Career dynamics within the construction industry: a trade and craft perspective

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Career Dynamics within the Construction Industry –
A Trade and Craft Perspective

Joseph Gaiva Kappia

Doctoral Thesis submitted in partial fulfilment of the requirements for the award of
Doctor of Philosophy of Loughborough University

July 2006, Loughborough, UK
Abstract

Recruiting and retaining an adequate share of the UK workforce is vital to meeting the construction industry’s demands and sustaining its current growth. This requires the industry to attract new employees, adopt a proactive approach to Human Resource Development (HRD) and the formulation of effective retention strategies. Career development programmes are required which can align the industry's needs with the career expectations of the individual employee. However, despite the importance of such schemes to the trade and craft occupations, most research devoted to career development has a professional and managerial focus. A need to redress this imbalance has been compounded by a variety of factors such as the scarcity of skilled people, falling recruitment levels and high employee turnover rates. The overall aim of the work reported in this thesis is to develop an understanding of trade and craft career dynamics. The information can be used as a framework for supporting specific career management and career development initiatives, which in turn will serve to actively encourage skill development, attract new employees and retain the services of the current workforce.

Drawing on the conceptual languages of extant “Careers” and “Human Resource Management” theory, the research adopted an ethnographic research approach. An iterative multiphase research design framework was utilised, involving a combination of research paradigms. These quantitative and qualitative methods included: a questionnaire of 563 informants; discussions with 54 groups of trainees; and 88 in-depth interviews with both New Entrant Trainees (NETs) and Qualified and Experienced (QE) construction workers. By encouraging systematic narrative accounts of the attitudes, behaviours and idea systems of the actors involved a better understanding of the nature of trade and craft employment was developed.

Combining and comparing the findings of both datasets (NETs and QEs) and relating this to the outlined theoretical perspectives sheds new light on the career dynamics within the industry. The research found that although employees are not comprehensive in their information and search of career options; they do place a high priority on career development. However, career development is limited due to the
realities (opportunities and operational conditions) of the industry; which influence attitudes of individuals and their peers. Employees often further encounter a series of career decision errors which affect the employment relationship.

The findings suggest that good career development practice is capable of helping to attract, recruit and retain a sustainable share of the UK workforce. As such, the findings provide a platform from which effective employment strategies can be developed in the future.

**Keywords:** Career Development, Careers Theory, Human Resource Management, Trade and Craft Workers, Recruitment, Retention.
Career Dynamics within the Construction Industry –
A Trade and Craft Perspective

Joseph Gaiva Kappia

July 2006
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When I consider that less than eight years ago I was employed as a foundry worker in an aluminium recycling plant, justice cannot be done to the numerous people who have helped me along the path of personal and academic development. Sincere thanks must go to all family, friends, colleagues, academic supervisors, research director and administrative staff who all combined to make completion of this thesis possible.

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From this moment on I endeavour to work tirelessly to help those in need as all these people have helped me in mine.
In Loving Memory of Aunty Clarice
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Chapter 1

Introduction

The UK construction labour market during the first half of the 1990s was characterised by a low demand for skills, which resulted in significant levels of craft unemployment and declining company commitments to new entrant training. The issue of trade and craft career development was largely ignored in the face of renewed flexibility. However, the overriding influence of trade and craft labour to a labour intensive industry remains. Firms now recognise the valuable contribution that employees make and, more importantly, their potential for ensuring a sustainable competitive advantage (Cochran, 1997). Goss (1994) argues that human resources have become the major source of sustainable competitive advantage for most firms, based on the premise that in an increasingly competitive market, all firms can obtain the same materials, equipment and other factors of production at essentially equivalent cost, and therefore the main competitive difference between them is their human resource and how well it performs (Goss, 1994).
1.1 Sustainable Priorities

Modern environmentalist perspectives on social and economic development can be taken and applied to theories of career development, thus contributing to the concept of “Sustainable Career Development” (Iles, 1997). Conceptually, applied to career development, sustainability represents a critique of an instrumentality logic that views employees as merely a temporal resource. Through effective HRM strategies, career development is capable of improving retention, and industries may secure their ability to continue development and growth for stakeholders in successive generations (Iles, 1997). However, the HRM literature distinguishes between ‘Soft HRM’ and ‘Hard HRM’. Soft HRM or ‘developmental humanism’ (Legge, 1995 p.66), which views employees as keys to organisational success; is an ideology promoting the development of unique humanistic values (Legge, 1995; Drucker et al., 1996). Conversely, hard HRM or ‘utilitarian instrumentalism’ (Legge, 1995 p.66) has the tendency to view employees as a mere factor of production (Drucker et al, 1996). The casual, fragmented and hierarchical nature of the construction industry suggests an inherent incompatibility with developmental humanism; its management culture is in more of a utilitarian instrumentalist tradition, typified by hard HRM practices. Hard HRM approaches are typical of the industry’s inability to operate in a co-ordinated, homogeneous way with universal issues such as career development (Legge, 1995; Drucker et al., 1996; Barthorpe et al., 2000). If this is the case, employees will be treated casually, which would typically impact on worker motivation and contribute to staff turnover.

1.1.1 Sustainable Career Development

Career development constitutes a motivating tool to create and sustain competitive advantage. This has become an integral feature of strategic HRM (Arthur et al., 1989). An integrated career development strategy based on concepts of sustainability could serve to alleviate tensions which occur between individual organisations (particularly SME’s) and the industry as a whole. If employers can assist their employees in making decisions about their careers, they can better prepare employees
to be effective. When employers understand how their employees develop, they can do a better job of planning for their organisation’s human resource needs. Organisations should track career paths and help develop career ladders across the industry. An application of the sustainability concept would require all of the industry’s stakeholders to take account of career development initiatives. Through effective training and career development, the industry as a whole may retain and develop talent, thus enjoying human capital advantages. By encouraging learning, co-operation and innovation, the industry will be rewarded with human process advantage. Both have the benefit of ensuring long-term sustainable success. However, the antecedents to creating and implementing career development policy, is understanding what individuals constitute as a “career” and how they wish them to be developed. Key to understanding how to develop careers is to understand the dynamics of an industry and the processes which shape careers in the sector.

1.2 Understanding Careers

The literature surrounding “careers” is vast. It reports on research in the disciplines of social science, psychology and economics; with a century of rich development in theory and practice (Arnold, 1997; Zunker, 2002). In 1909, Frank Parsons presented a lecture that has since formed the basis of theory development; simultaneously having tremendous impact on the career guidance movement. By presenting a report that described systematic guidance procedures used to counsel eighty men and women, Parsons (1909) developed a framework to help individuals decide on a career. This framework contained a three part formulation (Parsons, 1909):

1. a clear understanding of yourself, aptitudes, abilities, interests, resources, limitations, and other qualities;
2. a knowledge of the requirements and conditions of success, advantages and disadvantages, compensations, opportunities, and prospects in different lines of work; and
3. true reasoning of the relations of these two groups of facts.
According to Parsons, ideal career choices are based on matching personal traits (abilities, resources, personality) with job factors (wages, environment, etc) to produce the best conditions of vocational success. The major work, *Choosing a Vocation*, was later published in 1909 and Parson's framework became the basis of the contemporary trait/factor theory of career development and, although almost 100 years old, his tripartite framework underpins theory and practice to date.

1.2.1 Careers and Productivity

The productive capacity of trade and craft employees has emerged as a complex territory to be explored, understood, and regulated. As reflected in the work of Drucker *et al.*, (1996), construction management has become dependant upon an objective knowledge, a scientific expertise and a reductionistic assessment of inputs and outputs (Chan, 2005). A range of ill-defined and overlapping attempts have been made to measure and quantify worker engagements within project delivery (Al-Darrab, 2000). Worker productivity is often based on unpredictable and irrational factors and so cannot be quantified (Denburg and McDougall, 1976; Noor, 1998).

This research considers that the productivity problems that the work and management research choose to resolve, often ignores the subjective elements of worker engagements. Although a vast area of research, the history of career theory development is limited. Much of the research to date has insisted on subjects of advanced vocational positions, or of young mainly middle class students. Many of the theories are thus grounded in the contexts of a dominating social class, with little development based on the perspectives of lower status and diverse populations. This is true of the construction industry where, despite its people-oriented and labour-intensive nature (Langford *et al.*, 1995; Drucker and White, 1995; Smithers and Walker, 2000), little attention is paid to the careers of its workers.
1.3 Recent History of the Construction Industry

The growth period over the last ten years has been characterised by high levels of capital investment allied to government commitments to transport education, health and housing (DTI, 2002; CFR, 2003; DTI, 2003; Benchmark Index, 2003). In parallel with this, traditional and inherent problems persist in terms of: communication, quality and delivery (Latham, 1994; Egan, 1998; Egan, 2002); the nature of adversarial relationships (Latham, 1994), and the proliferation of labour only subcontracting, which together lead to a predominance of false self-employment (Winch, 1998b; OECD, 2000; Harvey, 2001). With new agendas looming behind European integration, such as low-wage competition (Clarke and Wall, 1998b; Hellsten, 2006), there are dramatic uncertainties for the future of UK construction. The industry is still considered “primitive in characteristics” (Wouldhuysen and Abley, 2004 p.17) and advances in technology influencing working methods and practice, have not relieved labour intensity (Agapiou et al., 1995; Langford et al., 1995; Loosemoore et al., 2003). The construction labour market is tight, as there is a high degree of capacity utilisation (DTI, 2002; CITB, 2003). Job security is often limited due to the cyclical nature of the industry, and a cascading contractor/subcontracting relationship (Langford et al., 1995; Agapiou et al., 1995; Loosemoore et al., 2003). Although there has been a reported rise in recruitment levels, there is a high level of attrition among new entrants (DTI, 2002; 2003; CITB, 2002). In view of the growth and investment period that the industry is witnessing employment needs will undoubtedly climb. The irony is that the continued turnover of experienced employees will continue to contribute to major skills and workforce shortages.

Despite well documented workforce issues, trade and craft labour receives little research attention. Little is actually known about trade and craft careers. There is no leading reference authority pointing to workforce recruitment strategies or practical recommendations to stem the flow of labour. This short-sighted focus ignores the developmental nature of trade and craft careers and the complex array of barriers generally associated with career progression. As recruitment and retention of key skilled workers is crucial to the delivery of governmental targets, as well as the industry’s long-term goals, the industry is currently managing by ambiguity.
1.4 The Paucity in Research

The careers literature and various construction industry reports do little to address the problems associated with the careers of trade and craft workers. The salience of this statement becomes poignant in view of the facts highlighted in section 1.3:

- the Construction Industry is currently witnessing its best period of sustained growth since the late 1980's;
- sales growth outstrips the national average across all industries;
- the construction labour market is tight with a high degree of capacity utilisation;
- there is a marked failure to attract new trainees or experienced/mature personnel; and
- the industry is experiencing a high turnover of new and experienced employees at all levels.

The labour market climate threatens the industry's ability to sustain growth or even meet current demand. However, whilst there is growing recognition that attracting more recruits to the industry and retaining them is necessary, little recognition is given to the fact that at the heart of recruitment and retention is the developmental facet of the individual's career. Research that begins to address this issue is long overdue and presents an appropriate starting point to strengthen the long-term sustainability of the industry.

1.5 Defining Careers

The subject of careers has become the focus for analysis by academics and management practitioners alike (Arnold, 1997; Adamson, 1997; Arnold et al., 1998; Beardwell and Holden, 2001). As such, many definitions exist at varying degrees of complexity and practicality. Nevertheless, in management practice and theory, and for at least the last 30 years; definitions of careers have been dominated by interpretations considering their content of structure, succession and status (Adamson,
As such, a career may be defined as the: “Progressive transition of individuals through organisational structures, and successive transitions of organisational status” (Ibid), or “a linear employment pattern characterised by increasing development and specialisation in one occupation” (Ball, 1994 p.9). Such definitions pervade the literature (Arnold, 1997) and colour general notions of the career (Kanter, 1989 cited Beardwell and Holden, 1997). The use of terms such as ‘progression’ and ‘status’, also emphasise certain economic and political aspects of careers. But increasingly authors are beginning to reject these views as too narrow and simplistic (Arnold and Mackenzie-Davey, 1992; Young et al., 1996; Arnold, 1997; Adamson, 1997; Young and Collin, 2004b). In the past decade, research and practice in the field of careers has substantially enhanced the understanding of individuals’ career decisions, choices, adjustment and work performance. With ever changing definitions of careers in the workplace, research of this nature faces some exciting challenges and opportunities.

Russell (2001) reported on the changing nature of work and changing definitions of careers in the workplace due, for one, to the impact of communication technology and expanding global labour market. As such, it is becoming increasingly problematic to define careers in narrow terms (Arnold 1997). A review of the literature (Lewin and Mitchell, 1995; Adamson, 1997; Arnold, 1997; Arnold et al., 1998) highlights some consistencies across definitions suggest that a career contains a few fundamental and basic elements as listed below:

i) **Subjectivity** – Recognition that the career is personal, or a possession, and defined by the individual.

ii) **Sequence** – More than one employed position in a consistent occupation, not one employment position taken in isolation.

iii) **Employment related activities** – Work experiences (paid and unpaid), education, training, self-employment, and short-term contracts.

iv) **Experiences** – Related to the suggestion that careers may be subjective as well as objective, as two people may experience the same sequence of events differently.
A distinction, rejected in Arnold (1997), is often made between a job and a career; with the former considered as employment positions of 'low status, few promotion prospects', and the latter being regarded as employment positions of 'high status, many promotion prospects' (Ibid). This wider definition of careers expands to place work in the construction trades firmly within the 'career' remit. Despite this, research into the careers of manual based workers is limited. Some authors (cf. Thomas, 1989; McDonald et al., 2002) questioned whether organisations view manual workers as having or even wanting careers. This leads to assumptions that "the only work experiences and sequences worth examining are vertical ones" (Thomas, 1989 p.354). The anecdotal view within the construction industry is also that trade and craft employees are motivated purely by short-term financial rewards which supersedes any countenance for focussing on a long-term career.

1.5.1 Retention

The construction industry lends itself neatly to many forms of dialectic enquiry due to: the historically prevalent cultures segmenting the workforce (Gale, 1992; Langford et al., 1995; Barhorpe et al., 2000); increasing technological complexity (Agapiou et al., 1995); and emerging human factors issues (Langford et al., 1995; Drucker and White, 1996; Yankov and Kleiner, 2001; Cabahug and Edwards, 2002; Loosemore et al., 2003a). One such factor is the turnover rates which stand to threaten productivity, efficiency and delivery (section 1.3). Retention forms the proactive aspect of any debate on turnover and relates primarily to sustaining workforce levels. The issue of employee retention is emerging across many industries as a critical challenge, posing many barriers to long-term sustainability, development, survival and economic success (Kreisman, 2002). The construction industry should have this as a major concern.

