shows only two clusters with a 60% plus match, these being clusters 8 and 11.

Cluster 8 matches constructs 7 (for the public - done for ourselves) and 4 (enjoyable - less enjoyable) at 73%. Here activities that are done for the public tend to be construed as enjoyable, whereas those 'done for ourselves' tend to be less enjoyable.

In cluster 11, the tightest match is for constructs 3 and 1 at 66%. Here when an event is 'routine' it tends to be 'important', but when 'not so much routine' it tends to be 'slightly less important'. There are, however, two exceptions for whereas detail machines (element 8) and general notices (element 2) are 'routine' they are still construed as 'slightly less important'. The next closest match in the cluster is between constructs 2 and 3 also at 66% (these elements are not matched first because construct 1 is closer than construct 2 to the next best match [in terms of least total distance] i.e., construct 5 - 60% as opposed to 40%: see construct matching scores). Here, albeit that the themes are rather basic, when an activity is 'working period' it is 'important', whereas if it is 'rest period' it is 'slightly less important'. There are

however two exceptions, these being kit cleaning (element 4) and detail machines (element 8), which although 'working period' are nevertheless 'slightly less important'. The final construct to join cluster 11 is 5 (repetitive - less repetitive) which is matched to construct 1 at 60%. Here kit cleaning (element 4) was the only activity considered 'not so much routine' and 'less repetitive', all other elements being scored either toward the emergent poles or neutrally.

### Feedback

Fireman Miller agreed with the general interpretation of the data.

Feedback for this subject was straightforward, the constructs elicited being mostly logical opposites. However, the use of 'routine - not so routine' (construct 1) was queried and especially in regard to the construing of 'operational fires' (element 6) as 'routine', and 'kit cleaning' (element 4) as 'not so much routine'. Where other subjects have elicited 'routine' as a construct pole (e.g., Cowans, Holding, Richards, Haynes, Croft) this has usually been; firstly, as an opposite to terms and phrases such as 'exciting' (Cowans), 'spontaneous' (Holding), 'don't get bored' (Richards) or 'varied' (Croft); and secondly, used to describe events such as 'machine check', 'routine maintenance' and 'general cleaning'. Thus, whereas the term is consistently applied to 'kit cleaning' (e.g., Holding, Haynes, Croft), it is not used in construing 'fire calls' (cf. Cowans, Holding, Richards, Haynes, Croft).

An initial impression might be that Miller has simply mis-scored the grid, albeit that this contrasts with his seemingly reliable scores for other constructs (e.g., the scoring for the concrete 'working period - rest period' construct). An alternative hypothesis might be to suggest

cognitive complexity in use of the construct. This may be supported by a seemingly double entendre in the clarification discussion. Miller although initially noting that routine events are simply "things that we do everyday", later qualified this to define 'routine' events as "things which are routine but which are not really necessary, but they're still routine". The 'everyday' suggestion of 'routine' could include fire calls and exclude kit cleaning if we infer (at face value) that at a busy city centre station, fire calls, unlike kit cleaning, are simply 'daily' tasks, and thus 'routine'. Miller's later suggestion, however, is apparently in line with that implied by other firemen, i.e., a meaning approximating to 'unexciting', 'unimportant' or 'boring'. This latter impression would seem to contradict the scores for 'operational fires' and 'kit cleaning' and a further clarification session would have been useful.

#### Fireman Haynes (Sutton Coldfield)

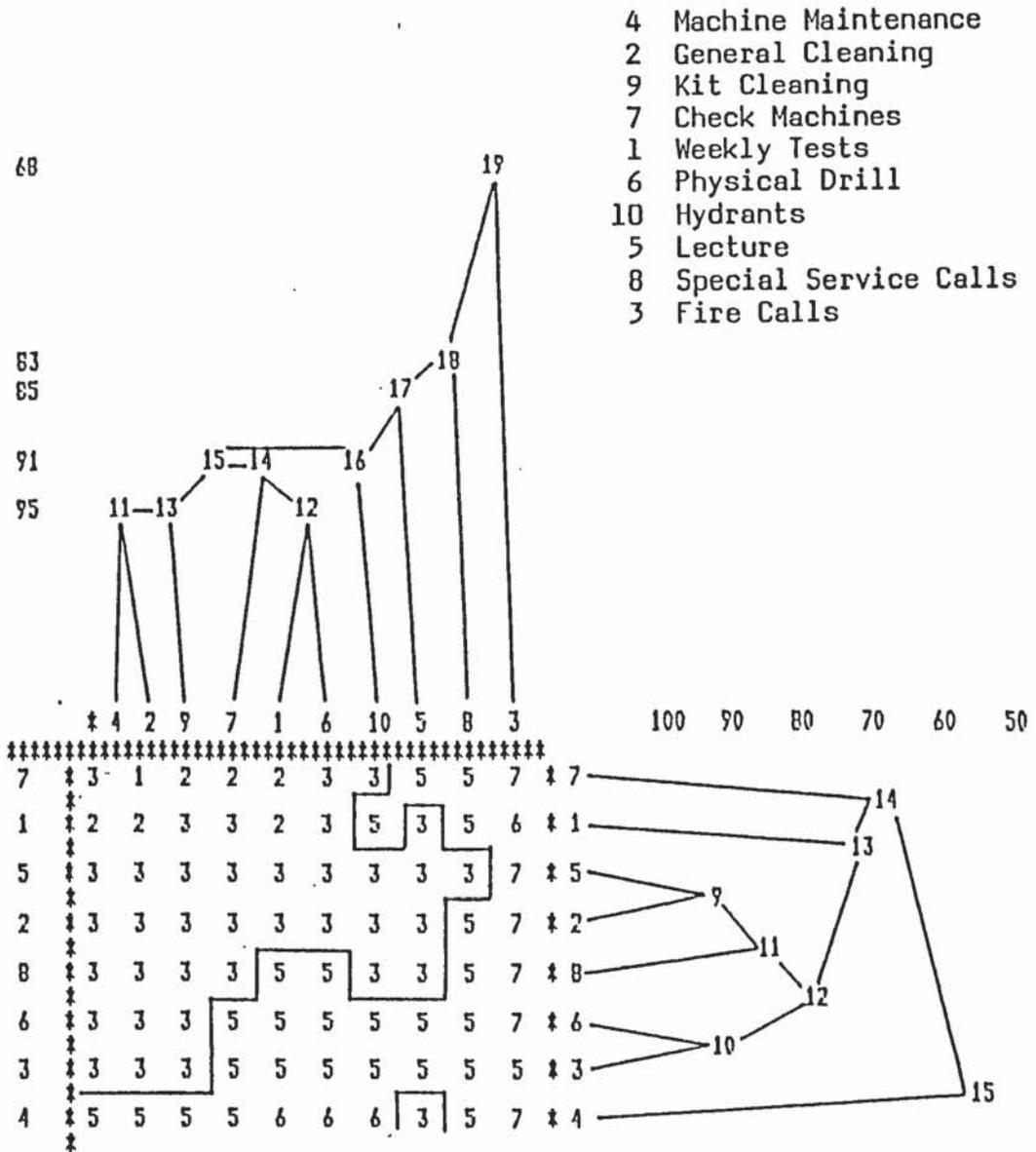
Figure 34 gives the elements and constructs for the initial interview together with the final grid produced by FOCUS. Construct 1 is reversed.

#### Elements

The element tree shows how in cluster 16 all seven activities receive contiguous matches at or above 91%. The tightest links occur within sub-clusters 13 and 14.