1.5.2 Careers and Retention

Key to retention is the career dynamics within a particular sector and how this contributes to individuals deciding to stay or leave jobs, organisations and industries
Chapter 1

(Kreisman, 2002). The literature reports a decided link between individual identities and careers longevity (Super et al., 1957; Holland, 1985; Lent and Brown, 1996; Grey, 1997), although both concepts prove problematic to analyse in comparison, as both are separately constructed. Also most career theories ignore the extent to which an individual's work and social environment dictate or influences further investment into the initial career choice. The unique characteristics of the construction industry, particularly at its production interface, merit a determined investigation.

1.5.3 Career Expectations and Aspirations

Analysing expectations and aspirations of the individual embarking on a particular career path, and whether or not these are subsequently met, is fundamental to retaining employees. Expectations are the individual's perceptions of statutory provisions by the employer, while aspirations are personal ambitions and goals which explain how people choose from alternative courses of action. Vroom (1964) sees this choice process as a cognitive, calculating appraisals of factors namely:

- **Expectancy**: Individuals would perceive an ability to perform certain actions;
- **Instrumentality**: Performing the action leads to identifiable outcomes; and
- **Valence**: The outcomes will be of value to the individual.

Expectations in accordance with instrumentality and valence vary amongst individuals. Driver (1979) and Derr (1986) identified career prototype orientations, each characterised by varying degrees of: expectations; aspirations; and stability in vocational field. Comparatively, to Schein (1978) individuals develop careers after their true abilities, needs and values become crystallized through a variety of real-world work experience. Once formed, these have significant consequences for an individual's career satisfaction and job stability. Moreover, Schein suggests clear links between such stability and career progression as influenced by levels of career development (Schein, 1978).

However, traditional and normative career models assume perfect labour markets, implying rational systems whereby individual effort alone guarantee movement
through hierarchies and vertical mobility (Wright, 1981; Thomas, 1989). Alternative theoretical perspectives highlight careers as existing and being affected at the intersection of several factors including: socio-economic history; social class; organisational structures; labour market segmentation; aspects of choice; and individual effort (Thomas, 1989; DeSimone et al., 2002). These factors often serve jointly to limit career opportunities (Ginzberg et al., 1951; Gottfredson, 1981; Gati, 1993; Gati et al., 1993) particularly within blue-collar occupations (Leibowitz et al., 1992; McDonald et al., 2002). In the UK construction industry, the labour process is distinct, and workers are often employed based on their immediate productive output, rather than their long-term capacity to produce (Olomolaiye et al., 1998). As a result, trade and craft employees enter into temporary labour only contract relations where there is little opportunity for training, development or progression (Winch, 1998b; Harvey, 2001). Under such conditions, it is doubtful that there would be opportunities for career goals to be met.

1.5.4 Internal and External Careers

Another contribution by Schein (1978), was in differentiating between the concept of internal and external careers. The 'internal career' or subjective career, is seen as the individual's pursuit of an occupational path during his or her lifetime. The 'external career' or objective career – is the developmental path established by the organisation for employees during their time with that organisation. There is a marked potential for an incongruence or friction between on the one hand, objective goals of the organisation; and on the other, the subjective goals of the individual. As employees grow and change, the types of work they may want to do may change, although organisational objectives may remain static. The labour-intensive nature of construction work is often not in keeping with formal career agendas of individuals in late adult life, although their trade skills are still required by the organisation. Piper and Lisca (1999) cite a US Construction Industry Institute (CII, 1992) study which highlights that a tradesperson typically leaves craft work at age 36 (Piper and Liska, 1999). Yet these individuals will have skills and experiences which can be valuable to the industry. In this respect, a career progressive ladder leading to alternative work
within the industry may be capable of promoting active career reinvestment rather than disillusionment and attrition.

1.5.5 Career Pathologies

Recently, attention has been devoted to the matter of transition from a failing career to a more suitable one (Routledge, 1983; Arnold, 1997). Rusbult and Farrell (1983) advanced the theory that individuals may develop coping responses or reaction strategies to compensate for failing careers. These may be attrition or a negative public verbalization for a catharsis effect. Further strategies involve passive optimism in the hope that things may change, or passively allowing conditions to deteriorate. Although very little theory is devoted to the exploration of the reality of employees caught up in the malignancy of an unsuitable career, research in this field has increased in recent years (cf Carson and Carson, 1995; 1997; Blau, 2001; Bedian, 2002). The scope now exists to employ Staw and Ross's (1986) models of escalation in decision-making, and Brockner and Rubins (1986) concept of "entrapment" to conceptualise the phenomenon. Such theoretical perspectives further propose that when an individual experiences dissatisfaction with a long-term decision or choice, they may experience anguish, anxiety or anger.

1.5.6 Career Development

Career development has long been advocated as a means of overcoming the problems inherent in attracting and retaining employees (Schein, 1978; 1980), however in order to proffer a career development strategy, the careers of the intended group must be evaluated (Zuncker, 2002). There are currently significant blind spots to the industry's understanding of trade and craft careers; and subsequently, considerable limitations to the industry's support of trade and craft development and commitment to their continuous and lifelong learning. Very little, however, is understood about craft career aspirations, trajectories, or how current opportunities accord with them.
In recent reports (CITB - ConstructionSkills, 2004a; CITB - ConstructionSkills, 2004b), compiling the most up-to-date information, CITB-Construction Skills pointed to: “a lack of a clear, flexible, education career ladder from school based programmes; through initial skills formation at FE and HE level; and to ongoing continuous professional development” (CITB- Construction Skills, 2004a p.8). The organisation of construction labour often fails to take advantage of established career development practices (Olomolaiye et al., 1998), particularly at trade and craft levels. There are failings on the supply side of training (Callender, 1992; Clarke, 1992; Clarke and Wall, 1998a). The large scale growth in self-employment and the use of labour only sub-contractors has contributed towards a non-paternalistic relationship between employee and employer; thus reducing employer commitment and investment to training (Briscoe et al., 2000; Harvey, 2001).

Career development has been largely ignored, or remains a low-level priority within many organisations (CITB, 2004a; 2004b) and the industry has an overarching reliance on the efficiency of ‘Financial Incentive Programmes’ to motivate workers (Olomolaiye et al., 1998 p.182). Work is often encouraged, maintained and motivated through these financial rewards, which in turn encourages anecdotal assumptions that manual trade and craft employees are motivated by monetary incentive alone (Austrin, 1980; Thomas, 1989). This generally fits with the wider labour market view that manual/blue-collar workers neither expect nor desire careers or development (Thomas, 1989; McDonald et al., 2002). There is, however, a paucity of data to explain: whether such assumptions are true; what career development opportunities actually exists at a trade and craft level; and what impact opportunities have on career development attitudes.

1.5.7 The Careers of Diverse Populations

Career theorists are beginning to recognise the need to include previously underrepresented populations in career theory. A particular reason for this is that unique environments can be supportive or oppressive to a career. Interpersonal environments affect and are affected by cognitive and behavioural person factors (Lent et al., 1994 p. 117). To account for this there has been a call for theory
convergence proposing that career models take into account individual perceptions within the context of their social environment. This recent move has seen the emergence of post-modern theories of contextualism and constructivism/constructionism. These theories emphasise the persons unique environment and individual narrative as the unit of career assessment (Cochran, 1997; Herr, 2001; Brott, 2004; Bujold, 2004). They view careers from an interpretive standpoint and so do not bias against the individual's perceptions of what constitutes a career, even if they do not meet with the traditional achievement-oriented model. Using these theories can potentially guide inquiry on the careers of specific populations such as manual employees, and help in establishing frameworks for further investigations. The emergence of a unique framework model would serve the industry in planning and strategising for future growth.

1.6 The Research Question

As is further explored in this thesis (Chapter 5, section 5.1.1) a research question was used to guide the research, rather than any hypothesis. As several authors suggest (Popper, 1992; Longino, 1993; Atkinson and Hammersley, 1994; Hammersley and Atkinson, 1995; Maxwell, 1996; Holliday, 2002), hypothesis testing is more suited to quantitatively based studies; when certain events recur in accordance with the rules and regularities, as is the case with repeatable experiments where observations can be tested against predetermined assumptions.

The major question directing the research was to establish: What is the nature of craft workers' career dynamics and are there opportunities available for such workers to meet their expectations and aspirations? This question contained a series of sub categories of questions (see Appendix A) which were pursued for two primary reasons. The first reason was interest in whether the life-cycle and career development literature would be replicated when applied to a group of trade and craft workers. Although stages of career growth have been identified in other professions, it seemed possible that development may be different for construction operatives. The many environmental factors that impact on construction occupations (e.g.
education and training; the economy; government legislation; working patterns; transient and fixed-term employment; changing models of procurement and production; compositional and demographic change) make the role very different at different times. As a result it might be expected that the same career and developmental patterns may not be experienced as that of say, a solicitor or doctor, where the core functions of the role may remain stable over time.

The second reason was a conviction that enhanced understanding of the growth and development of trade and craft careers would have important implications for: i) the industry; ii) individuals working within the industry (workers and those who manage them); and the nature of future research. Answers exposed by the research question will help to outline strategies to attract individuals to the industry and help retain them in a way that is mutually supportive to them and the long term success of UK construction. Understanding how individual’s behave within the career domain (this research) will help to establish what affects performance in collateral domains (quality and productivity) within the project delivery process in future research.

1.7 Aims and Objectives

These question was explored via an overarching aim, which was to understand trade and craft career dynamics from the perspective of individual workers. This aim was to identify unique characteristics and, features, but would also serve to uncover how attitudes towards careers potentially impact on quality and productivity. This aim formed the basis for establishing the broad research objectives outlined below:

1. develop a broad review identifying the career issues relating to trade and craft employees;
2. explore New Entrant Trainees (NETs) perspectives of trade and craft careers;
3. explore Qualified and Experienced workers (QEs) perspectives of trade and craft careers;
4. compare and contrast NETs and QEs perspectives to see if career needs change over time; and
5. develop a conceptual view of trade and craft careers in relation to extant and emergent careers theory and construct a model of trade and craft careers.

1.7.1 The Research Process

Research is not a single, discrete event but a process that typically requires a number of interconnecting phases. These phases represent differing sets of tasks that address differing research problems (Hustad, 2004). The research was constructed around a set of phases, or groups of analytical tasks, which formed the basis for meeting the research aims and achieving the research objectives (Ritchie and Lewis, 2003). The analytical tasks formed three interacting phases:

- The Scoping Study (ScS) – Preparatory study of literature and informal interviews with stakeholders (employees, employers and training providers).
- Phase 1 (P1) – Perceptions of New Entrant Trainees (NETs)
- Phase 2 (P2) – Perceptions of Qualified and Experienced workers (QEs)

1.7.2 Research Approach

Career theory within the social sciences is now questioning the adequacy of its more positivist roots and the research methodologies that it has generated (Collin, 1998; Flores et al., 2003; Guindon and Richmond, 2005). This research follows in the traditions of phenomenology; adopting approaches recognised in the spirit of developmentalism, and contextualism and constructionism - a term the research views as Developmental Contextual-Constructivism (DCC). Following in the traditions of Vondracek et al., (1986) and Lent et al., (1994), the research oriented towards the knowledge of the individual mode of constructing (constructivism); taking into account the social and environmental aspects of career (contextualism); and how this unfold and change over time (developmentalism). Various researchers have suggested a more developmental, context and socially oriented view of constructivism. This acknowledges that individuals construct and reconstruct their
own meaning of how their careers develop within their changing environments. This is referred to in this research as a Developmental, Context and Construct orientated position (DCC). In less ambitious terms this does not confer any new theories, but confers a mere approach and framework by which the research is conducted. The theoretical perspective and process of investigation primarily accords with the qualities of qualitative research. Through inductive phenomenological research a richer, deeper and process-based set of data is gathered. However, research can never truly associate to one paradigm or the other (Firestone 1987; Creswell, 1994). Research that prescribes to any particular paradigm often misses opportunities to develop innovative and creative data collection methods (Knox, 2004a; Knox, 2004b). In this research, all methodologies that allowed for increased contextual insights and provided greater understanding of the internal and external forces affecting the trade and craft careers were explored.

1.7.3 Research Methods and Analysis

Various qualitative and quantitative methods are used to address the research aim outlined above (section 1.7). Several tools and techniques have been systematically combined to analyse the data within a particularly novel research design. These include QSR NVivo, SPSS and MS Excel, together with summary statement matrices and thematic analyses. Using these software facilitated the storage, retrieval and simultaneous analysis of multiple data sets.

1.7.4 The Research Design

The research views the career as a dynamic interaction between the individual and the dyad (individual units forming a pair) of organisation and industry. Implied in the research is the process of developing a greater understanding of the nature of trade and craft employee occupations; examining how the industry as a whole serves to develop the individual’s career; and the extent to which the organisation of labour may impact adversely on trade and craft careers.
An iterative multiphase approach has been used throughout the research whereby all data are considered to inform each subsequent phase. As seen in Figure 1.1, the research involves a rapprochement of research paradigms, combining quantitative and qualitative methodologies. This involves: ScS - a *scoping study* (interviews with key employers, employees and training providers); P1 - Phase 1 (questionnaires, *post hoc* discussion sessions/informal focus groups, and interviews with NET’s); and P2 - *Phase 2* (in-depth interviews with QE’s). Throughout the research process, primary data sets were cross-referenced against two sets of secondary data: literature based theory (theoretical perspectives of work and careers); and contextual data (construction industry reports and statistics). In Figure 1.1, the model describes the primary research process.

![Figure 1.1 Model presenting the phases of research and data collection](image)

The preparatory study (ScS) was a broad investigative process. Phase 1 (P1 (a), (b) and (c) provided a means to generate the view of NETs. Phase 2 enabled views of NETs to be compared and contrasted against the views of QEs. Each phase is described in the proceeding sections (1.7.5, 1.7.6 and 1.7.7) although a comprehensive detail of process and methods is given in Chapter 5 and a research storyline is outlined in Appendix E.
1.7.5 The Scoping Study - ScS

The Scoping Study involved a broad literature search of contextual data and interviews with key construction stakeholders (employees, employers, and training providers). These broke down into three basic activities:

- establish stakeholder attitudes towards trade and craft careers and career development incentives;
- conduct a review of the UK construction labour market and identify key strategic drivers; and
- develop a theoretical framework upon which to base any subsequent empirical investigations.

1.7.6 Phase 1 - (P1)

This phase was developed from the scoping study and amended to reflect the emerging findings. Phase 1 was designed as an iterative multi-methodological approach based on a questionnaire study, focused discussions and interviews. This later informed the design of Phase 2.

1.7.7 Phase 2 - (P2)

This comprised in-depth interviews with QEs; who were considered key informants to the research. From their perspective it was aimed to develop rich insights into how trade and craft careers are established, developed and maintained.

1.7.8 Contributions to Research

The theoretical contributions have been widely disseminated through conference and journal publications (Kappa et al., 2003; 2004; 2005a; 2005b; 2005c; 2006a; 2006b; see Appendix B).
1.8 Structure of the Thesis

The thesis is organised into nine chapters. Figure 1.2 (shows a schematic representation of the thesis indicating how the chapters interrelate with each phase.)
Key
ScS = Scoping Study
P1 = Phase 1 (a – c)
P2 = Phase 2
--- = data flow
----- = sequential flow

Figure 1.2 Structure of thesis and data links from research phases
1.8.1 Chapter 1: Introduction

Chapter 1 provides an introduction to the research, setting out the general background and context. The chapter sets out to justify the rationale for the research and laying an outline of themes that the thesis wishes to explore. The research question, aim and objectives are outlined, and it explains further how the thesis is structured.

1.8.2 Chapter 2: Career Development and Retention within Construction

Chapter 2 examines the context in which careers are set within the construction industry. Using concepts developed in sociology, psychology, careers and management theory, the chapter identifies issues that guide the research. Current industry concerns are highlighted and the nature of careers within project-based environments are examined. The paucity in trade and craft research is critiqued and a discussion is centred on how greater understanding of trade and craft careers may enhance worker retention. These understandings will contribute to construction management research and practice; and will in turn advance the project delivery process.

1.8.3 Chapter 3: Deconstructing Career Theories

Chapter 3 explores the theoretical foundations of career theory, serving to outline the origins of its many disciplines, concepts and approaches. The chapter presents a discussion around the theories main concerns and the current trends emerging within the field of its research. Interrelated components of its theory are discussed, and its importance to social enquiry.
1.8.4 Chapter 4: Career Pathologies – A Conceptual Framework of Career Entrapment

Chapter 4 examines careers in relation to the behavioural psychologists’ concept of decision making errors, escalation and entrapment. From a conceptual point of view, this chapter explores reconciles the contextual data in Chapter 2 against the careers theory explored in Chapter 3.

1.8.5 Chapter 5: Methodology

Chapter 5 outlines the research methodology, strategy and approach. The chapter states the research propositions and the research design is introduced, along with methods of data collection and analysis. A further discussion is held which evaluates the major challenges encountered during the research process.

1.8.6 Chapter 6: P1 – NET career influences, expectations and priorities

Chapter 6 examines the results and findings of the first phase (P1) study consisting primarily of New Entrant Trainees (NETs). Firstly, the major influences on NETs choosing to approach a trade and craft career are examined. This is followed by a description of their expectations and aspirations; and then by their perceptions of positives and negatives that are or will be encountered during the course of their careers. Finally, the chapter examines how they prioritise unique work related factors within their employment and careers.

1.8.7 Chapter 7: P2 – QE perceptions of the Construction Industry

Chapter 7 presents the data collected from the second phase (P2) study of Qualified and Experienced workers within the industry. The sample mainly comprised operative workers at trade and craft levels, but it also includes those who have developed their career position into supervisory, technical and managerial roles. The
Chapter 1

chapter conducts a career analysis based on the narrative discussions held during the data collection phase and examines respondent’s emotional involvement with their current career.

1.8.8 Chapter 8: Discussion

Chapter 8 discusses the research findings and results, reconciling NET and QE perceptions (Chapters 6 and 7) in the context of the literature (Chapters 2, 3 and 4). The careers of those: entering; working within; and who have advanced from trade and craft positions are examined in relation to the literature and research propositions. The compatibility and conflicts that occur (within construction organisations and wider construction industry) in meeting the varied employee needs is discussed. The chapter also outlines a framework for further investigating trade and craft careers; and explores how this framework might be used in further research.

1.8.9 Chapter 9: Conclusions

Chapter 9 concludes the thesis by summarising the achievement of the study and assessing the extent to which the research questions have been answered and aims and objectives have been met. The chapter introduces a range of recommendations, providing an indication of future research that might follow from the outcomes of this work.

1.9 Summary

This chapter has provided an introduction to the research and justified the rationale for the study. The research question, aims and objectives are introduced and the thesis structure outlined.

The following chapters review the relevant literature: firstly on career development within the context of the construction industry (Chapter 2); secondly on careers theory
(Chapter 3); and third a rational view of what the realities of careers within the industry might uncover (Chapter 4).
Chapter 2

Career Development and Retention in Construction of Trade and Craft Operatives

This chapter introduces many of the issues under investigation throughout this thesis. It presents a broad overview of the literature and contextual data surrounding the issue of careers in the construction industry. In doing so, it covers the first objective of the study as outlined in section 1.7.

2.1 The Human Element as a Factor of Production

In construction management terms, the primary interest of much trade and craft research is seeking to uncover what turns on the primary production generators inside workers (Olomolaiye and Price, 1989). In simplistic terms, productivity is described as the ratio of output to input (Kendrick, 1956; Chau and Walker, 1988; Chan, 2005). The construction organisations rely heavily on the continuing productive and innovative spirit of its manual based personnel. As such, they are a key component in the industry’s growth; supporting profits, serving both to reinvigorate and renew the industry’s competitive advantage in the process. Olomolaiye (1998) describes the attributes of the trade and craft worker contributing to productivity as: i) skills, qualifications, training and experience; ii) innate physical and mental ability; and iii)
Chapter 2

the intensity of application of both skill and innate ability to the production process. As such productivity is related to the physical, social, psychological actions of employees and the employer’s process in inducing, driving or restraining forces that act on the employee’s capacity to perform (Maloney, 1983). Labour acts as the fulcrum of production (Olomolaie et al., 1998) and it is the employer’s role to support this by recruiting, training, developing and retaining the services of the workforce, if higher productivity is to be achieved. An underlying rationale for this study is that a greater understanding of relations to careers, impacts on the output of production. Understanding careers will help bridge the gaps in our understanding of more tangible variables such as output and input.

2.1.1 Careers as a Factor of Production

The case for investigating productivity in a more subjective way is based on two premises. Firstly, productivity is always psychologically salient to individuals. Production fundamentally is influenced by the emotional relationship of workers involvement with their careers. Emotion has a background presence to all human endeavours (Atkinson, 1957; Arnold et al.; 1998; Brott, 2005). Secondly, the quantification of production only extends to its qualitative supply. If workers are not motivated to work, productivity remains low (Olomolaie et al., 1998; Noor, 1998; Al-Darrab, 2000). However, the human element is often only studied as a cursory influence and the careers of those engaged in production are fundamentally neglected. The crude relationship between outputs divided by the inputs that is applied to society in general, has long since proved inadequate in explaining problems within the workforce (Chan, 2005). Despite the straightforward representation, research directed towards the understanding of productivity and subsequently the desire for improvements, have led to even more ambiguities (Ibid). Olomolaie et. al. (1998) state “defining such concepts does not lead to consistent definitions, but explanations of the main characteristics of the subject (p.2)”. They advance three distinct concepts that included: the rate to measure, the output of the factors of production over a defined time period; a measure of how well the resources are utilised; as well as the force behind the production itself. They further state that often there is a tendency for different researchers to limit research to only one or two of these three. This is not
surprising since the explanation of any phenomenon is subjected to the researcher's bias.

2.1.2 Measuring Productivity

The measurement of productivity poses much challenge that the research and industrial communities have yet to resolve (Chan, 2005). The problem that remains is that measurement of productivity improvement is not possible because output, itself is not measurable (Denburg and McDougall, 1976; Al-Darrab, 2000). Noor (1998) suggests that the definition of output quantities is a relatively simple task, as they can be physically measured. However, the determination of the labour against work hours and its association with a measured output is a more contentious issue (Noor, 1998). As such, different measures of input give rise to different labour productivity measures (Noor, 1998; Olomolaiye et al., 1998; Chan, 2005).

2.1.3 Ensuring quality and productive capacities

The human element as represented by the construction workforce is the main catalyst/determinant of construction efficiency and productivity. The efficiency of the workforce in converting resources into built product is dependent on technology and the sociological environment, as well as the management capacity of the contracting organisation and the construction site. This is made easier by understanding the workers and how they perceive their working role, then applying motivating principles effectively to improve labour quality and productivity. Increasing motivation through financial rewards is a method that is most common when businesses rely on the quantity of the output of employees (Austrin, 1980; Olomolaiye et al., 1998). For those employees involved in production, a piece rate system is often employed where employees are paid for each individual product they produce. In which case, they would be motivated to produce as much as possible in order to achieve a high pay. Financial incentives alone are not necessarily sufficient, and may not always be the most appropriate way to improve performance. Indeed, multiple
types of incentives influence the behaviour of workers and organisations in the project delivery system.

Understanding incentives in the existing system as well as those underlying the process is key to achieving the desired produce outcomes (Olomolaiye et al., 1998). These systems rely extensively on the many careers that collide and constitute the construction project (Langford et al., 1995; Loosemore et al., 2003a; 2003b). Subsequently, understanding how individuals maintain their commitment to their careers is a valuable commodity in identifying the long term production capacities of employees. Considering such factors as recruitment and retention of key skilled workers, becomes crucial to the delivery of governmental targets as well as the industry's long term goals. Ignoring the developmental nature of trade and craft careers ignores the complex array of enablers and barriers that may impinge on the long term productive process. In essence this leads to a process of managing by ambiguity.

2.2 Career within Construction

One common and simple meaning attributed to the term career is of patterns, sequences and consequences of work related activities that people engage in at various points in their lives (Hall, 1986; Arthur et al., 1989; Adamson, 1997; Arnold, 1997). Variations of this definition focus on "internal and external"/"subjective and objective" elements, which in turn relate to differing perspectives of the employer and employee (Schein, 1978 p.10 - 11). Other definitions consider careers as a sequence of attitudes and behaviours associated with work activities (Hall, 1976). These definitions can also be taken in a more abstract form to mean the movement and transition of individuals through occupational Time and Space (Collin, 1984), representing the element of an individual's work history, within a particular social context.
2.2.1 Career as an Elitist Statement

Despite advances in theory, in wider society and organisational practice, the traditional notions of an objectively defined and upwardly-directed career still pervade. These definitions usually refer to a normative, achievement-oriented model (Hall, 1976; Arthur, 1989), which assumes progressive escalation indicators in terms of financial rewards, power or status. In this regard, theories that widen the career concept may be subordinated as rhetoric. In effect these disguise socio-ideological underpinnings that refer to some groups of people and their related occupations and not others. As such, "having a career" can be used as an elitist statement that excludes: women; minority groups; lower social classes; those in occupations that are perceived to have few promotion prospects; and those who work in particular industry's, organisations, or environments (Thomas, 1989; Loscocco, 1990; Leibowitz et al., 1992; Milman, 2003; and McDonald et al., 2002). The rhetoric distorts the career reality of most populations by asserting the assumption that labour markets are perfect and rational systems that reward vertical career mobility equally.

2.2.2 The Role of Opportunity

In reality, career development and progression often require significant changes in qualifications, labour market position and/or organisation (Arnold, 1997; Arnold et al., 1998). As well as choice and individual effort, opportunity guides progression (Gottfredson and Becker, 1981) while economic history, social class, organisational structures and labour market segmentation, often serve to limit such opportunities (Thomas, 1989; DeSimone et al., 2002; Schoon and Parsons, 2002). Blue-collar workers often find themselves on negative opportunity strata (Leibowitz et al., 1992; McDonald et al., 2002).

The roots of the problem are at the heart of careers research itself. The majority of extant theories are based on research conducted on typically white middle-class males (the dominant ideological populous) aspiring to upper managerial positions. This was certainly the case of original work such as Super (1951), Gottfredson (1981) and Holland (1985). Hence, career definitions and traditional career development models
have largely been premised on these experiences, values and goals. The result is that much of what is known, might appropriately be labelled “careers of white middle class males” (Tyler, 1977; Casto, 2000). The lack of resistance that these groups experience within established society may explain why career development models have tended to describe linear or stage progression career paths, in which the individual moves in predictable, ordered patterns throughout their careers (O’Leary, 1997).

In the occupational context, most organisations are expected to provide career development programs that address the varied needs of executives, managers, technical and administrative professionals (McDonald et al., 2002). However, the same cannot be said for manual workers (Ibid). Consequently, within the construction industry, due in part to stereotypical views of manual employees, the concept of a career is often only applied to specific (professional and managerial) occupations.

Thomas (1988) poses the question, “Should we bother with blue-collar careers?” (p.354). In an extensive bi-polar argument, Thomas suggested that the answer was clearly “yes.” However, Thomas argued that this is only achievable by dispensing with the normative, achievement-oriented model of careers and developing an inclusive perspective that “transcends the colour of the collar” (ibid) and focuses on the individual’s interpretation. Loosemore (2000) presents a strong case against “occupational reductionism” in construction management research, and comments that the research community needs to be aware of biases that prevail and limit our understanding of occupational groups. Still, in this research into occupational stereotypes; trade and craft employees are notable once again by their absence. There is clearly a need to redress a research imbalance.

2.2.3 Blue-Collar Careers

While workplace research typically highlights managers and professionals as a focus for research, employees occupying manual occupations – as in the construction industry – are often essential to organisational output. Therefore, organisations are urged to devote more attention to the career development of these often-overlooked
employees. Attempts have been made to explain the career perspectives of non-managerial employees. For instance, McDonald et al. (2002) used post hoc discussions to explore the career experiences, concerns and interests of blue-collar workers in the United States. The study used a multiple qualitative methodology using post hoc discussions and questionnaires to investigate the career development experiences, concerns and interests of the target population.

By considering satisfaction with work and careers and the potential role of career development activities in enhancing work life, the post hoc discussions concentrated on six fundamental questions:

- What is important to you in your work?
- Looking back over the jobs you have had, are you satisfied with where you are now?
- Why or why not?
- What activities have you participated in to help in your current or future work?
- What has been the effect of these activities on your current work experience or your plans for future work?
- What additional activities would be most helpful for your career?

Using an open ended questionnaire, respondents were asked to respond to two statement sets about careers and career planning. The first set inquired about how (or if) the current job fits into a career plan:

- I have a job, but I don't think of it as a career (27 per cent).
- I am in this job for now, but I have other plans for my career (29 per cent).
- This job is part of a career path I have chosen to follow (43 per cent).
- No response (1 per cent).