In sub-cluster 13 we see elements 4 (machine maintenance) and 2 (general cleaning) matched at 95%, with element 9 (kit cleaning) joining element 2 also at 95%. These events are construed similarly on all dimensions. In sub-cluster 14, element 1 (weekly tests) is matched with element 6 (physical drill) at 95%, with element 7 (check machines) joining element 1 at 91%. These elements receive similar ratings on all constructs with the

FIGURE 34: FOCUSED GRID - SUTTON COLDFIELD NO 3 (HAYNES)



- 7 Covers Wider Aspect - Done Over and Over Again
- 1 Off the Station - On the Station (Reversed)
- 5 Urgent Nature - Secondary
- 2 Unpredictable - Standard Activities
- 8 Physical - Non-physical
- 6 More Important - Unnecessary Routine
- 3 Specific Activity - General Activity
- 4 Practical - Theory

FIGURE 35: GRID SCORES - SUTTON COLDFIELD NO.3 (HAYNES)

RAW GRID

	* 1	2	3	4	5	6	7	8	9	10
1	* 6	6	2	6	5	5	5	3	5	3
2	* 3	3	7	3	3	3	3	5	3	3
3	* 5	3	5	3	5	5	5	5	3	5
4	* 6	5	7	5	3	6	5	5	5	6
5	* 3	3	7	3	3	3	3	3	3	3
6	* 5	3	7	3	5	5	5	5	3	5
7	* 2	1	7	3	5	3	2	5	2	3
8	* 5	3	7	3	3	5	3	5	3	3

ELEMENT MATCHING SCORES

	* 1	2	3	4	5	6	7	8	9	10
1	* 83	54	83	81	95	91	81	83	87	
2	* 83	37	95	77	79	87	68	95	79	
3	* 54	37	41	52	58	50	68	41	58	
4	* 83	95	41	81	83	87	72	95	83	
5	* 81	77	52	81	85	89	83	81	85	
6	* 95	79	58	83	85	91	85	83	91	
7	* 91	87	50	87	89	91	81	91	91	
8	* 81	68	68	72	83	85	81	72	85	
9	* 83	95	41	95	81	83	91	72	83	
10	* 87	79	58	83	85	91	91	85	83	

CONSTRUCT MATCHING SCORES

	* 1	2	3	4	5	6	7	8
1	* 20	46	50	26	40	10	33	
2	* 80	60	43	93	66	76	86	
3	* 60	60	56	53	93	50	73	
4	* 36	56	43	36	63	20	56	
5	* 73	26	66	63	60	70	80	
6	* 60	53	26	36	60	56	80	
7	* 70	10	36	53	16	30	63	
8	* 66	33	46	43	40	40	23	

exception of construct 7, where unlike elements 1 and 6, element 7 is scored towards the 'non-physical' pole.

If we examine these six elements (i.e. cluster 15) as a whole we find that they are all construed as 'on the station' (construct 1 reversed), as 'standard activities' (construct 2), 'secondary' (construct 5) and 'done over and over again' (construct 7). In terms of construed differences the contour lines indicate that while the events in cluster 13 are 'general activities' (construct 3) and 'unnecessary routine' (construct 6), in cluster 14 are 'specific activities' and 'more important'. The final element making up cluster 16, i.e., 'hydrants' (element 10), has high matches with all elements except 3.

Of the remaining three elements, the lecture (element 5) has its closest match with element 7 (check machines) at 89%, while element 8 (special service calls) has its strongest links with elements 6 (physical drill) and 10 (hydrants) both at 85%. Element 3 (fires) is by far the most separate event, it's highest match being 68% with special service calls.

### Constructs

The dendrogram gives its strongest matches for the constructs in cluster 12. Within the cluster we find a high match between constructs 6 and 3 at 93%. Here all events construed as 'specific activities' (construct 3) have also been scored as 'more important' (construct 6), and conversely all tasks perceived as 'general activities' have been construed as 'unnecessary routine'. The cluster has another 93% match between constructs 5 and 2. Here eight of the ten constructs are considered as 'standard activities' (construct 2) and 'secondary' (construct 5). Fire calls (element 3), however, is construed as 'unpredictable' and 'urgent

nature'. An exception to this pattern is for special service calls (element 8) which although 'urgent nature', is nevertheless 'secondary'. Construct 8 (physical - non-physical) joins construct 2 at 86%. When events are construed as 'physical' they are generally also 'unpredictable' (construct 2) and 'urgent nature' (construct 5). Two exceptions here are 'weekly tests' (element 1) and 'physical drill' (element 6) which although being 'standard activities' and 'secondary' are nevertheless 'physical'.

Of the remaining linkages construct 1 reversed (off the station - on the station) has its closest matches with construct 2 at 80%, and then with its adjacent linked construct, 5, at 73%. Construct 7 (covers wide area - done over and over again) has its closest matches with construct 2 at 80%, and then with its adjacent construct, 1 reversed, at 70%. Construct 4 (practical - theory) has no substantial matches, its closest links being with constructs 6 and 5 (reversed) both at 63%.

#### Feedback

Fireman Haynes agreed with the cluster analysis presented.

As with Fireman Miller the constructs seem rather straightforward and Haynes was asked to clarify only the 'covers wider aspect - done over and over again' construct. Haynes explained:

Haynes:           When you're going out to a job [fire calls etc.] you're covering a wider aspect of the job than in anything else. Because you don't know what you're going to do so therefore you're covering anything from chemicals, what have you. So anything can happen. Whereas 'done over and over again' is sort of, well take drill, you do it over and over again, a ladder drill, you do it over and over. It's only when you're actually outside doing it in strange circumstances that you're covering more of an aspect of the job.

In terms of task evaluations the researcher questioned why the elements in cluster 13 (machine maintenance, general cleaning, kit cleaning) were

'unnecessary routine' (construct 6) while those in cluster 14 (check machines, weekly tests, physical drill) were 'more important'.

Haynes: The machine maintenance is just cleaning the bodywork, maintaining the bodywork, and as I say with the general cleaning that's just maintaining the floor and all the stuff around it, the same with the kit. I don't think they're necessary as much for the simple fact that it isn't the kit that's going to do the job, it's you and the stuff that you're using. The bodyworks nothing, it's the engine in it and all the kit that's inside that's going to do the job when you get there.

Researcher: And these are seen as 'important' why is that?

Haynes: Well we check the machine because obviously you've got to make sure everything's there, because if you get there without something it's no good anyway. Weekly tests are important because it's looking after your interests, you're making sure the equipment is in good order. And the drill is really for yourself to make sure you're in good stead when you get there, and you know exactly what's going to happen and what you're going to do.

#### Fireman Richards (Sutton Coldfield)

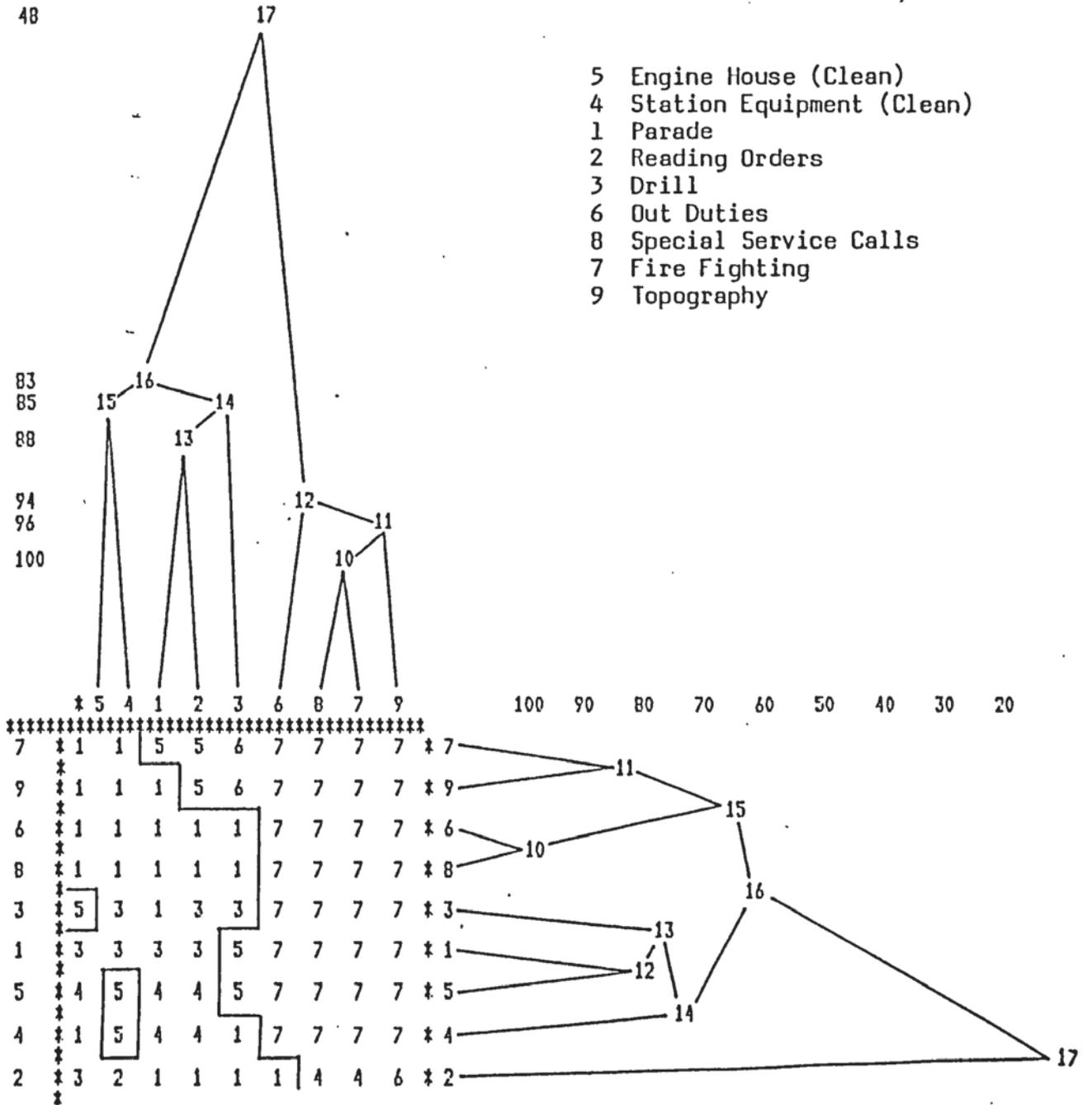
Figure 36 gives the elements and constructs for the initial interview together with the final grid produced by FOCUS. Constructs 1, 2 and 8 are reversed.

#### Elements

In figure 36 we see two major clusters - 12 and 16.

In cluster 12 we have a 100% match between elements 8 (special service calls) and 7 (fire fighting). Element 9 (topography) then joins with a 96% match with firefighting, with element 6 (out-duties) completing the cluster with a 94% match with special service calls. All these activities are construed as 'greatly helps your confidence' (construct 7), 'important for efficiency' (construct 3), 'practical' (construct 5) and offering the opportunity to 'gain experience' (construct 4).

FIGURE 36: FOCUSED GRID - SUTTON COLDFIELD NO.4 (RICHARDS)



- 17 Greatly Helps Your Confidence - Helps Confidence
- 9 Important - Less Important
- 6 Meeting Public - Done Within Station
- 8 Don't Get Bored - Routine (Reversed)
- 3 Important for Efficiency - Less Important for Efficiency
- 1 Interesting Mundane (Reversed)
- 5 Practical - Theoretical
- 4 Gain Experience - Involves Pretending
- 2 Not Done Everyday - Done Everyday (Reversed)

FIGURE 37: GRID SCORES - SUTTON COLDFIELD NO.4 (RICHARDS)

RAW GRID

	1	2	3	4	5	6	7	8	9
1	5	5	3	5	5	1	1	1	1
2	7	7	7	6	5	7	4	4	2
3	1	3	3	3	5	7	7	7	7
4	4	4	1	5	1	7	7	7	7
5	4	4	5	5	4	7	7	7	7
6	1	1	1	1	1	7	7	7	7
7	5	5	6	1	1	7	7	7	7
8	7	7	7	7	7	1	1	1	1
9	1	5	6	1	1	7	7	7	7

ELEMENT MATCHING SCORES

	1	2	3	4	5	6	7	8	9
1		88	74	83	75	33	27	27	24
2	88		85	79	72	44	38	38	35
3	74	85		68	68	48	42	42	38
4	83	79	68		85	31	29	29	25
5	75	72	68	85		24	25	25	22
6	33	44	48	31	24		94	94	90
7	27	38	42	29	25	94		100	96
8	27	38	42	29	25	94	100		96
9	24	35	38	25	22	90	96	96	

CONSTRUCT MATCHING SCORES

	1	2	3	4	5	6	7	8	9
1		18	-18	-18	-7	-55	-29	55	-44
2	3		-3	-3	22	-40	7	40	-7
3	77	25		55	66	62	44	-62	59
4	62	11	-25		74	62	59	-62	51
5	81	0	-7	-14		37	62	-37	55
6	55	40	-62	-62	-37		51	-100	66
7	66	-7	-22	-29	-25	-51		-51	85
8	-55	-40	62	62	37	100	51		-66
9	66	7	-37	-37	-33	-66	-62	66	

In cluster 16 we see two main sub-clusters, those of 15 and 14. Cluster 15 represents an 85% match between element 5 (cleaning engine house) and element 4 (cleaning station equipment). These are construed as 'mundane' (construct 1 reversed), 'routine' (construct 8 reversed) and 'less important' (construct 9). There are two exceptions to the construct matches. On construct 3 while cleaning the engine house is 'important for efficiency', cleaning station equipment is 'less important for efficiency' (see feedback). Secondly, for construct 4, cleaning station equipment is scored as 'something from which you can gain experience', whereas cleaning the engine house 'involves pretending' (see Haynes in ethnography).

Cluster 14 contains elements 1 (parade), 2 (reading orders) and 3 (drill). Here we have an 88% match between elements 1 and 2, with element 3 joining element 2 at 85%. These activities are construed as similar to those in cluster 15 being 'routine' (construct 8 reversed), 'done within station' (construct 6) and 'done everyday' (construct 2 reversed), but dissimilar in that they (like elements in cluster) are construed as 'greatly help(ing) your confidence' (construct 7). However, whereas the events in cluster 12 are seen as 'important for efficiency' (construct 3) those in cluster 14 are 'less important for efficiency'. In terms of intra-cluster differences the contour lines show that while reading orders (element 2) and drill (element 3) are 'important' (construct 9), parade (element 1) is 'less important'. Nevertheless, reading orders is construed with parade as being 'mundane' (construct 1 reversed) whereas drill is 'interesting'.

### Constructs

The dendrogram offers two main clusters, those of 15 and 14.

In cluster 15 we can see a 100% match at sub-cluster 10 between constructs 6 and 8 indicating that when something is 'meeting public' (construct 6) it is 'don't get bored' (construct 8 reversed) and conversely when it is 'done within station' it is 'routine'. The other large match in cluster 15 is between constructs 7 and 9 forming 11 at 85%. Here where something is 'greatly helps your confidence' (construct 7) it is 'important' (construct 9) whereas if something is only 'helps confidence' it is generally 'less important'. The only exception here is for parade (element 1) which in being 'greatly helps your confidence' is nevertheless 'less important'. Cluster 15 is finally matched when constructs 9 and 6 are linked at 66%. Although this does not constitute very strong clustering it nevertheless suggests that where something is 'meeting public' (construct 6) it is also 'don't get bored' (construct 8 reversed), 'important' (construct 9) and to a certain degree 'greatly helps confidence' (construct 3). Conversely where something is 'done within station', it is 'routine', 'less important' and only 'helps confidence'. The second horizontal contour line shows the two main exceptions; although 'reading orders' (element 2) and 'drill' (element 3) are 'done within station' (construct 6) and 'routine' (construct 8), they are nevertheless 'important' (construct 9) and 'greatly helps confidence' (construct 7).