The second set of statements was used to determine how much thought respondents had given to careers:

- I have not done much thinking about my career direction and plans (22 percent).
- I have done a lot of thinking about my career direction and plans (78 percent).
A correlation made between these two groups of questions found that 72 per cent of the participants thought in terms of a career plan when considering their current jobs, and 78 percent report having given thought to career direction.

2.2.4 Imposing Predefined Career Definitions

These results are particularly interesting in light of assumptions often made about manual and non-skilled workers in terms of their lack of career awareness. Further results revealed an unprecedented range of needs and perspectives regarding career development and reinforced the importance of conducting further studies involving non-managerial population. However, in McDonald’s study, each focus group began by defining the term career to participants. In doing so, they impose their own set of definitions on the participants. Invariably, such action does not allow for individual interpretation by the target group. In reference to question 2 of the research, how trade and craft informants define their careers was important to this research.

In essence, the term career is a nomic instrumentality (all things to all people) (Routledge, 1983); to which unremitting care and attention should be considered prerequisites to its analysis (Arthur et al., 1989) in order not to exclude certain groups. Not only does the term give meaning to real occurrences and reality structures, but it also gives identity to individuals and a framework that gives sense to individual lives (Arnold, 1997). In movements towards a more contextualist and constructivist approach, an examination into trade and craft careers would first define the term career from the perspective of craft workers and also seek to gain unique insights into their worldview.

Understanding how individuals construct meaning and, in what context their careers are set is emerging as a marked industry concern (CITB 2004a; 2004b). A militating factor threatening the well-rehearsed performance improvement challenges (cf. Latham, 1994; Egan, 1998; 2002; Wouldhuysen and Abley, 2004), concerns the attrition of both new recruits and qualified craft professionals. Current data suggest that 40 per cent of trainees leave education before completion of a professional trade standard (CITB, 2004a; 2004b), with some regions reporting attrition rates as high as
50 per cent (Mackenzie et al., 2000). The Office for National Statistics reports that: 20 per cent of plumbers; 25 per cent of those qualified in wood trades; and approximately 50 per cent of electricians work outside the construction industry (Ruiz, 2003). Collectively, these data suggest a vast employee haemorrhage. Taking into account natural wastage through retirement and predicted expansion across the sector, there are continued questions regarding the industry’s ability to meet demand or cope with sustain growth (DTI, 2002; CITB, 2002; 2003). However, the trade and craft career is an under researched field and so in academic terms, what actually contributes to high attrition rates is not understood.

2.3 Career Development

A link between career theory and management theory can be established through the variety of career development theories. The theories of career development are as established as that of careers, although the distinction (between career and career development) is to some extent artificial as career development is embedded in the career ethos - due to the conceptualised view that a “career” is a search for development and or progression. Career development entails the acquisition of skills and knowledge transferable across all aspects of a person’s life; while progression entails the development of relative value status within an occupation, also transferable into the social domain (with currency beyond the vocational domain and into a person’s social environment).

The construction industry relies on competent trade and craft personnel to occupy positions that currently exist and positions created through industry growth (Piper and Liska, 2000). In examining the career dynamic, Arnold (1997) suggests that careers do not necessarily ‘involve promotion or other indicators of increasing status (pp. 16–17); however there must be an element of expectation of some innate subjective reward. Along with competitive salaries, enhanced career opportunities through career development are considered a requirement of organisations wishing to retain employees (Dainty et al., 1998).
Career development may be defined as a 'systematic analysis of employee abilities and interest affecting job placement and progression, through various assessment, counselling and training activities' (Gunnigle and Flood, 1990, p. 172). It is a process for achieving specific employee and organisation goals. Career development may include the provision of career information to employees, identifying advancement opportunities and the promotion of job satisfaction (Bernes and Magnusson, 1996; Kirk et al., 2000). Career development can provide a means for the industry to improve the quality of occupational existence while simultaneously linking to the improvement of overall employee productivity.

2.3.1 Perspectives

Two distinct approaches to career development that dominate the field have mainly emerged as proving suitable for the research:

- process approaches; and
- structural approaches.

2.3.2 Structural approaches

Structural approaches attempt to describe characteristics of both the person and the workplace (Vondracek et al., 1986a; Brown and Brooks, 1996; Jackson, 2000). A systematic examination of these characteristics is undertaken to help individuals match their characteristics to the most suitable environment.

Early structural approaches were often referred to as 'trait-and-factor' approaches; that is, individual traits were considered from within the context of work environment. Structural approaches rely on two major sources of information:

- data about the world of work, often referred to as occupational information; and
- data about the individual.
2.3.3 Process Approaches

The process approach to career development is much more developmentally based than structural approaches. Career development is seen to occur over time, with an emphasis on the processes that lead an individual to make a particular decision. The marked difference between approaches is that:

- structural approaches tend to consider career decision making as a single event; and
- process approaches view occupational choice as a sequence of interrelated processes that span a lifetime.

Donald Super's (1957) model influences the process approach. The model describes career development in terms of issues that individuals experience at five particular stages in their lives; beginning at 0-14 years to 65+. Super also promoted the concept of the 'life-career rainbow':

- a person plays a number of "roles" in their life: worker, parent, homemaker, etc.;
- a person's lifestyle can be determined by considering the relative importance of each of the major roles at any given time;
- the overall sequence of these shifting roles makes up the person's life cycle; and
- the entire structure is what Super defined as the career pattern.

Original structural frameworks for career development consider three broad factors (Parsons 1909 cited Brown and Brooks, 1996):

- a clear understanding of oneself including aptitudes, abilities, interests, ambitions, resources, limitations and their causes;
- a knowledge of the requirements, conditions of success, advantages, disadvantages, compensation, opportunities and prospects in different lines of work; and
- true reasoning on the relations of these two groups of facts
2.4 Retention

In competitive labour markets it is often widely acknowledged that retaining talent and a competitive workforce is made through appropriate career development strategies. The growth of the UK construction industry throughout the 1990s has increased demand for professional, managerial and craft labour, yet this buoyancy is putting a considerable strain on its labour market. Projected recruitment targets are high across all personnel strata (CITB, 2002; 2003; 2004a; 2004b), with increasing concerns as to the industry's ability to cope with increasing skills demands.

It is important to recognise the direct relationship of retention to turnover. Turnover represents a different aspect of the same underlying concept, with retention postulated as the positive conjunctive. An investigation by Milman (2003), explored reasons behind manual and non-skilled employee turnover in the amusement park and attraction industry. A self-administered questionnaire was developed based on the literature review and several qualitative interviews with operators and human resource managers. The questions included items pertaining to the respondents' current job responsibilities, respondents' job search process, respondents' previous employment experience and respondents' evaluation of their current employment experience. Other questions asked the respondents to evaluate their level of importance of employment characteristics, the level of prior expectations of these characteristics and their perceived manifestation of these employment characteristics by their employers.

To predict retention; respondents were also asked to indicate their level of satisfaction with their current job, their likelihood to refer someone to their current place of employment and their likelihood to remain with their current employer. The last set of questions asked respondents to assess employment features that would make them move to another company.

The results empirically confirmed that non-skilled employee retention was predicted by progression possibilities, job content, job security and working conditions rather than monetary rewards. More specifically, employees who had: positive experience with regard to consistent working hours; sense of fulfilment with their job; positive
experience with performance reviews; longer tenure with their current employer; and higher level of satisfaction with the job, were more likely to stay with their current employer. A study of this nature is long overdue for it would go some way in outlining remedial measures for retaining trade and craft employees specific to construction related trades.

2.4.1 Career Development and Retention within the Construction industry

A lot of attention has been placed on career development in recent years. In behavioural psychology and management practice, the causal relationship between career development initiatives and employee retention is considered to some degree certain and predictable. Although this attention on manual, and what was previously regarded as 'Blue-collar' occupations, is not evenly weighted. In the construction industry, such a causal relationship may be considered tenuous and uncertain due to the paucity in research or practice. The connection between cause and effect is less predictable than at managerial and professional levels.

2.4.2 Atomistic Assumption - Contractor and Sub-Contractor Relations

Symptomatic of problems relating to career development and retention is the casual nature of the construction industry due to: the large proportion of self-employment, much of which is “non legal” (Harvey, 2001 p.7); and the nature of sub-contractor organisations (Agapiou et al., 1995; Cabahug and Edwards, 2002), which employ few personnel directly. In Austrin (1980, p. 304), the problem is identified as follows.

The industry is characterised by a main contractor who contracts out the work, the sub-contractor who contracts for a piece of that work, and other workers who are hired out on mainly labour only basis to the main contractor by the sub-contractor. Accordingly, the worker is placed in a position of dual dependency; on the sub-contractor for a wage and the main contractor for the supply of work.
Harvey (2001) suggests that this system undermines construction and addresses the “Corrosive Effects” that this system has. According to Harvey, the industry concentrates on wealth generation on the individual level and focuses less on ways in which employment is institutionally organised. Concurring with Austrin (1980), employees only enter into contracts to supply labour, leading to an “Atomistic assumption (Harvey, 2001 p.18) where-by increased financial gains are valued amongst workers. It is asserted (for example Yarnall, 1998; Harrison, 2000) that for career development to be effective in organisations, line managers need to support the future development of their staff and have the necessary skills to coach and counsel them as appropriate. Due to the fragmented structure and project-based nature of the construction industry, the effect of this is possibly limited. Compounding this is the fact that workers tend to be employed for particular construction projects which have a limited duration (Langford et al., 1995; Barthorpe et al., 2000; Loosemore et al., 2003). Although this does not always involve an abject detachment of the worker from the industry, the nature of itinerant working patterns often fundamentally implies the continuous renegotiation of the employment relationship and a subsequent reengagement of a psychological relationship on work availability. Fundamentally, the nature of such work does not attach itself to any structured career ladder, nor does the working climate complement any career development initiative. Typically, organisations do not adopt a paternalistic stance, for example, through job security and upward promotions with regard to the workforce for career management. This may be a route cause of individuals seeking lateral career moves into other industries. However, a considerable investigation into this phenomenon is yet to be conducted.

Other factors may call into question the causal relationship between career development and employee retention. So while a relationship may be proven, this relationship may be a casual one and the two constructs may not be causally related to a significant point. Factors such as: Financial Incentives - the nature of trade and craft pay structures; Job content – work is often physical and repetitive requiring fewer cognitive skills; Job Security - basic employment relationship and the nature of subcontractor employment; Work conditions - work is often seen as dirty with a poor health and safety record; and Social Factors – trade and craft workers enter into the industry through social relations with family or friends also informal membership of the construction community (Gale, 1992). These factors make the career
development to retention relationship less predictable and fundamentally uncertain. Any probabilistic causal relationship between career development and retention has nonetheless failed to capture the attention of academic research to a great extent and generally the blue-collar/trade and craft career perspective is one which has largely failed previously to be researched.

2.5 Career Choice and Career Development – Components of Infrastructure

As argued throughout this chapter, the issue of trade and craft careers is the subject of much neglect. However, previous research has been used to form the basis of the research. This is outlined in the next section.

2.5.1 Anticipated Socialisation

The nature of students' job search activity, the possession of relevant work experience, and exposure to employers through recruitment and selection activities may form part of the "evolving sequence of a person's work experiences" (Arthur et al., 1996, p. 8). Garavan and Morley (1997), suggested a stage model of organisational entry; where the first stage, anticipatory socialisation - encompassed all learning that took place prior to a graduate's first day on the job; and influenced subsequent stages such as the development of an initial psychological contract and the first organisational encounter. Students in vocational or dedicated professional courses are likely to be provided with information about potential employment in their particular sector, earlier in their training. Subsequent recruitment and selection experiences also have an effect on career expectations, anticipations and development orientation. This contributes to anticipatory socialisation. Particularly students on vocational courses are susceptible to such effects as their socialisation through exposure to professional employers begins during training. Employers' practices are thought to contribute to the formation of realistic career expectations and the initial psychological contract between them and employers, because lecturers are likely to
have closer ties to the practicing profession. The mandatory nature of this training within NVQs, makes it likely that such a socialisation process persists despite idiosyncratic events within a profession.

2.5.2 Industry Promotion and Careers Information

Promotion of the construction industry centres on marketing activities which present positive images of the industry in an attempt to counteract the traditionally negative views of many construction occupations. The CITB reported that during 2003 over 1,500 promotional event days were held, involving 300 employers and reaching an estimated 50,000 potential recruits (CITB, 2004a). Such events provide potential new entrants with information on career options and pathways within the sector, generally portraying the industry in a positive manner in terms of both the rewards and opportunities available. Although the proliferation of established/traditional career development theories demonstrates the importance of formal career information to considered career exploration (cf. Parsons, 1909/1989; Super, 1957; Crites, 1976), opinion varies as to the extent to which this type of information shapes career decisions and choice (Blustein et al., 1997; Philips et al., 2001; Schultheiss et al., 2001). This is because individuals making decisions are often: limited by incomplete and ever changing information (Gati et al., 1993; Gati, 1993; Kracke, 2002); not comprehensive in their information search or investigative of options (Kahneman et al., 1982); restricted by their level of academic attainment (Gottfredson, 1981; Gati et al., 1993; Gati, 1993); and/or not always in a position to make their decisions alone (Forrest and Mikolaitis, 1986; Shanteau, 1988; Phillips, 1997; Philips et al., 2001). In particular, contemporary marketing of industries often ignores or minimises informal social networks within this process.
2.6 The Interplay of Careers Information, Relational and Informal Networks on Career Decision and Choice

The preceding discourse has emphasised the complex array of influences that are likely to come together to determine an individual’s career choice. Merely focusing on a single influence is likely to present an incomplete picture of how an individual came to a particular career decision. For example, if career selection is believed to be made on the basis of “self-determination” - which focuses on autonomous career exploration through consideration of a range of options open to them (Deci & Ryan, 1985) - then the individual is considered to be a rational and adaptive decision maker, who uses formal systems to support methodical and un-impulsive decision and choice processes. This model would assume considerable levels of social autonomy and self-direction (Philips, 2001). This would ignore the wider and often-complex processes that constitute career decision and choice. Thus, examining the construction industry’s current recruitment practices in isolation may conceptually marginalise the role of paternal, relational and socio-environmental networks in shaping the career choice of construction craft workers. A more robust appraisal of career choice must conceptualise relational influences as a multidimensional phenomenon (see Schultheiss et al., 2001) as has been adopted in this study. This is a view supported by Agapiou (2002), who called for construction employers to initiate strategies that broaden potential influencers’ knowledge about employment opportunities and overcome negative attitudes. Such integrated approaches to recruitment will serve to enhance current and existing approaches.