In the second major cluster, i.e., 14, we see tight matches for constructs 3, 1, 5 and 4. The closest match is between constructs 1 and 5 at 81% suggesting that when something is 'practical' (construct 5) it is 'interesting' (construct 1 reversed), but when it is 'theoretical' it is 'mundane'. The one exception to this pattern is for cleaning station equipment which although 'practical' is nevertheless 'mundane'. Construct 3 (important for efficiency - less important for efficiency) enters the

cluster with a 77% match with construct 1 at sub-cluster 13. Thus, when something is 'interesting' (construct 1 reversed) it is generally 'important for efficiency' (construct 3) and conversely when something is 'mundane' it is generally 'less important for efficiency'. There are, however, two exceptions. Firstly, whereas 'cleaning the engine house' is 'important for efficiency' it is nonetheless 'mundane'. Conversely, drill while 'interesting', is 'less important for efficiency'. The cluster is completed when construct 4 (gain experience - involves pretending) matches with construct 5 at 74%. Here where something is 'practical' it is generally 'gain experience', but where something is 'theoretical' it 'involves pretending'. The one exception to the pattern seems to be drill (element 3) which although 'practical' still 'involves pretending'. Again while not representing strong clustering, cluster 14 seems to suggest that when something is 'practical' (construct 5) it is also 'interesting' (construct 1 reversed), is 'important for efficiency' (construct 3), and (to a lesser extent) helps 'gain experience'. On the other hand when something is 'theoretical' it is also 'mundane', 'less important for efficiency', and (to a lesser extent) 'involves pretending'. The only remaining construct, construct 2, has little correlation with any other construct and can be interpreted separately.

#### Feedback

Fireman Richards although agreeing with the interpretation, noted two errors, the first being possibly due to incorrect scoring. In cluster 15 Richards had stated that 'cleaning station equipment' was 'less important for efficiency' whereas 'cleaning engine house' was 'important for efficiency'.

Richards: I should have put it in the reverse way actually. Obviously for helping efficiency if you're going to clean the machine and you're cleaning the equipment, it's handling and giving you more confidence with it. It's got to be more important [for efficiency] than cleaning the engine house floor, where you're only cleaning for appearance and your own self pride on cleanliness really because the job has just got to be done really.

The second part was with regard to parade being 'less important'. Here, Richards suggested that it was only 'less important' from the viewpoint of younger men in the job. Richards noted that for older firemen, like himself, parade had importance in instilling a disciplined attitude:

Richards: It's both [important and unimportant] really, the brigade is split into two. See I'm looking at it from an older angle. Parade is perhaps more important to the older hands in the job, although as I say I'm one of them, because you know it's part of discipline. It's really just part of discipline. It's doing as you're told really this routine, if you like, saluting and saying 'Sir' to officers. It's all part of adhering to the brigade structure itself. Whereas the young lads who haven't had perhaps any national service they would look at it differently I would think. Parade, they would think is just a waste of time [they would say] why can't you just come in and clock on.

Although Richards suggests that younger firemen tend to undervalue parade, he notes that they, in fact, need parade more than the older firemen who had been used to discipline in national service. As strict acceptance of orders is a necessity on the fire ground, activities such as parade should prepare the fireman to adhere to orders without question.

Richards was next questioned over the scoring of 'drill' (element 3) as 'interesting' (construct 1 reversed). Here he illustrates how drill is only 'interesting' or 'mundane' according to how the officers take the sessions. At Sutton the watch officers (especially the older officers) are generally creative and so drill is 'interesting'.

Richards: It depends on what sort of officers you've got. There are officers that will bore the pants off you, and there are others that are excellent that will hold your interest all the time, because you're not just doing what it says in the standing orders all the time. They put a little more personal flair into it and it makes it more interesting. But now the younger officers hands are more tied than they were in the past before it became West Midlands. In the Birmingham Fire and Ambulance Service, the officers in charge made it more interesting. You've got more boring officers now taking drill since 1974 because they are a lot more promotion minded now than they was in them days. They're all promotion minded, and if they took a chance and did a drill off the cuff and somebody got hurt they would very likely get their knuckles wrapped, and think it would spoil their promotion chances.

Again the feedback discussion serves not only to correct errors and clarify concepts, but also to expand themes and raise shared constructs. The first transcription apart from correcting the mistaken interpretation regarding elements 4 and 5, seems to involve another construct used earlier by another experienced fireman (Randall), i.e., when Richards discussed the handling of equipment as 'giving you more confidence'. Also his later remarks that cleaning the engine house 'has just got to be done' seems to reflect Fowler's earlier remark about routine station activities being 'just necessary'.

#### Fireman Croft (Sutton Coldfield)

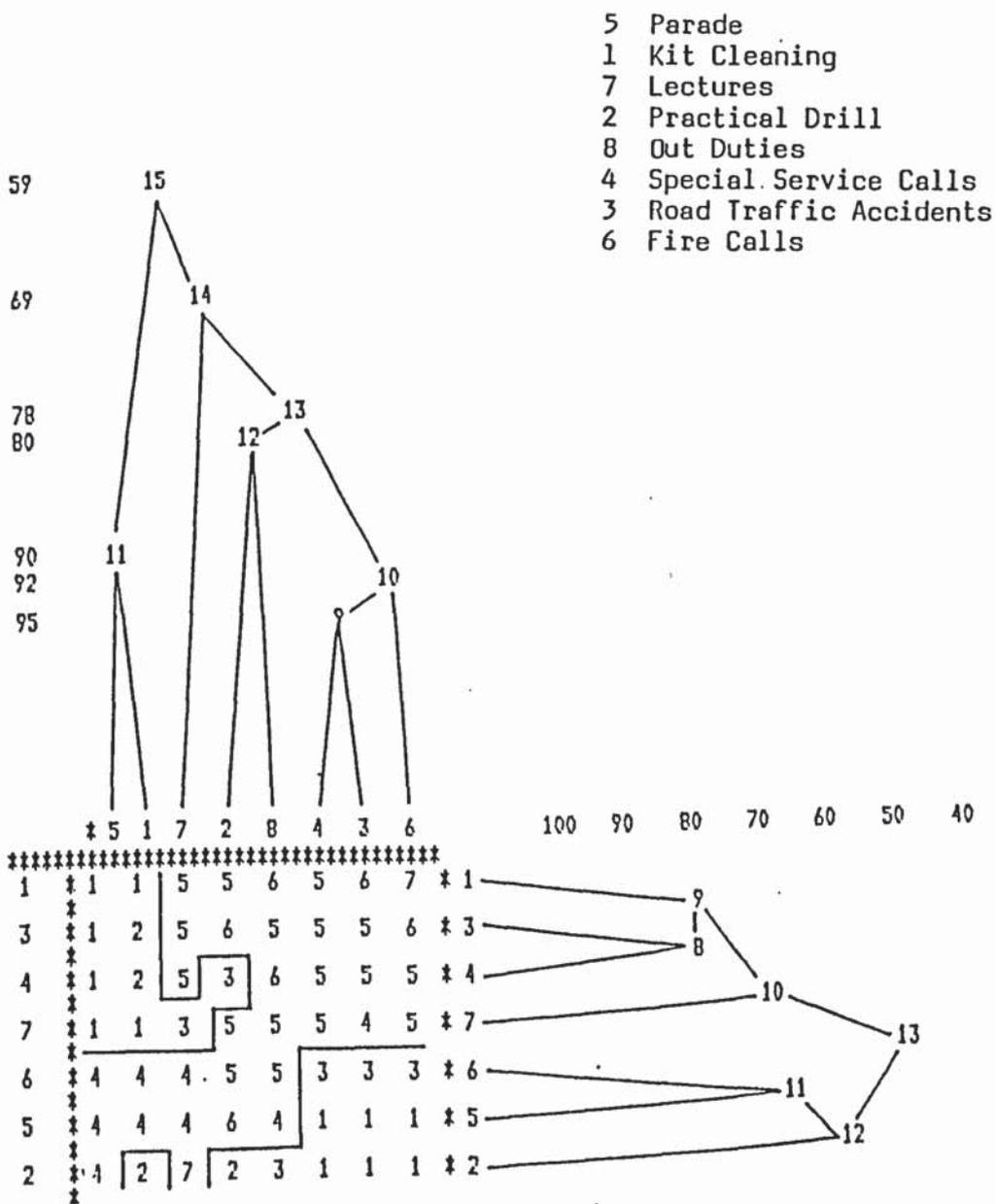
Figure 38 gives the elements and constructs for the initial interview together with the final grid produced by FOCUS. Constructs 1, 2 and 5 are reversed.

#### Elements

Figure 38 shows three main clusters, i.e., 11, 12 and 10.

In cluster 10 we see a match at 95% for elements 4 (special service calls) and 3 (road traffic accidents). Element 6 (fire calls) joins the cluster

FIGURE 38: FOCUSED GRID - SUTTON COLDFIELD NO.3 (CROFT)



- 1 Routine - Varied (Reversed)
- 3 Improves Your Efficiency - Doesn't Improve Your Efficiency
- 4 Broadens Knowledge - Doesn't Broaden Knowledge
- 7 Interesting - Boring
- 6 Done By the Book - Depends on the situation
- 5 Practicing For the Job - Actual Jobs (Reversed)
- 2 Theoretical - Practical (Reversed)

FIGURE 39: GRID SCORES - SUTTON COLDFIELD NO.5 (CROFTS)

RAW GRID

	1	2	3	4	5	6	7	8
1	7	3	2	3	7	1	3	2
2	6	6	7	7	4	7	1	5
3	2	6	5	5	1	6	5	5
4	2	3	5	5	1	5	5	6
5	4	2	7	7	4	7	4	4
6	4	5	3	3	4	3	4	5
7	1	5	4	5	1	5	3	5

ELEMENT MATCHING SCORES

	1	2	3	4	5	6	7	8
1		61	54	54	90	47	59	57
2	61		69	73	52	71	69	80
3	54	69		95	45	92	71	78
4	54	73	95		45	92	71	78
5	90	52	45	45		38	59	52
6	47	71	92	92	38		64	76
7	59	69	71	71	59	64		78
8	57	80	78	78	52	76	78	

CONSTRUCT MATCHING SCORES

	1	2	3	4	5	6	7
1		-12	-20	-8	-4	37	-4
2	29		33	12	58	25	25
3	79	0		79	33	41	75
4	75	12	4		37	37	70
5	37	0	16	4		33	25
6	29	33	50	62	66		50
7	70	0	8	20	16	50	

with a 92% match with element 3. These activities are all construed as 'broadening knowledge' (construct 4), 'improving your efficiency' (construct 3) 'depending on the situation' (construct 6), 'varied' (construct 1 reversed) and 'interesting' (construct 7).

Cluster 11 matches elements 5 (parade) and 1 (kit cleaning) at 92%. These activities are construed as 'not broadening knowledge' (construct 4), 'doesn't improve your efficiency' (construct 3), 'routine' (construct 1 reversed) and 'boring' (construct 7).

Cluster 12 links elements 2 (practical drill) and 8 (out duties) at 80%. These activities are perceived as similar to those in cluster 10 in that they 'improve your efficiency' (construct 3) are 'varied' (construct 1 reversed) and 'interesting' (construct 7), but dissimilar in that they are 'done by the book' (construct 6). There is general intra-cluster agreement except on construct 4 where out duties is 'broadens knowledge' while, surprisingly, practical drill is 'doesn't broaden knowledge'.

Lectures (element 7) receives looser matches than other activities and is clustered last, it's closest link being with out duties at 78%.

### Constructs

The construct tree shows two main clusters - 10 and 12.

In cluster 10 the tightest match is between construct 3 and 4 at 79%. Construct 1 reversed is then linked to construct 3 also at 79%, with construct 7 completing the cluster with a 70% match with construct 4. In terms of construct links, the cluster suggests that when something is 'improves your efficiency' (construct 3) it is generally 'broadens knowledge' (construct 4), 'varied' (construct 1 reversed) and

'interesting' (construct 7). Conversely where something is 'doesn't improve your efficiency' it is 'doesn't broaden knowledge', 'routine' and 'boring'. The contour lines, however, indicate two exceptions. Firstly, although lectures (element 7) 'improve your efficiency', 'broaden knowledge' and are 'varied', they are nonetheless 'boring'. Secondly, whereas practical drill (element 2) 'improves your efficiency', is 'varied' and 'interesting', as noted previously, it 'doesn't broaden knowledge'.

Cluster 12 holds slightly looser linkages with constructs 6 and 5 reversed matching at 66% and construct 2 reversed completing the cluster with a 58% link with construct 5. Here when something is 'actual jobs' (construct 5 reversed) it is generally 'depends on the situation' (construct 6), and conversely when 'practicing for the job' it is usually 'done by the book'. The construct matching scores show how construct 2 (practical - theoretical) has no other reasonable linkages other than with construct 5.

### Feedback

Fireman Croft agreed with the basic interpretation of the grid.

In clarification he was first asked to explain the scoring of drill as 'doesn't broaden knowledge'. Croft explained:

Croft:           Out duties is always something different, you're always learning something new, whereas drill you're going over what you already know, basically; and practicing it and practicing it and practicing it until you do it without thinking about it.

Here drill is not construed as an exercise in learning but rather in habituation. Croft was then asked the meaning of 'done by the book - depends on the situation'.

Croft: Again, drill if you're going on drill it's basically to get you accustomed to the equipment and everything else, and to handle it without thinking about it which very often takes longer than if you're in a fire situation where people have to be rescued and there isn't time. So you take short cuts and so instead of the drill book way you just get it up there, get it up to the building, extend, pull them out, whatever it is. Do you see what I mean by that? One can't exist without the other, you've got to have drill to practice for your performance and your efficiency ... You're adapting what you've learnt, compounded, practiced, made efficient on the drill ground because no two fire calls are the same, so you've got to adapt. No drill book exercise or anything like that can apply for each one, it's just a basic thing which the officer in charge adapts, and the firemen adapt to each situation as it demands.

This is essentially an expansion on the above 'practice' theme, with Croft emphasising that in being 'done by the book' drill essentially precludes any personal discretion. However on the fireground or at other emergencies it is 'the situation' that determines to what extent the actual procedures idealised in the drill book are replicated, often it being necessary to take 'short cuts'.

APPENDIX FOUR:  
REPERTORY GRID INDIVIDUAL FEEDBACK SCHEDULE

## APPENDIX FOUR

### Feedback Interview: Fireman Fowler

#### A. Element Clusters

1. Cluster 13 (R.T.A.'s (4), S.S.C.'s (5), Fires (10))

- these are: (2) exciting  
(9) what public thinks I do for a living  
(7) require specialist training  
(6) carry more responsibility  
(5) informative  
(8) important  
(3) different

2. Cluster 16 (Lectures (8), Drill (10), Out Duties (3))

- these are similar to cluster 13 in

- (7) require specialist training
- (5) informative
- (8) important
- (3) different

- these are dissimilar to cluster 13 in

- (2) not as exciting
- (9) not what public thinks I do

- differences in the cluster occur in that

- (a) while drill and out duties are seen to carry responsibility (6), lectures offer less in this respect.