2.6.1 Training Mechanisms

Many authors point to a deficiency in skills training investment in the UK construction (Callender, 1992; Clarke, 1992; Clarke and Wall, 1998a). Training amongst the trade and craft is often strained due to the still over reliance on competence based training and qualification structures. Despite revisions (Agapiou, 1998) the relationship with the industry and National Vocational Qualifications (NVQs) remains tenuous at best, with marked uncertainties about: their long-term
future; nature; and value as employability capital. The very nature of UK skills training has been brought into question (Clarke and Wall, 1998), with issues of a fragmented funding structure still prevailing which has a marked bearing on their implementation; administration; structure and subsequent accreditations (Agapiou, 1998). As a consequence further revisions are necessary in order to engage employers – particularly SME’s – in the formal industry training mechanism (CITB 2004a; 2004b).

2.6.2 NVQ – “Use” and “Exchange” Values

These issues are compounded by the limited equity NVQs carry in relation to academic qualifications. In Britain, general qualifications are accorded higher status than work-related qualifications and play a major role in selection for well paid jobs. The value of qualifications can be said to be of importance for various ‘stakeholders’: employers, individuals, professional bodies, awarding institutions and ultimately the clients the professionals work with. Fuller (1995) suggests that a distinction should be made between the purposes of qualifications and perceptions of their worth. According to Fuller, qualifications have status according to their perceived transferable value in return for remuneration. This is termed their ‘exchange value’ (Fuller, 1994, 1995).

Vocational qualifications, theoretically, should have both a high use and high exchange value as they equip people to undertake jobs competently (Hillier, 1999). However, while employers are likely to be more interested in skills based qualifications - such as NVQs - which have a high use value; individuals are more likely to want academic qualifications which they perceive to have a high exchange value. For instance, to the employee who wishes to move vertically across organisations.
2.6.3 Progression through Qualifications

A further related complication is the process of advancement from vocational qualifications to the more academic route often required for progression to higher occupations. The NVQ structure at its best should offer progression not only to each subsequent academic level, but also routes into higher alternate training structures. Figure 2.1 outlines the primary routes between NVQs in construction and links into other vocational qualifications. However, while NVQs actively promote skills based training they are often limited in academic content (Parfitt and Roberts, 1997).

Technical skills accrued at NVQ Level 3 are set to improve candidate’s confidence and performance in transferring to more supervisory and management based skills at NVQ Level 4 and 5. However, Parfitt and Roberts (1997) identified the need for current NVQ Level 3 students to receive more structured information about HND study for effective transitions into academic and degree level qualifications. Empirical evidence suggested that NVQ Level 3 students who had transferred to the HND as opposed to NVQ Level 4 or 5, found the early stages daunting due to the differing teaching and assessment styles (Parfitt and Roberts, 1997). Measures were laid out in a recent report by the Working Group on 14-19 Reform, chaired by Tomlinson (2004), which set about plans for a revision of educational structures to align equitable status of vocational and academic qualifications. However, the recommendations have not been fully upheld in the subsequent Government White Paper: 14-19 Education and Skills (2006). There is still a cluttered array of educational and professional bodies with over nineteen having some involvement with construction (Lees and Ashworth, 2005). Langford et al., (1995) relay the voices of Government, client, academics and the numerous construction industry stakeholders: “The number of professions, chartered or otherwise is too many...” thus there is a “need to develop a common educational programme for all built environment professionals” (Langford et al., 1995). This should extend across all trades in order to encourage seamless progression from trades into occupations considered professional, such as architecture and project management.
Figure 2.1 Primary routes between NVQ in construction and links into other vocational qualifications. Source: Adapted from Hassan et al., (2004)
2.7 Succession Planning

Over the past decade many authors have commented on the declining numbers of graduates entering construction and related occupations (cf. Clarke and Wall, 1998; Agapiou et al, 1995), including quantity surveyors (Cavill, 1999) and civil engineers (Byfield, 2001). Approximately 14,000 managerial and clerical staff and 4,500 construction professionals will be required each year in order to account for the retirements from the sector and forecasted expansion of the market. In spite of a marked escalation in advertising, marketing and recruitment, the CITB’s econometric employment model suggests that the industry will have a net shortfall of 7,000 construction managers year-on-year until 2006 (CITB, 2002; 2003). However, graduates do not exclusively satisfy recruitment to management and professional positions in the industry and despite harrowing statistics the industry has not looked laterally to develop and support its trade and craft workforce into these roles.

In recent years, many construction degree programmes have been withdrawn in response to falling recruitment across most built environment disciplines (Cavill, 1999; Byfield, 2001; Ross, 2001), whilst at the same time, employers are reporting difficulties in recruiting a sufficient graduate intake to satisfy demand (Lees and Ashworth, 2005; Dainty and Edwards, 2003). The analysis by Dainty and Edwards scrutinised application and admissions data to UK Higher Education courses over a six-year period. The results revealed a significant decline in the number of graduates applying for, and accepting, places on building degree courses during the analysis period despite increased micro economic activity. They reconcile these against future predicted growth within the sector and added to the increasing debate on recruitment. More recently (Majekodunmi, 2006) the Universities and Colleges Admissions Service (UCAS) report that in 2005 there was an eighteen per cent rise in admissions to building degrees; approximately eleven per cent in Architectural students; although there was more than a fourteen per cent dip in Higher National Diploma entrants. However, there is increasing concern that Universities are struggling to attract lecturers to teach them. While these concerns add to the growing list, an alternative might be to ask why the shortfall in graduates and their tutors might not be met by advancing the careers of those already in construction employment.
2.7.1 Succession Planning for Site and Project Managers

One issue surrounding the promotion of trade workers to higher occupations is whether or not individuals with a trade and craft background have the skills capacity to make the arduous transition into management. Farrell and Gale (2003) go some way in addressing the issue. They assessed three distinct career progression paths (CPP) of site managers to assess which CPP contributed best towards the development of the skills required for the role. The CPPs considered were: progression through a craft occupation (craft CPP); craft training followed by undergraduate study (craft/graduate CPP); or undergraduate study (graduate CPP).

Their results found that of twelve identified skills, the craft/graduate CPP contributes best in eight and the graduate CPP contributed best in four. The Craft CPP was found to contribute least in eleven of the twelve skills categories. They conclude that in terms of developing the skills and attributes of a senior manager, a career progression path consisting of craft training with a period of undergraduate study contributed the best. However, Fletcher and Baldry (1999) suggest that superior managers cannot only assess valid and reliable performance on self and peer evaluation, but must include evaluation by subordinates and others they regularly deal with. The results of Farrell and Gale cannot be seen as conclusive; as it remains to be seen how these perceptions would way up against the perceptions of wider stakeholders (clients, employers and subordinates) and indeed wider quantitative considerations such as delivery time and cost. Nevertheless, it is important to assess what characteristics, traits or competencies would set apart senior managers with craft backgrounds from their graduate contemporaries.

Although there are frameworks for assessing the skills, competencies and traits of successful senior managers (Meredith and Mantel, 2003; Dainty et al., 2003; Cheng et al., 2005), there is no widespread agreement as to what makes a good site or project manager (Sabaa, 1999; Farrell and Gale, 2003). Several authors consider people as instrumental to project delivery, rather than systems and processes (Lechler, 1998; Lechler, 2000; Cooke-Davies, 2002; Cooke-Davies and Arzymanow, 2003). Arguably, it is often team leadership that facilitates the effective completion of the...
project within the defined parameters of cost and time. Given the complex array of factors within the project delivery process, the most demanding and important task of senior management is often building, developing and maintaining the project team (Dainty et al., 2003), the majority of whom are at trade and craft levels.

Another finding of the Farrel and Gale Study was that although there is no empirical data promoting the value of one CPP over another, certain occupational criteria are used when appointing to managers. Individuals with graduate backgrounds are preferred to those with craft training regardless of experience. In this argument, Farrell and Gale's contentions outline three discrepancies: trade and crafts workers receive less than equitable status in promotion scenarios; there is a need to offer post graduate training and development to trade workers to enhance the quality of management; and further research needs to assess how (given the current shortfall) trade and craft workers do succeed into management positions. While the industry cannot repel graduates from entering the industry, to the contrary, the success of the national industry depends on diverse group of managers sharing individual experiences to overcome crisis. The industry should encourage and promote the engagement of trade and craft operatives to superior work roles. This should be actively encouraged through the development of seamless progression roots to senior level management. The issue is not of whether trade and craft workers would make for better senior managers, but how they should be given the opportunity.

### 2.7.2 Seamless Progression

In essence a strategy for skills development within the industry should combine skills and learning with a mechanism for advancing individuals seamlessly within their careers. Figure 2.2 presents a conceptual model of the process. This represents individual stages of a national strategy. A strategy would be outlined nationally for consistency, with standards and pathways determined by the industry. Education and training would be delivered by training organisations in tandem with work place assessment. The outcome would potentially supply the industry with a qualified and skilled workforce (objective) as well as offering advancement to the individual.
2.8 The Need for More Research

The debate continues as to what lies at the root cause of failures within the training and career development system at the trade and craft level. Many emphasise the failings of the supply side of training (Callender, 1992; Clarke, 1992; Clarke and Wall, 1998a); others suggest the shift towards self-employment (Winch, 1998a; Harvey, 2001); and inadequate commitment to training persists as employers do not see the benefits of training trade and craft operative (Chan et al., 2001; Hassan et al., 2004). The construction industry can draw heavily on the achievements of other sectors and industries in relation to a proactive focus on the career development issues. A causal relationship between employee retention and career development has long been established in other occupations, disciplines and academic research (Young, 1990). For instance, Usherwood et al., (2000a; 2000b), suggests that amongst UK library authorities there is evidence of a statistically significant relationship between the length of stay of employees and ongoing career development; and that those with
active career development initiatives are twice as likely to actively recruit new candidates should occasion arise.

2.9 Attitudes and Behaviour

As Parson's (1909) system suggests, career development comprises three basic elements:

- the individuals willingness to partake in career development – buy in;
- the organisation or industry buying into the career development process; and
- congruence between organisation, industry and individual goals.

For this to be successful there needs to be clarity and consistency of goals and the alignment of systems towards these goals. Thus, the implementation of career development cannot be viewed in isolation from the organisation and industrial context for which it is being considered. Contextual aspects of career development within construction would raise several significant points:

- career development represent a wide variety of individual, organisation and industry derived arrangements;
- the existing context when a career is implemented plays an important part of whether the individual experiences opportunities for career development; and
- career development does not necessarily lead to progressive indicators of success. Success is determined by the individual’s sense of achievement and relative progression across their whole life course.

2.9.1 Work Effect Concept Systems

Individual’s attitudes towards work and employment continually shift and are based on decisions and choices at various stages of their career. These decision and choices can be conceptually linked to “Work effect concept systems” (Jepson, 1984), which presuppose three facets of preferences and priority attachments: the relative
importance of a factor to a deliberating individual; the most preferred level of a factor to an individual; c) and the readiness to compromise. While in the field of behavioural psychology and management practice, the causal relationship between career development initiatives and employee retention is considered fairly predictable; attitudes and behaviours are fundamentally influenced by job position, responsibilities or activities (Schein, 1987). An emphasis on career development may change if an individual is in an occupation with fewer promotional opportunities (or mode of achieving promotion). In these cases, individuals are led to a greater orientation towards the present, often manifested as an increased desire for immediate monetary reward (Hall, 1976; Rabinowitz and Hall, 1981; Cron, 1984).

2.9.2 Attitudes Towards Success

Measures of labour market success are often determined by variables such as earnings, socio-economic status, occupational prestige and job satisfaction. It is earnings that are usually the established performance metric of career progression (Olomolaiye et al., 1998; Mills and Hill, 2001). The sociologist’s alternatives to earnings are: social status, SES, occupational prestige and various measures of social class. However, whether a career strategy is successful or not depends upon the contextual setting - which may be the organisation or the industry in which the individual is located.

This is highly dependent on the organisation/industry’s career development strategy. If managed effectively career development enhances both subjective and objective dimensions of careers. For the individual (subjective) it increases employee job satisfaction and improves motivation. For the industry (objective) it promotes improved productivity and quality, reduces operating costs, and allows greater employee flexibility. Conversely, poorly managed career development erodes trust.
2.9.3 Two Factor Theory

One theory of job satisfaction is based on Hertzberg's (1968) two factor theory of Hygiene Factors and Motivation Factors. Job attribute preferences are the weight of significance that individuals give to various job characteristics, both intrinsic and extrinsic (Wernimont, 1966). Intrinsic characteristics are those attributes linked to the work itself, such as levels of autonomy (the degree to which a job offers discretion to an individual in scheduling the work and determining how to complete it) or levels of job variety (the extent to which a job requires a variety of skills or activities). Extrinsic characteristics are associated with the conditions under which the work is performed, such as salary and benefits, or working with competent and sociable co-workers. Intrinsic factors sometimes referred to as motivators or satisfiers, encourage employee growth and development, resulting in satisfaction. Extrinsic factors, sometimes called hygiene factors or dissatisfiers, can prevent dissatisfaction with a job, but do not contribute to job satisfaction (Hertzberg et al., 1959; 1968). Thus, the presence of both intrinsic and extrinsic factors is necessary to avoid employee dissatisfaction and build job satisfaction. As seen in Figure 2.3, Motivators are described as a rocket with Hygiene factors providing a launch pad. Within this analogy while the rocket is the most important factor, without hygiene factors there is no launch pad to propel from.
In construction management terms, interest in such theories as Hertzberg’s theory has been in seeking what motivates productivity (Olomolaiye and Price, 1989). Expanding on the work of Smithers and Walker (2000), Table 2.1 presents a broad range of factors found to influence, motivate and satisfy trade and craft workers in construction trades (Borcherding and Oglesby, 1975; Neale, 1979; Wilson, 1979; Maloney and McFillen, 1985; Olomolaiye, 1988; Olomolaiye, 1990; Davies and Duff, 1994).
Table 2.1 Factors found in previous construction management research. Source: Adapted from Smithers and Walker (2000).

<table>
<thead>
<tr>
<th>Range of factors relating to motivation in the construction industry</th>
<th>Literature Source</th>
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<td>C= Maloney and McFillen (1985)</td>
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<td>D= Olomolaiye and Ogunlana (1988)</td>
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<td>F= Wilson (1979)</td>
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<td>Completion within budget</td>
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68
The studies yield a wide range of results, although it must be recognised that these studies primarily involve understanding satisfiers or dissatisfiers (hygiene or motivators; Intrinsic or extrinsic factors) on individual projects, rather than longer term goals. As such, results differ based on individual project and environmental characteristics (Olomolaiye et al., 1998). While they provide insights into what sustains tenure to individual projects, they do not necessarily provide insights into construction retention holistically. Understanding how individuals relate and prioritise factors would help to inform practitioners on what contributes to retention; and what filters individuals into different occupational sectors.