3. Cluster 17 (Kit Cleaning (2), Station Routine (9), Parade (7),  
Checking Appliances (6))

they contrast with clusters 13 and 16 because they are:

- (3) mundane
- (5) less informative
- (6) carry less responsibility

they are similar to cluster 16 in being

- (2) less exciting
- (9) not what the public thinks I do

differences in the cluster occur:

- (a) parade and checking appliances are important (8) whereas kit cleaning and station routine are less important.
- (b) checking appliances is seen as requiring specialist training (7) while other 3 elements are just 'run of the mill'.

B. Construct Clusters (points for clarification)

1. When something involves 'specialised training' (9) it is 'important' (8) but where it is 'run of the mill' it is 'less important', EXCEPT parade which while 'run of the mill' is nevertheless 'important'.
2. When something is an 'operational activity' (1) it requires 'specialised training' (7) whereas activities that are procedure are seen as 'run of the mill' EXCEPT checking appliances which while 'procedure' is nevertheless seen as 'requiring specialist training'.
3. When something 'carries more responsibility' (6) it is 'exciting' (2), but if something 'carries less responsibility', it is 'not as exciting'. Two EXCEPTIONS are 'drill' and 'out duties' that while 'carrying more responsibility' are nevertheless 'not as exciting'.
4. When something is 'work off the station' (4) it is what the 'public thinks I do for a living', and when something is 'work on the station', it is 'other aspects of what I do', the EXCEPTION is 'out duties' which is 'work off the station', but also 'other aspects of what I do'.

C. Constant Clarification

1. In the construct 'mindane - different' what is meant by "different"?
2. In the construct 'informative - just necessary', what is meant by these terms?
3. Why is the lecture to a larger degree "operational"?

APPENDIX FIVE:  
STANDING ORDER 7/1 (W.M.F.S.)

APPENDIX 5  
ORDER NO. 7/1  
WEST MIDLANDS FIRE SERVICE  
STATION ROUTINES

1. Operational Readiness

Personnel when on duty must be available to respond to emergency calls and to perform work relating to the operational readiness of appliances and equipment for emergency calls at all times.

2. (1) Daily Routines

Stations will normally adhere to the following routines:-

Monday to Sunday inclusive

(a) Day Shift - 0900 to 1800 hours

0900 hours	Parade. Roll call. Dismiss off-going Watch. Detail drivers, appliance riders and Breathing Apparatus men. Read out orders, check appliances and equipment.
0930 - 1100 hours	Parade. Station Routine.
1100 - 1115 hours	Stand-easy.
1115 - 1300 hours	Station Routine.
1300 - 1400 hours	Lunch.
1400 - 1530 hours	Parade. Station Routine.
1530 - 1545 hours	Stand-easy.
1545 - 1700 hours	Station Routine.
1700 - 1730 hours	Tea.
1730 - 1800 hours	Clean personal gear - clean Mess Room - tidy domestic quarters before roll call.

(b) Night Shift - 1800 - 0900 hours

1800 hours	Parade. Roll call. Dismiss off-going Watch. Detail drivers, appliance riders and Breathing Apparatus men. Read out orders, check appliances and equipment.
1830 - 2100 hours	Parade. Station Routine.
2100 - 2200 hours	Supper.
2200 - 2359 hours	Station Routine.
2359 - 0700 hours	Stand-down.
0700 - 0800 hours	Parade. Station Routine. Clean appliances, Appliance Room and Station.
0800 - 0830 hours	Breakfast.
0830 - 0900 hours	Clean personal gear - clean Mess Room - tidy domestic quarters before roll call.

2. (2) Station Routines

Station Routine includes:-

- (a) (i) Training, in accordance with Standing Order 6/4, to take priority over all other station routines.

No discretion is allowed in achieving the commitment of at least 100 hours' general training and the appropriate number of hours of specialist training in any period of 13 weeks as required by the training programme.

A minimum of two hours' training per shift is to be carried out at least one hour of which is to be practical training. Officers in charge of day shifts should aim to complete three hours' training to assist them in completing the training programme.

- (ii) Probationer Firemen training in accordance with Standing Order 6/7.

(iii) Where appropriate the training of Retained personnel.

(iv) Training at Service and Divisional level as required.

- (b) Routine maintenance including standard tests and associated work, the cleaning of Fire Service equipment, appliances and other Fire Service vehicles in order to maintain a high standard of efficiency and cleanliness at all times.

- (c) Inspections, tests and marking of hydrants, bridge doors, fire wells and other water supplies in accordance with Standing Order 11/1.
- (d) Inspections and tests of dry and wet rising mains in accordance with Standing Order 11/1.
- (e) Out duties as required by Section 1(I)(d) of the Fire Services Act 1947 (Standing Order 15/3 refers). Fire Prevention Inspections (Standing Order 14/1 refers), and such public relations work as may be required, e.g. school visits, exhibitions, etc.
- (f) Training of outside organisations as required in accordance with Standing Order 6/13.
- (g) Day to day maintenance and cleaning of operational areas on fire stations sufficient to maintain a high standard of efficiency and cleanliness at all times.
- (h) Kit inspections in accordance with Standing Order 8/1.
- (i) Duties compatible with the skills of a fireman and the nature of the Fire Service.
- (j) Any necessary clerical duties.

All stations to have a station routine programme approved by the Divisional Commander, so designed to enable all work to be completed and ensure the attainment and maintenance of satisfactory standards. Any work unable to be completed by a watch due to the operational exigencies of the Service is to be completed as soon as possible during the next periods allocated to station routine.

The Officer in charge of a station is responsible for ensuring that the duties enumerated above are carried out during periods allocated to station routine, due regard being given to the nature and extent of the work to be done and to the nature and urgency of any outstanding work.

Full use is to be made of all time allocated to station routine and personnel may be allowed by the Officer in charge to stand down during time allocated to station routine only when the training period has been satisfactorily completed, out duties are up to date and a high standard of cleanliness, especially of fire appliances, has been achieved.

In order that the most effective use is made of time available it is preferable normally that duties other than training which require personnel to leave the station be carried out by the day shift and work on stations be performed by the night shift.

Officers in charge of stations are to ensure that the station and appliances are in a clean condition at time of changeover.

2. (3) Public Holiday Routine

Public Holiday Routine will be adopted on the eight public holidays, concessionary and extra statutory days only and will be confined to ensuring the operational readiness of appliances and equipment in accordance with paragraph 1 of this Order.

(a) Day Shift

- |                   |  |
|-------------------|--|
| 0900 - 0930 hours | Parade. Roll call. Dismiss off-going Watch. Detail drivers, appliance riders and Breathing Apparatus men. Read out orders, check appliances and equipment. |
| 0930 - 1700 hours | Only work related to ensuring the operational readiness of appliances and equipment to be carried out.   |
| 1700 - 1730 hours | Tea.   |
| 1730 - 1800 hours | Clean personal gear - clean Mess Room - tidy domestic quarters before roll call.   |

(b) Night Shift

- |                   |  |
|-------------------|--|
| 1800 - 1830 hours | Parade. Roll call. Dismiss off-going Watch. Detail drivers, appliance riders and Breathing Apparatus men. Read out orders, check appliances and equipment. |
| 1830 - 2359 hours | Only work related to ensuring the operational readiness of appliances and equipment to be carried out.   |
| 2359 - 0700 hours | Stand down.  |
| 0700 - 0800 hours | Parade. Station Routine. Clean appliances, Appliance Room and station.   |
| 0800 - 0830 hours | Breakfast.   |
| 0830 - 0900 hours | Clean personal gear - clean Mess Room - tidy domestic quarters before roll call.   |

3. Change of Watch Procedure

- (1) Parade Personnel will fall in two watches.
- (2) Dress In accordance with Standing Order 7/2
- (3) Calling the Roll The Officer in charge of the parade will call both watches to attention, "Call to Roll", dismiss the off-going watch, and will inspect the uniform of the duty watch. The off-going watch is to ride to any call received before the order for

dismissal is given. The Officer in charge of the station is to attend Parade at change of watch.

- (4) Inspection of Duty Watch The Officer in charge must make an inspection of each man's uniform prior to commencement of drill and satisfy himself that it is clean and smart.
- (5) Reading of Orders The duty Sub Officer or Leading Fireman must read out any orders or other instructions to the oncoming watch before dismissal and sign accordingly.
- (6) Handing Over Duties Sub Officers, Leading Firemen and drivers are required to hand over their duties to their reliefs. Drivers of the duty watch after checking their machines must report to the Officer in Charge that they have done so. Details of fresh damage or marks should be reported and entered in the vehicle log. The machine check must include the escape warning light where fitted. Drivers will not proof-start engines; the Officer in charge may order a short road test if there is reason to suspect that the engine is defective or if a vehicle has not been run for seven days. Breathing Apparatus Operators are required to check their sets in accordance with instructions in Standing Orders. Appliance inventories will be checked at each change of watch, under the direction of the Officer in charge of the watch. Any discrepancies or damaged equipment will be notified without delay to the Officer in charge of the watch, who will take the necessary action to remedy any loss or defect. Escape warning lights must be proof-checked by applying sufficient movement to the escape to cause an illumination of the bulb.
- (7) Personnel Late for Duty The changeover of watches is not to be delayed because of the non-arrival of an Officer in charge of the oncoming watch. The Officer in charge of the off-going watch is expected to remain on duty until he is relieved by the Officer in charge of the oncoming watch, and Divisional Headquarters is to be advised immediately.
- (8) Temporary shortage of riders When an appliance at a one appliance station which is expected to be available would otherwise be put off the run because of a temporary shortage of riders, a sufficient number of personnel from the off-going watch is to be requested to keep the appliance on the run while the matter is referred to Divisional Headquarters.
- (9) Oncoming Watch finding appliance away from station In the event of the oncoming watch finding that the watch to be relieved is attending a fire or other incident, the Officer in charge is to inform Divisional Headquarters of the availability of crews without appliances. He will call the roll and proceed with station routine or provide reliefs as instructed.

4. Dutyman

- (1) A dutyman is to be responsible for the performance of all duties mentioned in Standing Orders or elsewhere as being the responsibility of the dutyman.
- (2) Visits by Officers - Reporting When senior officers visit the station, the dutyman is to report his own name and that of the Officer in charge in the following manner:-

"Fireman Brown on duty, Station Officer Smith in charge"

5. Stand down Periods

The stand down period 2400 - 0700 is a rest period in which only work necessary to maintain the operational readiness of appliances and equipment will be carried out and during which members may rest but must at all times be capable of immediate response to emergency calls.

6. Station Routines

It is implicit in the National Agreement that while all hours designated for station routines are available for work, it is not the intention to manufacture work for the sake of occupying personnel for the full work period. When the training requirements set out in Standing Order 6/4 have been complied with, the other requirements of station routines have been completed, including appliance maintenance, to a satisfactory standard, then the Officer in charge has discretion to stand down the personnel.

7. Public Address External Loudspeakers

Public address loudspeakers fitted to the exterior of fire stations will only be used between the following times:-

Daily - 0900 to 1800 hours

Officers in charge of stations may, at their discretion, use the external loudspeakers for the duration of evening drill sessions and when thought necessary for the operational efficiency of the Service. It is the responsibility of the Officer in charge to ensure that the exterior loudspeakers are switched off immediately afterwards.

APPENDIX SIX:  
MICRO TEACHING EXERCISE PROBLEMS

## Appendix Six

### Advanced Training - Command and Control

#### Problem 1

Leading Fireman ..... is a member of a watch you have recently taken over. He is an 'old soldier' and has completed about 16 years in the job. He is not helping you one bit with anything, and his whole attitude of apathy and sarcasm has gone far enough.

You are now about to interview him, and you are also well aware that the Divisional Commander is expecting you to sort this Watch out.

You have exactly 7 minutes to put over your style of interview.

#### Problem 2

A Fireman on your Watch asks for an interview with you.

He is the barman on the Watch and it is apparent that the men have been talking since you took over.

It is possible he may be after an extension to the opening times of the bar.

You have exactly 7 minutes to put over your own style of interview

#### Problem 3

A Fireman on your Watch has requested an interview with you on a domestic matter. He is very worried about a certain situation.

You have exactly 7 minutes to put over your own style of interview.

## Advanced Training - Command and Control

### Problem 4

Fireman Walton was late this morning that makes 6 times in the last three weeks. It is the source of jokes now on the watch, and you must do something about it.

You have exactly 7 minutes to put over your style of interview.

### Problem 5

This fireman you are about to interview is a good practical man, he is very capable and has a lot of potential. You have noticed that he has never taken an exam. You are to motivate him into wanting to take his exams.

You have exactly 7 minutes to put over your own style of questioning and interview.

### Problem 6

Leading Fireman Gregg is an ex-serviceman on your watch. His problem as you see it is that he is too strict, too regimental, too hard on the men, and they resent him.

He is a hard worker, and is very loyal to his Station Officer. He is in your opinion creating friction on the watch and you have decided to have a word with him.

You have exactly 7 minutes to put over your own style of interviewing.

## Advanced Training - Command and Control

### Problem 7

On nights, a fireman comes into your office in a very worried state. He is requesting permission to go home immediately. It is a problem you need to find out about and you will have to make a decision. You are on a 1 pump station and there are only 5 of you on duty.

You have exactly 7 minutes to sort this out, and put over your own style of interviewing.

### Problem 8

You are just passing the hose shop when you hear 2 of your watch talking about the Gaffer. You stop and listen, dependent upon your own standards, you have 7 minutes of listening only.

You can interrupt if you wish, or set up an interview right there in the hose shop.

You must handle this as you would on station.

## Advanced Training - Command and Control

### Problem 9

You are just passing the dormitories when you hear raised voices. You stop and listen, it now depends on you in the next 7 minutes exactly what you do.

### Problem 10

Fireman Walton has just informed you that £20 has gone missing from the till behind the bar. The time is 2210 hours - you have 7 minutes exactly to sort it out in your own way.

APPENDIX SEVEN:

'WHO'S IN CHARGE' (FILM): TRANSCRIPT OF OPENING SEQUENCE

Worker 1  
(Mike Hammett): What time d'you make it?

Worker 2:  
(Steve): Eight O'Clock

Mike Hammett: It's going to be nine

Worker 2: We should be out by then

Mike Hammett: Bert, you know we're going to be stuck in the rush hour again, don't you?

Bert:  
(the Foreman) Leave the lads alone will you

Worker 2: There's only the three of us, isn't there?

Bert: Well, you can cope

Mike Hammett: Why couldn't you load it up yesterday?

Worker 2: We were all ( ) yesterday, wasn't we

Worker 3: Where is everybody? I mean there's only two of you here  
(Enter Mr. Probert - Dispatch manager)

Mr. Probert: Hey, Mike, can you come up to my office for a minute, I want a word with you

(Narrator interrupts to set the scene)

Narrator: October 1st, 1978. Blackitt and Marshalls Ltd., North Middlesex. This year, in spite of an optimistic Chairman's Report, no change in company's annual turnover

[Mr. Probert's Office]

Mr. Probert: Well you've been with us some time now, you seem to know your way around, we were wondering if you'd like to come off the road and take a job inside. In fact, we'd like to offer you a position of foreman in dispatch. Would that suit you?