If people feel that they are learning and developing new expertise, they will also feel that this brings personal advancement and growth. This then is the ultimate motivation, but implicit within such advancement and growth is an expectation of continuity within the organisation. Loyalty then develops as a consequence of motivation, and motivation through provision of advancement and growth opportunities. Companies that facilitate this self-development recognise that continuous learning is essential to the company's long-term future. Therefore, the company should be seen to be supportive of employee development and in so doing, will stand to benefit itself. A company that provides the tools, encouragement and incentive for self-learning will foster loyalty and benefit through the individual's development. Fishbein and Ajzen (1975) theory of reasoned action provides a link between satisfaction, motivation and behaviour, thus providing an explanation of psychological mechanisms for decision making and employee retention.

2.9.4 Theory of Reasoned Action (TRA) and Theory of Planned Behaviour

The Theory of Reasoned Action (TRA), established in the field of social psychology asserts that attitudes and subjective norms, lead to intentions which lead to behaviours (Ajzen and Fishbein, 1975). In basic terms, this suggests that a person's behaviour is determined by their attitude towards the outcome of that behaviour and by the opinions of the person's social environment. This theory has received a great deal of
empirical support (Ajzen and Fishbein, 1980), although Schifter and Azjen (1985) proposed a later more complex Theory of Planned Behaviour (TPB) to account for elements of irrational decisions, habitual actions or any behaviour that is not consciously considered. The revised theory suggests a volitional or non-volitional component but suggests that a person's behaviour is determined by their intention to perform the behaviour and that this intention is in turn a function of attitudes toward the behaviour within their subjective norm.

However, a simple attitude-behaviour relationship has been challenged with the argument that more complex models need to be employed (cf. Eagly and Chaiken, 1993). What was consistently found to emerge was the extent to which performing the behaviour is an important component of the person's self-concept (self identity); and the individual self as conceived within a wider social structure (social-identity) (Tajfel and Turner, 1979; 1986) which examined the role of past experience of performing the behaviour. According to TRA and the more complex TPB of considering the role of self and social identities; behaviour can best be predicted from a person's intention or willingness to perform the behaviour. As such, intention is regarded as the most proximal predictor of behaviour. However, further expanding the assumptions of TRA and TPB introduces self-categorisation theories (Turner, 1985; Turner et al., 1987), which supposes that people often evaluate themselves in terms of self-inclusive social categories of sex, class or team, therefore behaviour becomes contingent on differences between groups. This mediates the relationship between individuals and the broader structures of groups and categories. As such, attitudes consider contextual salience of intention to behaviour.
In a construction management context, TRA or TBA have not been used to assess the behaviour of trade and craft workers to their careers. The theories been used to good effect by Teo and Loosemore (2001) to examine attitudinal forces of operatives with regard to waste management on construction projects (Teo and Loosemore, 2001). The UK construction industry generates fifty per cent of overall landfill volumes. Attitudes represent people’s evaluations of objects or situations that predispose them to behave in a certain way. Their research was threefold, to determine: operatives’ beliefs and perceptions towards waste and to determine the influences that shape them; operatives’ knowledge-base and awareness of their role in the waste generation process; and impediments to the effective adoption of waste management practices on construction sites. They determined that by transposing the research results into this theoretical framework they could conceptualize and better understand the forces that shape peoples behaviour towards waste in the construction industry. The sentiments of Teo and Loosemore concluded that their research was valuable in creating the foundations for exploring attitudes towards waste in their research; would benefit in
other contexts; and make a significant contribution to the advancement of new and important areas of construction research.

2.10 Chapter Conclusion

This chapter has examined the context in which careers are set within the construction industry. Using concepts developed in sociology, psychology, careers and management theory, the chapter identified issues that guide the research. Current industry concerns are highlighted and the nature of careers within project-based environments are examined. The paucity in trade and craft research is critiqued and a discussion is centred on how greater understanding of trade and craft careers may enhance worker retention.

In the next chapter the theoretical foundations of career theory are examined. This outlines the origin of its many disciplines, concepts and approaches. The chapter presents a discussion around the theories main concerns and the current trends emerging within the field of its research. Interrelated components of its theory are discussed, and its importance to social enquiry.
Chapter 3

Deconstructing Careers Theory

While Chapter 2 explores the context in which trade and craft careers are set, this chapter explores the theoretical underpinnings of careers theory and examines potential approaches useful in investigating the subject matter.

The word career appeared first in the sixteenth century and derives from French and Latin words for a race course (Williams, 1983). An historical trace only finds its association to work in the nineteenth and twentieth centuries although in the nineteenth century it had more to do with a sense of vocation than its latter day expression of work progression (ibid). By its modern conceptualisation, the original racing connotations of rapid and uninterrupted activity prevail and colour the notion of career to this day.

In management practice and theory, for at least the last 30 years, definitions of careers have been dominated by interpretations considering their content of structure, succession and status (Adamson 1997). As such, a career may be defined as the ‘Progressive transition of individuals through organisational structures, and successive transitions of organisational status’ (Ibid), or ‘a linear employment pattern characterised by increasing development and specialisation in one occupation’ (Ball, 1984 p.9). While such definitions pervade the literature (Arnold, 1997) and colour
general notions of the career (Kanter, 1989 cited Beardwell & Holden, 1997), emphasising certain economic and political aspects of careers; suggested by the use of 'progression' and 'status' (Adamson, 1997), this view is increasingly being rejected as 'narrow' (Arnold, 1998 p.387) and 'simplistic' (Adamson, 1997).

Russell (2001) reported to the changing nature of work and changing definitions of careers in the workplace due, for one, to the impact of communication technology. It is becoming increasingly problematic therefore to define careers in narrow terms (Arnold 1997). As Chapter 1 explains, from the literature (Lewin and Mitchell, 1995; Adamson, 1997; Arnold, 1997; Arnold, 1998) consistencies across definitions suggest that a career contains the following fundamental and basic elements:

i) Subjectivity – Recognition that the career is personal, or a possession, and defined by the individual.

ii) Sequence – More than one employed position in a consistent occupation, not one employment position taken in isolation.


iv) Experiences – Related to the suggestion that careers may be subjective as well as objective, as two people may experience the same sequence of events differently.

A distinction, rejected in Arnold (1997), is often made between a job and a career, with the former considered as employment positions of 'low status, few promotion prospects', and the latter, careers, being regarded as employment positions of 'high status, many promotion prospects' (Ibid). In acknowledging the subjectivity by which careers may be defined, this view will be rejected here as an individual may equally consider a consistent pattern of perceived low status employment as a career.

Arnold (1997) suggested a wider definition of careers exists and that a career may not necessarily be confined to one occupation. A further suggestion is that careers do not necessarily 'involve promotion or other indicators of increasing status such as income' (pp. 16 -17). A career is the sum total of all of your work-related
contributions to society in a lifetime. A career encompasses all the roles a person plays and duties they perform. Individuals may have many jobs or positions that converge, but they only have one overall career. A career includes paid, un-paid, volunteer, part-time and full-time positions. There are various career options in the modern world of work: Self-Employed, Organisation Employed or Project-Employed. Careers include many life roles that are not usually considered: student, homemaker, babysitter, office worker, doctor, lawyer, etc. (Arnold, 1997; Casto, 2000). While it may be acknowledged that the careers may not be viewed strictly by indicators of increased income or status, there must be an element of a perceived reward. How individuals themselves view their careers is fundamentally important and should guide any development of appropriate career development strategies. In response to question 2, the research set out to explore how trade and craft workers themselves would define the term career.

3.1.1 Career Concepts Model

Driver (1979) suggested that careers may be defined by the orientation of the person involved in the career itself. A career concept model (CCM) was introduced, based on the earlier works of theorists (cf. Parsons, 1909; Super, 1957) and used in defining later models such as Holland’s (1985) career environments; Schein’s (1975; 1978; 1987) career anchors; and Darr’s (1986) success orientations. Driver suggested that careers refer to the modality of an individual’s career decision along three dimensions of: frequency of job change; direction of movement; and type of change in work content. From this four career concepts were defined: steady state – characterised by little or no job change; linear – representing moderate or consistent upward movement within a single occupational field; c) spiral – more gradual long-term upward movement in related occupational fields and short-term lateral changes among them; and transitory – frequent short-term changes in variable directions throughout unrelated fields.
3.1.2 Defining Careers

Van Maanen and Schein (1976) demonstrated how three major sets of variables interact to produce career outcomes. They introduced the concept of a career cube to depict this. In the first dimension there are categories that represent environmental settings such as cultures, roles occupations and organisations; the second represents the internal variables related to the career such as learning styles, intellectual ability, and personality traits; the third represents the temporal life cycle.

A different meaning is adopted for the term career according to the perspective from which it is viewed (Collin, 1984a). The literature clearly defines a distinction between objective and subjective definitions or as Collin (1984a) suggests the perspective of "observer" (objective) and "actor" (subjective) (Collin, 1984a p.35).

![Diagram of the Career Cube](image)

Figure 3.1 The Career Cube. Source: Adapted from Van Maanen and Schein (1976)

From the observer construct there is an emphasis on spatial movement which limits the overall viewpoint. The observer looks upon increased mobility and status and is the pre-eminent viewpoint of the scientific investigator (Ibid). From the actor's perspective, not only do they see their own career differently through thoughts and emotions, but they may also focus on more temporal dimensions of movement. This
view will also be limited to others as they will only experience the subjective elements through empathy, inferred language and behaviour.

Using work by Goffman (1959; 1961) and Hughes (1937), Collin explains the term "career" as being defined and used to determine two differing function: to describe (official positions; Goffman; and series of status' Hughes); and to interpret (felt identity; Goffman; the moving perspective, Hughes). The differing range of perspectives masks the different ways the word is used. As such, it is suggested how "the overlapping meanings may distort or impoverish the word" (p.38), and noted how paradoxically classifying the word ultimately leads to greater ambiguity of the career experience. Collin proposed an analytical framework within which meanings can be analysed.

From the depiction in Table 3.1 one can see the substantive career as the observer's description of what constitutes a career. This describes occupational, organisational and individual elements that are observable. The phenomenal is the individual's own experience in occupation organisation and through life. The social symbolic is particularly relevant to everyday speech and denotes experiences which are seen to reflect the values of society such as advancement, success and moral worth. The transcendental is the recognition of past and future events that individuals used to create a canopy of meaning and invests continuity, purpose and legitimacy. From it individuals discern a pattern in past experiences and this provides the basis of future action.
Table 3.1 Framework for the analysis of the meanings of the word "career". Source: Adapted from Collin (1984a)

<table>
<thead>
<tr>
<th>Career as Description</th>
<th>The Observers construct of &quot;Career&quot;</th>
<th>The Actor's construct of &quot;Career&quot;</th>
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<tr>
<td></td>
<td>The Substantive &quot;Career&quot;</td>
<td>The Phenomenal &quot;Career&quot;</td>
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<td>- the career path through</td>
<td>- the progress of self:-</td>
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<td><em><strong>the individual's subjective experience of such progress</strong></em></td>
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<td>The Socially Symbolic Career</td>
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<td>The Phenomenal &quot;Career&quot;</td>
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<td>- the progress of self:-</td>
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</table>

From this depiction and others (Super, 1957; Holland, 1985; Schein, 1975; 1978; 1987) careers can be seen as a common theme running through a person's life. It can be viewed as organised and patterned paths taken by an individual across time and space. From this inclination, it can be a series of separate but related incidents, events or experiences a person passes through in the course of his or her lifetime. These fundamentally are influenced by a person's social environment and changing nature of their social perceptions.
3.2 The Modern Context of Careers

Examining careers in a modern context divides careers into two particular types, occupational or vocational in which typically there are various stages through which a member may pass. These are described as professional type occupations such as law where a lawyer may progress from junior lawyer to judge over time. Secondly, there are organisational careers in which the individual progresses through a series of positions in a fairly specified sequence such as in the public service (Watson, 1987; Savage, 1998). What might be seen to distinguish these two types of career is the power exercised by the individual. In a professional type of career, the individual must market his/her services while in the organisational career, the individual is an employee subject to those higher up in the hierarchy. It is the latter form of career which has suffered most substantially in the recent restructuring of the workforce and is often excluded from theoretical observations. Careers such as that of craft workers often form part of the excluded career set.

It is also interesting to note that our notions of career are comparatively recent. The career has become a generic feature of a society (Savage, 1998). The career is not only a way of securing efficiency and of structuring an organisation; it is also a disciplinary device. Those who expect to be promoted were expected to behave in certain ways (Watson, 1987; Miller and Rose, 1990). In fact, the notion of career could be seen very much as self surveillance; employees are encouraged to develop a career ethos and to behave in ways appropriate to their organisation (Foucault, 1997). Great stress is placed on efficiency, regularity, predictability, dependability and responsiveness surrounding the term. It is expected that careers follow an ordered and progressive pattern and anyone who does not meet certain standards would be rejected from the philosophy of a career (Watson, 1987; Rose, 1989). An important aspect of the study was to see how trade and craft careers actually fit into the wider context of career theory.
3.3 Careers Research

Research into career theory is a continually expanding field of investigation. It is based on a body of theoretical knowledge and the use of continually developing skills, practice and techniques. Career theory can be traced back to the early 1900's when Parsons (1909) formed the notion of "talent matching" in order to offer and determine the nature of careers guidance. Most traditional career theories originate from either psychological or sociological theory, which is briefly identified as:

- Psychology – concerned with vocational development and focuses on the individual; and
- Sociology – concerned with the process of occupational choice and the individual’s role in society.

Different theorists have different descriptions of what a "career" is but, more importantly, different approaches examine careers from different perspectives. Three common and unique perspectives are:

- Structuralism;
- Differentialism; and
- Developmentalism.