Mike Hammett: Yeah, yeah

Mr. Probert: Good. That's that then. You start on Monday

Mike Hammett: Er, but what about Bert?

Mr. Probert: Yes, well it's not really working out with Bert in charge, he's only been acting foreman, and he needs to go back to being charge hand. I've explained the situation to him, I've told him we really need a younger man in the job.

Secretary: Mr. Probert, it's Reading on the line about the delay.

(takes phone temporarily off secretary and replies)

Probert: Er yes, will you hold on, I'll be with you in a minute.

(gives phone back to secretary and returns to Mike Hammett)

That's going to be your big problem, lad, sorting out these delays. There's a backlog of orders and we'll never get through them until we can get these vehicles out on time

Mike Hammett: Yeah, we had that trouble this morning

Probert: Well, you know the problem then don't you?

Hammett: Yeah, right

Probert: Well, make that a priority, right?

Secretary: Mr. Probert?

Probert: So you're no longer an hourly paid employee, you're on staff in management now, congratulations

Hammett: Thanks very much

Probert: Well, it'll mean a bit more in your pocket. If you have any problems don't hesitate to let me know, the door is always open. Good. Oh, if you want to talk to me about anything we can have a chat later on.

(takes phone back off secretary, speaks again to the caller)

Yes, I understand the situation but we're having a few delays in despatch

END OF SCENE

APPENDIX EIGHT:

'WHO'S IN CHARGE (FILM): TRANSCRIPT OF DEBRIEF AND DISCUSSION

1. I.O.3: And this is all the information I think we can impart to you about preparation for leadership. We've given you the areas of need, identified the areas of need where you should be functioning as a leader to be effective. We've given you those six key functions, planning, briefing and all that. And we've gone through the exercise and the film. But what the film has now identified is another important area, that is the question of loyalties. A very difficult area for you to perform in. A very very difficult area to find yourself in. Now Mike where he has the situation where he has the second argument about overtime. Don't blame me, it's management, it's not me. I don't care, it's what they want (says Mike in film). Or (for example) the lads have stood down, S.O. goes out, there's a bit more to be done (and S.O. says to the L.F.) Turn to them again, get them in overalls again, they'll do it properly. So you go out (and say) OK lads get your overalls on again. And then you start to get the ear'ole (and you, the L.F., say) don't blame me, it wasn't me, the S.O. says you've got to get your overalls on and start again. Oh no he f---ing didn't. The S.O. told me (i.e., L.F. Gough's emphasis) and now I'm telling you (all his emphasis) to get your overalls on and do it again. Like it says, face the problem full square, if you duck out, you've blown it. You start to lose your credibility with your superiors and you certainly lose your credibility with your inferiors, I mean subordinates, wrong word inferiors. And with your credibility goes your authority doesn't it, as it did with Mike. They weren't doing what he wanted them to do. He couldn't get a thing out of them. Likewise, the question of loyalties is a two way thing, don't be disloyal upwards, er, downwards I mean. You've got distinct loyalties to the men. Now the leading fireman is the closest, most intimate contact with the watch. There's no doubt about it. He becomes their mate and rather than destroy the relationship he becomes privy to information that he is reluctant to pass on to his S.O. or the Sub.O because he might get someone into trouble. He starts to establish these intimate relationships. Very difficult situation to find yourself in. You will, you may even have experienced it, as temporary leading firemen. I certainly did as a leading fireman. In fact in the end I got moved because of the relationship. Now that being the case, what do you do? Well from experience I can tell you that the only loyalty you should consider above all else is the loyalty you have, or should have, to the command structure. That's got to be your prime consideration and any other loyalties you have should come second to that. I hasten to add that I soon got established again. That exactly what was said to me 'you are no f---ing good' and my reply was 'whose fault is that?' Anyway just briefly touched on the question of loyalties ...

C.L.F. 1: For arguments sake say you are a leading fireman on a particular watch and you've got a cracking bunch of blokes, and the two officers above you, you know are a right bunch of

yourself. Because if they then turn around, I mean it's got to be true to say, that if the A.D.O. and the D.O., they come on the station, in the bar, drink, chat. And before very long you've said something that you've regretted. Haven't you? Is there anybody who's not fallen into that trap? Stood at the bar with the A.D.O. and the D.O., and its, 'fuck, I shouldn't have said that' and away he goes little notebook, another point to mention. And before very long the S.O. and the Sub.O. are identified, clearly identified by the command structure itself. And that bloke, who's an out and out wanker or people who fit that description are very soon known throughout aren't they? You know your divisional wankers don't you. You know all the stories about them. But don't forget one mans meat.

C.L.F. 5: I was suprised before when you said inferiors isn't the right word to use, you said subordinates, but you didn't hesitate to use the word superiors.

T.O. 3: M'm, no this is true, this is true. Anyway I've stolen 5 minutes so you can have those five minutes back at the other end. O.K. Unless theres any other points you want to make. I mean, don't just cut it dead. It's all you're going to get on leadership, we'll be confirming what I've told you on leadership in all the afternoon sessions you'll be doing now, leadership exercises. And you I can guarantee thinking about planning, briefing, supporting, informing and evaluating, you'll be thinking it as easy as you'll be drawing breath. I know you will. But is there any other points you want to make before we lose the drift altogether.

C.L.F. 6: Yes, m'm. What you were saying then, m'm, now if you have got a Station Officer and say Sub Officer you don't think are doing their jobs, er that they ought to be doing, and aren't giving you any support. And as a result the watch is suffering. If you don't say something to somebody ; then effectively you're copping out because the watch is suffering /

T.O. 3: / And theres also the risk that you'll be tarred with the same brush. Now you're doing what every other course has done, quoting specifics for which you want an answer and I can't do that, I can't do it can I? While it's the cruel harsh reality of life out there, I can't do it. Er, what I've given you is the guidelines, and I've posed the question of loyalties. What I can't do is give you the answer to every problem you're going to throw at me, it would be wrong of me to do it.

C.L.F. 7: M'm, I think that's what's being said, though as that there are some situations where your loyalties will be reversed because of the, your superiors, if you like, your loyalties have got to be to the watch /

I.O. 3:

/ It is the most difficult line to draw, it's the most difficult, if you like, side of the fence to fall being a leading fireman. I know. I've been there. In fact I was a leading fireman for, cor, nearly two years (i.e., not a long period). But nonetheless I've been there. I've seen the difficulties, I've experienced the difficulties and I can tell you what happened to me, and I can tell you how I dealt with it. But that isn't good enough for you, because it ain't going to be the problem you're going to get, that's the long and short of it. All I can do, I'll apologise for it, is eave you the grey area. These are the problems that you can't sort out until they manifest themselves and the best way of dealing with the problem is your way. But, you've been given the guide lines haven't you? What you've done, you've sat there for two days now and all of a sudden this morning now, now you've broadened your horizons. Next time you go up to a leding fireman's rank, you'll be better armed, you'll have the ammunition. But I make no bones about it, I've left you the grey area. I can't deal with specifics, I can't do it, it would be wrong for me to attempt to do it. And I'm sure that you appreciate that, you're intelligent enough people to appreciate that. All of you can quote the cases, I can quote the cases, but I can't tell you how you should deal with them. Yeah? Well if there's nothing else you want to make, no further points you want to make. If there's any, oops, I was going to say grey areas, if there's any problems you've got with the subject we've discussed this morning, let's deal with them now. Before it loses its impetus (Silence). O.K., then, it's twenty-to, see you back at twenty-to.

(Emphasis in original)

APPENDIX NINE:

SAMPLE OF CHILDREN'S SCHOOL TEXTS RELATING TO FIREFIGHTING

APPENDIX NINE

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- Ralphs, D.H., Fire, London: Franklin Watts, London, 1977.
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APPENDIX TEN:

PRESS CUTTINGS FROM 1977 FIREMEN'S STRIKE

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