3.3.1 Structuralism

From a sociological perspective Structuralism views careers as being determined by social structures which have a significant role to play in the destiny of the individual. The structural approach is to assess: data about the world of work often referred to as occupational information; and data about individuals such as interests and aptitudes. Roberts (1968) a major theorist in this field, suggested that individuals’ do not typically choose their jobs in any meaningful sense; they simply take what is available. This determined by what was termed “The socialisation process” involving school, social class, family background, ethnicity and gender which shaped the nature of career entry. Roberts later revised some original ideas to acknowledge factors such as people spending longer in education, individual experiences are more varied, changes to the labour market.
3.3.2 Differentialism

Similarly, but from the psychological perspective, differentialism is concerned with the examination of individual differences in terms of traits and factors. So this area of career theory assumes that individuals can be measured and the task is to match individual aptitudes, personality and other characteristics to jobs (pegs and holes). Rodger (1971) suggested a Trait and Factor Theory which consisted to a seven point plan to determine a career identity. Consisted of Identifying: 1) physical make-up; 2) attainment – including educational; 3) general intelligence; 4) special aptitudes and talents; 5) interests; 6) disposition; and 7) circumstances. This approach became widely adopted in the UK.

3.3.3 Developmentalism

Going some way to merge the two approaches outlined above is Developmentalism. This body of theory emphasises that a career is a process which takes place over a period of time. Individuals move through stages in their life and make mini decisions as they progress. The individual eventually becomes aware of who they are and what they want (self-concept) and they look for a job where they can implement this. A major theorist in this field, Super (1957), suggested a series of five life stages which individuals typically go through: Growth (birth to 14); Exploration Stage (15-24); Establishment (24-44); Maintenance (44-65); and Decline (65+). Super (1981) adopted the view that vocational choices are made in the context of other roles that people play in life (multiple roles which interact) and the locations that these roles are based in: Roles (Parent, Homemaker, Spouse, Worker, Citizen, Leisurite, Student, Child, Pensioner); and Locations (Home, Community, Education, Work). Table 3.1 tabulates the three perspectives.
Table 3.2 Theoretical approaches to the study of careers

<table>
<thead>
<tr>
<th>Approach</th>
<th>Major theorists</th>
<th>Contribution</th>
<th>Descriptive Components</th>
</tr>
</thead>
</table>
| **Structuralism**       | Ken Roberts (1968)       | Career facilitators                 | • Opportunity Structure  
                          |                          |                       | • The social structure determines each individual's eventual occupation  
                          |                          |                       | • Individuals' do not typically choose their jobs in any meaningful sense; they simply take what is available  
                          |                          |                       | • The socialisation process determines the career entry, e.g. type of school, social class, family background, ethnicity, gender etc  |
| **Developmentalism**   | Donald Super (1957)      | A series of 5 life stages which individuals typically go through: | 1. Growth (birth to 14)  
                          |                          |                       | 2. Exploration Stage (15-24)  
                          |                          |                       | 3. Establishment (24-44)  
                          |                          |                       | 4. Maintenance (44-65)  
                          |                          |                       | 5. Decline (65+)  |
                          |                          |                       | • General managerial competence  
                          |                          |                       | • Autonomy/independence  
                          |                          |                       | • Security/stability  
                          |                          |                       | • Entrepreneurial creativity  
                          |                          |                       | • Service/dedication  
                          |                          |                       | • Pure challenge  
                          |                          |                       | • Lifestyle  |
|                         | Alec Rodger (1971)       | Seven point plan - became widely adopted in the UK | 1. physical make-up  
                          |                          |                       | 2. attainment – including educational  
                          |                          |                       | 3. general intelligence  
                          |                          |                       | 4. special aptitudes and talents  
                          |                          |                       | 5. interests  
                          |                          |                       | 6. disposition  
                          |                          |                       | 7. circumstances  |
|                         | John Holland (1973)      | Personality Theory: - 6 personality types each with corresponding careers to which the personalities are best suited: | • Realistic  
                          |                          |                       | • Investigative  
                          |                          |                       | • Social  
                          |                          |                       | • Conventional  
                          |                          |                       | • Enterprising  
                          |                          |                       | • Artistic  |
3.4 Converging Theoretical Perspectives

From this perspective, an immediate problem for analysing careers based on psychological and sociological disciplines is that they work across different philosophical boundaries. In deconstructing and reconstructing the perspectives in a more ordered form, Sonnenfield and Kotter (1982) identified a series of converging theoretical perspectives that can be applied to the study of careers. In rough historical order of development, starting with the oldest, these have been discussed below:

3.4.1.1 Social class

Careers are governed by a person's position in the social structure. This position determines the opportunities that are made available to the individual but also the socialisation to which the growing person is exposed. They ultimately come to view their own careers in ways consistent with their social class.

3.4.1.2 Static personality differences

This assumes that people's personalities are relatively stable over time and that people differ from one another. Careers are determined by personality and people choose the "best-fit career" to suit their personality. The emphasis is on matching people to the best available fit.

3.4.1.3 Career stages

The career can be divided into distinct phases or stages. The issues and concerns of most importance to a person are said to vary systematically with stage. The aim is to identify the stage and its associated concerns.
3.4.1.4 Life cycle

An extension of career stages, lifecycle acknowledges the importance of biological and cultural factors outside the work setting as influences on a person’s career, the notion of stages remains but is used more flexibly and is not confined to career. The aim is to identify key life roles and to identify their interplay over time. (Sonnenfeld and Kotter, 1982)

Each of these perspectives offers an individual way of viewing careers, although none of them can be viewed in isolation from the other. For example, the assertion of the social class approach that suggests job opportunities depend largely on the social structure, is often evident in the literature (cf. Roberts, 1968). However, the psychological view maintains that an individual’s personality would play an important part in shaping careers of people in all social classes. The argument then focuses on whether personality is simply a consequence of social class, and whether by focusing on them psychologists are simply reinforcing social stereotypes (Vondracek et al., 1986a; Vondracek et al., 1995). Further arguments however, suggest that by emphasising psychological and sociological perspectives little justice is done to the inter-disciplinary nature of career and the range of social science perspectives that contribute understanding of careers (Arthur et al., 1989). As seen in Table 2.2, various career perspectives represent attempts to understand the operation of individuals within complex, unstable, interactive and dynamic human systems, including: economics; sociology; psychology; and other behavioural sciences. Most practitioners move from one perspective to another: the resolution of practical problems usually requires some pragmatic reconciliation between different disciplines. Yet in theoretical terms it is difficult, perhaps impossible, to find ways of satisfactorily integrating these perspectives.
Table 3.3 Outline of disciplines and career perspectives

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Perspective</th>
<th>Main Proponent (e.g.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychology</td>
<td>Career as vocation: a viewpoint accepting the traditional psychological position on stability of personality in adulthood; associated theory is intended to help guide individuals and organisations fill job openings in a mutually satisfactory way.</td>
<td>Holland, 1985</td>
</tr>
<tr>
<td></td>
<td>Careers as a vehicle for self-realisation: a humanistic viewpoint focusing on the opportunities a career can provide for further individual growth and how that growth can in turn benefit organisations and society (e.g. Shepard, 1984).</td>
<td>Shepard, 1984</td>
</tr>
<tr>
<td></td>
<td>Career as a component of the individual life structure: from this viewpoint eras and transitions throughout the career are predictable and are to be accommodated in the work arrangements made</td>
<td>Levinson, 1984</td>
</tr>
<tr>
<td>Social psychology</td>
<td>Career as an individually mediated response to outside role messages: a viewpoint that studies particular occupational circumstances, such as those of priests or scientists and engineers, for their psychological effects.</td>
<td>Schneider &amp; Hall, 1972</td>
</tr>
<tr>
<td>Sociology</td>
<td>Career as the unfolding of social roles: this viewpoint overlaps with social psychology but places greater emphasis on the individual's reciprocal contribution to the social order</td>
<td>Hughes, 1958; Van Maanen and Barley, 1984</td>
</tr>
<tr>
<td></td>
<td>Careers as indicator of social class: seeing careers as a stratospheric indicator of relative social position within an ordered system</td>
<td>Blau &amp; Duncan, 1967; Featherman &amp; Hauser, 1978; Warner &amp; Abegggen, 1955</td>
</tr>
<tr>
<td></td>
<td>Career as social mobility: seeing a person's title as an indicator of social position</td>
<td></td>
</tr>
<tr>
<td>Anthropology</td>
<td>Career as status passages: a viewpoint overlapping with functional sociology about how rites and ceremonies serve to maintain a society or culture over time</td>
<td>Glaser &amp; Strauss, 1971</td>
</tr>
<tr>
<td>Economics</td>
<td>Career as a response to market forces: a viewpoint emphasising the near-term distribution of employment opportunities and the long-term accumulation of human capital</td>
<td>Becker, 1975; Doeringer &amp; Piore, 1971</td>
</tr>
<tr>
<td>Political Science</td>
<td>Career as the enactment of self-interest: this views individual needs such as power wealth, prestige, or autonomy as prominent objects of self-interested behaviour in the context of institutional political realities</td>
<td>Kaufman, 1960</td>
</tr>
<tr>
<td>History</td>
<td>Career as a correlate of historical outcomes: looking at the reciprocal influence of prominent people and period events on each other</td>
<td>Schlesinger, 1965</td>
</tr>
<tr>
<td>Geography</td>
<td>Career as a response to geographic circumstances: focusing on variables such as availability of raw materials, a natural harbour, or a population ready for work or trade as they affect the way working lives unfold</td>
<td>Van Maanen, 1982</td>
</tr>
</tbody>
</table>
Many writers believe that the careers field is fragmented and has serious weaknesses. As the connotations of its sixteenth century meaning imply, embedded in the ethos of the term "Career", is a search for rapid development and or progression. However, careers cannot only be studied from a dispositional level where individual attitudes, values and effort dictate this progression (Thomas, 1989). Vondracek and Lerner (1982) insist that the social, political, economic, physical and cultural milieu must be considered in the study of careers. However, of the many approaches, models, concepts and theories, they all remain segmented, with each theory neglecting other theories. It seems that people working from different perspectives scarcely take notice of each other's work. It could be argued that this could perhaps be appropriate in the early stages of development but not after that. Attempts have been made to work within a multi-disciplinary framework (Blau et al., 2001) but with mixed success. Making linkages between the various disciplines often involves a quest for some middle-ground with the result that they lack the depth and specificity of studies within disciplinary boundaries. A major challenge of this study is to form a link between theoretical perspectives in order to examine trade and craft careers in terms of development, structure and, explore the differences between careers research in other disciplinary fields.

3.5 Research Based on Traditional Theories

In theoretical terms, the antecedent processes to career selection are encapsulated by the Career Decision (identification of potential options), and Career Choice (determination of a suitable option) processes (Gati, 1993; Gati et al., 1993). The career decision and career choice processes are often used interchangeably, although they describe two distinctly different processes. While career choice refers to the area of work or the sequence of work roles that an individual intends to pursue, career decision refers to the psychological processes involved in outlining the range of choice variables (Arnold et al., 1998). The fusion of these processes is known as career exploration, which has been recognised as the process by which individuals seek information about educational and career options in order to progress in world of work (Blustein et al., 1995). This is seen not only as a search for a vocation, but also
understanding one's own perspective in relation to the world of work (Forrest and Mikolaitis, 1986; Kracke, 2002).

From the psychological perspective, an important concept in examining occupational choice is that of "Self-Concept Theory" (Super, 1951; 1957; Super et al 1963; in Super, 1981), which has been examined by several authors (Roberts, 1975; 1980; O’Neil, 1980; Gottfredson, 1981; Ball, 1984; Betz, 1994). Self-concepts may be defined as an individual’s view of themselves in relation to the world. According to Super, (1981 p.17) self-concept theory implies:

Occupational choice represents an attempt to implement one's self concept in an occupation, and that this is done by matching one's picture of oneself against one's picture of people in occupations that one knows and in which one is interested.

This is also referred to as the occupational choice model (Roberts, 1975; Ball, 1984; Betz, 1994), which intimates that the individual chooses an occupation, which is congruent with his/her self-concept and his/her 'preferred global life style' (Hayes cited Speakman, 1980 p.11). It is suggested that it is this view of oneself, which subsequently causes some occupations to appear more attractive than others.

O’Neil et al., (1980) developed a model depicting six general factors and 22 sub-factors affecting sex role socialisation and career decision making. The hypothesis of the model is that Individual, Societal, Familial, Socio-Economic, Situational and Psycho-Social Emotional factors affect both the sex role socialisation process and career decision making process. Later studies (O’Neil et al., 1980) which tested undergraduate and graduate students against the model also supported this hypothesis. Whether or not similar factors can be found to exist in the influencing the careers of less privileged groups is uncertain. However, using the O’Neil et al., study would represent a convenient starting point in examining influences of other groups such as trade and craft workers.
Figure 3.2 Factors affecting the Sex Role Socialisation and Career Decision Making Process (O'Neil et al 1980)
3.6 Person Environment Fit

In the context of differentialism, Holland (1973) proposed six personality types: Realistic; Investigative; Social; Conventional; Enterprising; and Artistic. Each of these types was said to correspond with six similarly differentiated careers or career environments to which the personalities are best suited (pairs). As Holland later points out "the assumption that there are only six kinds of people in the world is unacceptable on the strength of common sense alone" (Holland, 1997, p.3). The six category scheme allows a rank ordering of a person's resemblance to each of the six models (Arnold, 1997): ranking each according to preference allows for an individual score. As individuals will rank each differently, combining scores allows for 720 personality patterns or "repertoires" estimating these scales is possible by the use of several scales such as: Vocational Preference Inventory (VPI; Holland, 1985b); a Self-Directed Search (SDS; Holland et al., 1994); the Strong Interest Inventory (SII; Harmon et al., 1994). These scales variously test choice of vocation, work history, pre-employment aspirations or combinations of these. Of the numerous critiques of Holland's typology (cf Arnold, 1997), the authors generally prefer to build on rather than dismiss Holland's work (Arnold, 1997). For instance, Prediger and Vansickle (1992) used Holland's scores for individual and preferred environment to describe people and occupations in two dimensional space using axes of: "things" versus "people" and "data" versus "ideas". Thus, every person and every occupation could be summed up as a graphical point according to their relative preference. Holland's typology is considered well grounded and in many western countries forms the basis for matching individuals to vocational options by career psychologists.

An assessment of Holland's typology has generally been linked to wider personality theory although in a wider context a number of issues arise which draw into question the contextual salience of the theory. In identifying personality types the instrument used to test the theory asks about interests and competencies. However, the tendency is to combine data quantitatively and generate an overall score. In doing so, much useful information is lost (Arnold, 1997). Greater knowledge of individual's criteria for assessment might be gained by assessing a person's orientation by looking at their
unique attributes and interests in a more subjective way. Furthermore, for many individuals a career depends more on existing opportunity structure than choice. Conceptualising careers as a simple search for the right environment does not sufficiently attend to the constraints of social circumstances (Roberts, 1981). Furthermore, and in connection to the assumption of calculus, Holland does not propose or define contingencies or consequences of a poor person environment fit.

Table 3.4 Characteristics of Holland’s six types of vocational personality. Source: Holland (1985b)

<table>
<thead>
<tr>
<th>Likes</th>
<th>Conventional</th>
<th>Investigative</th>
<th>Enterprising</th>
<th>Social</th>
<th>Artistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Realistic</td>
<td>Animals, Tools, Machines</td>
<td>Numbers, Records, Machines, Order</td>
<td>Study, Maths, Science</td>
<td>Leading, Persuading, Selling</td>
<td>People, Teaching, Nursing</td>
</tr>
<tr>
<td>Realistic</td>
<td>Tools, Machines, Plants, Animals</td>
<td>Record keeping, Systematic order</td>
<td>Understanding &amp; solving maths or science problems</td>
<td>Leading, Selling</td>
<td>Teaching, Counselling, Nursing, Providing information</td>
</tr>
<tr>
<td>Investigative</td>
<td>Practical things you can see touch &amp; use</td>
<td>Business success</td>
<td>The quantifiable</td>
<td>Success, Politics, Leadership, Business</td>
<td>Helping people, Solving social problems</td>
</tr>
<tr>
<td>Enterprising</td>
<td>Orderly predictable</td>
<td>Precise, Scientific, Intellectual</td>
<td>Energetic, Ambitious, Sociable</td>
<td>Helpful, Friendly, Trustworthy</td>
<td>Expressive, Original, Independent</td>
</tr>
</tbody>
</table>

Figure 3.3 Holland’s Congruency Model. Source: Adapted from http://www.careerkey.org/asp/your_personality/hollands_theory_of_career_choice.asp
Figure 3.5 Holland’s Hexagonal model of vocational personality types. Source: Adapted from Arnold (1997)

Figure 3.4 Prediger and Vansickle (1992) career dimensions in relation to Holland’s types. Source: Adapted from Prediger and Vansickle (1992)
Careers are not always selected in conditions of rational free choice. On the one hand, career selection is based on individual differences in aptitudes and personality (Holland, 1973; 1985; 1997); on the other hand, socio-structural conditions emphasising social class and opportunity (Ginzberg et al., 1951; Gottfredson, 1981; Bandura, 1986; Gati, 1993; Gati et al., 1993; Schoon and Parsons, 2002). Further to this, Hayes (1971) cited Speakman (1980, p.115) contests:

Occupational choice is made on the basis of an incomplete or partial self-concept, one which focuses largely on the economic man (sic), and that it is only when the individual experiences work at first and that he begins to crystallise his occupational self-concept in psycho-sociological terms.

As the present discussion suggests, different influences combine to determine the range of options considered in the selection process. Hughes (1951) determined that people often prefer to work in named occupations and the work an individual chooses to partake in becomes the essential element of social identity (p. 209) and thus it is socially judged (Ibid). As such, the name of the occupation not only becomes a ‘price tag’, but also a ‘calling card’. It could be theorised that individuals would always opt for careers of optimal name value regardless of personality or fit within the environment.

### 3.7 Career Expectations and Aspirations

Career aspirations expressed by adolescents are, however, generally believed to be unstable and likely to change many times before adulthood (Phipps, 1995; Super, 1980; Trice and McClellan, 1993). Further research submits that this is less of a determined process by the individual but can be attributed to the fact that characteristics of attainable occupations do not necessarily match the individual’s image or idea of an ideal career (Ginzberg et al., 1951; Gottfredson, 1981; Gati, 1993; Gati et al., 1993). The developmental theories of Super (1957) cited stages and tasks relative to childhood that influenced career activities in schools. Ginzberg et al., (1951), however, theorised that regardless of developmental stages individuals may not be able to act out their desired choice of occupation. Ginzberg submits a process of “Compromise” which is the stage or dimension of maturity in which a person
displays a willingness to acknowledge and balance the demands of reality; and individual needs (Ginzberg et al., 1951). In a similar vein, Gottfredson (1981) conducted a ten year longitudinal study examining the career development in children. According to Gottfredson's theory, children's perceptions of self, and their perceptions of occupational gender roles play a part in occupational selection. Two variables measured in the study were occupational aspirations and occupational expectations. These aspirations and expectations were measured and found to change developmentally but differing from Super's earlier work, evokes that this development was highly conditioned by both cognitive development and social environment. For instance, when boys began to realize that they would not become professional athletes, expectations became more realistic. Similar to Ginzberg et al., (1951) notion of compromise, Gottfredson suggested that a process of circumscription limited the free choices particularly females had on advancing their desired occupational choice.

It is determined from this that an individual's career preference or optimal career choice maybe superseded by an incongruence with available opportunity, leading to a necessity for this compromise (Ibid). Following in the footsteps of Gottfredson (1981), Gati (1993) and Gati et al (1993) consider compromise against the optimally preferred career or “Fantasy Career” (Trow 1941, cited Gati, 1993), and steer towards the importance of “assessing anticipated subjective satisfaction” (Gati, 1993 p.417), which are the perceived alternative rewards career choice may give the individual. While these three developmental models and theories of choice and aspirations (Ginzberg et al., 1951; Gottfredson, 1981; Gati, 1993; Gati et al., 1993) consider structural constraints, they do not account for the contextual link between macro level societal change and individual development which assesses initial incongruence and subsequent changes in person, environment and their anticipated rewards.

It is well documented that social background is associated with aspirations for education, occupational aspirations, and occupational status attainment and that the pattern of class inequality is much the same across most industrialized countries. Explanations of these phenomena emphasise the different opportunities and socialisation processes that exist across socio-economic status levels. Individuals from more privileged homes have more educational opportunities, greater access to
financial resources when they are needed (i.e., to pay for higher education), role models, occupational knowledge, and informal/kinship networks (cf Arnold, 1997).

3.8 Relational Networks

Most research on vocational choice has been conducted with high school or college students based on the assumption that the young people under investigation give serious consideration to the matter. As Gottfredson (1981) found parents were initially the major influence on children's career aspirations although students reported that teachers' influence had more impact as time went on. Nevertheless, most interesting is that in later stages of development when students were queried as to whether the school was helpful with career direction and in career preparation, they were only found to be considerably less positive in their responses.

Although the role of parents within the career process is widely acknowledged, the dominating importance of an individual's social environment has only recently begun to be explored in the domain of vocational behaviour (Otto, 2000). Within the wider careers literature, such theories reflect a "relational perspective" in analysing external influences on career selection (Chusid and Cochran, 1989; Way and Rossmann, 1996; Blustein et al., 1997; Blustein, 2001; Philips et al., 2001). The study of the family-career connection is considered a process beginning in the pre-school years where parents act as role models in the antecedent process (McDaniel and Hummel, 1984; Miller, 1984). These theories suggest that within the phases of careers (cf Super, 1957), a range of familial factors influence career choice, defined by Splete and Freeman (1985) as: geographic location; genetic inheritance; family background; socio-economic status; family composition; parenting style; and parent work-related attitudes. Thus, the family related factors act as an influence on physical and mental abilities; education and employment opportunities; financial resources; personality type; preference for certain types of interpersonal relationships; work attitudes; and willingness to pursue a career.
Otto (2000) underscores the importance of parents as “allies” in youth career development, acting as mediators between the individual and professional career information and networks (Shanteau, 1988; Kracke, 2002), reducing choice and decisional errors, fostering vocational maturity (Philips et al., 1983) and providing an adaptive transition from school to work (Blustein, et al., 1997). However, a negative influence within this process is that individuals may become over reliant on of parents and family for advice, denying responsibility for their own choices and thus limiting the appropriateness of their actions (Harren, 1979).

The above discourse implies that career decisions and career choices are made using distorted facts about oneself before an individual enters the work environment, and the realisations of satisfaction in careers based on self-concepts may not only be illusionary, but also reliant on parental influences. This is a view supported by Adamson (1997). Drawing on qualitative data from 50 in depth interviews, Adamson analyses the developmental phases of graduates in their initial career environment and highlights the constantly shifting construction and reconstruction of the individual self in light of career encounters with managers, peers and colleagues. Adamson (1997) describes three phases:

1. Adjustment/Reality Shock – Start. Initial experience of the work environment where high expectations may not be achieved.


3. Re-evaluation/Congruence – After several years. In this period Adamson noted that graduates became more cynical.

Adamson suggested that at these stages the individual determines whether or not the career path maintains congruence with the individual’s sense of self. Adamson views the career as a “Vehicle for the constant realisation of self”. Thus viewing self-concepts as an acceptable process for making decisions of environment may lead to a premature attraction to a particular career, one that is unsuitable to ones self in light of further experience. Furthermore, these decisions may be a circumscribed or compromised choice, influenced or directed by parents. In terms of Holland’s assumption of calculus, failure to act in light of new self-concepts would lead to an
individual being on a sub-optimal career path in a less than optimal environment. Speakman (1980 p.137) suggests:

Once an individual has embarked along a career branch that proves unattractive or unsuitable, it becomes even more difficult to step onto another branch than it was before.

Raedeke et al., (2000) considered a lack of acceptable alternatives as a factor in committing swimming coaches to their careers, and suggested it as a possibility for them experiencing feelings of psychological burnout. Raedeke alludes that the title of “swimming coach” was considered as attractive. However, social expectations were identified as serving to commit individuals to particular activities through creating feelings of obligation. It was indicated that individuals may become identified by family and friends in respect of their particular job title. As such a feeling of obligation to stay in that job may be experienced. Raedeke et al., (2000) suggested that two facets existed of coaching professionals; those that chose to stay, and those that stayed because they felt they had to. In their hypothesis, O’Neil et al (1980) placed particular support on Psychosocial-Emotional factors such as fear of failure and lack of confidence as affecting careers and prove to be a potential problem in restricting and limiting that career.

3.9 Paradigm Shift in Careers Theory

In the abstract concept, a career can refer to the individual’s movement through time and space (Routledge, 1983; Collin, 1984a; Collin and Young, 2000). A characteristic of the traditional theories of careers is that they all look for, or wish to impose some form of order. In fact reviewing the literature (Brousseau et al., 1996; Hemsley-Brown and Foskett, 1999; Ribbens and Jansen, 2005), the term career imbues a notion of erratic individual behaviour within a complex array of systems and environment influences and choices. New ways of looking at careers account for this, and as such new concepts emerge such as: Career Pandemonium (Brousseau et al., 1996); Career Chaos (Gibb, 2006); Career Lottery (Hemsley-Brown and Foskett, 1999); and Career Jazz (Ribbens and Jansen, 2005). In the latter analogy, Jazz has a
component of improvisation which allows for change of leadership and direction without the demand of consistent progression in one direction. Similarly, the emphasis in career trajectories has been shifting from consistent upward movement to jazz-like improvisation regarding achievement of career goals (Ribbens and Jansen, 2005). The career process is extremely complex from decision and choice making process, to achieving goals. The attempt to place order in the diverging activities creates substantial friction. There is often a lag between the rhetoric and reality of matching individuals to labour markets. The practice of viewing careers as fixed sets of tasks assigned to specific people on a more or less permanent basis is now being transformed and replaced by concepts that cluster tasks into general fields. This is seen as a more realistic view, and goes beyond analysing careers in terms of specifically defined tasks, personalities, attributes or environments.

Career theory within the sciences (e.g. Social, psychological) is now questioning the adequacy of its more positivist roots and the research methodologies that it has generated (Collin, 1998; Flores et al., 2003; Guindon and Richmond, 2005). Whereas the criticisms of career theory had first been expressed in terms of the need for a phenomenological approach, they have more recently been reconstructed in terms of contextualism and constructionism (Young et al., 1996; Collin, 1998; Flores et al., 2003; Guindon and Richmond, 2005). These approaches are all concerned with developing meaning from careers within the social interaction of individuals (Young and Valach, 1996; Collin, 1998; Guindon and Richmond, 2005). Hence, it is now argued that career is “an overarching construct that serves to frame and organise the complex pattern of intentional actions; chance occurrence and environmental consequences over longer segments of life (Young and Valach, 1996). These new approaches offer a new construction of the individual, as diverse an key element in career theory (Giddens, 1991). Rather than just regarding the individual as a passive entity, determined by external influences, or static personalities in mechanistic environments, the career is seen more as a reflexive project, for which the individual can be responsible for changing.

Two recent studies of career theory and professional careers literature present comprehensive accounts of the dominant and emerging theories to date (Flores et al., 2003); (Guindon and Richmond, 2005), which reviewed 165 and 172 articles respectively. Several major conceptual themes emerged in these two studies. In both
reviews, studies associated with traditional theories represented a smaller proportion of the literature than they had for many years. Among the traditional theories, person-environment fit and cognitive/social learning theories dominated research studies. A variety of other traditional theories such as career decision making were also represented, however newer theories emerged. These were provoked by post-modern theories of contextualism and constructivism/constructionism.

3.9.1 Contextualism

Many authors have emphasised the need for theory convergence. A useful meta-theory that synthesises individual and structural viewpoints has been conceptualised by Vondracek et al. (1986) in a developmental-contextual model. The model as depicted in Figure 8.6 was derived by combining Developmental Systems Theory (DST; Ford and Lemer, 1992), Lemer's developmental-contextual meta-model (Lemer, 1985) with Ford's Living Systems Framework (LSF) (Ford, 1987) to arrive at a comprehensive view of human development. The model draws on life-span development theories and contextualist perspectives, conceptualising careers as "the dynamic interaction between a changing (developing) individual and in a changing context" (1986, p. 5). Unlike the life-span, life-space approach developed by Super (1980), which takes the individual as its focal point of interaction, or Gottfredson's (1981) developmental theory of occupational aspirations, which emphasizes the effects of personal factors in career choices, the contextual-developmental approach stresses the mutual embeddedness of individual and context.
The notion of dynamic interaction implies that individuals influence the contexts that influence them and that no one level of analysis in isolation can be considered the "prime mover" of change (Vondracek et al., 1986a). The model also takes account of time, recognising that individuals develop within a particular historical context and, moreover, as they develop they move through a changing set of contexts.

### 3.9.2 Distal and Proximal Systems for Career Choice and Achievement

It has been argued that social class operates as a distal system that relates to children's development indirectly through the proximal context of the family environment. The developing individual is portrayed as being embedded in an interconnected set of contexts, which either have a direct impact, the proximal systems, or an indirect impact, the distal systems, which are often mediated by the more proximal contexts. Proximal systems include the immediate social and material setting in which one is situated. Distal systems include social class, the parents’ workplace, and cultural or societal norms and customs where the individual is not an active participant in the setting.
Two particular models used for demonstrating how the career may be determined are influenced are the "Mediating model" (Figure 3.6) and "Contextual systems model" (Figure 3.7; (Schoon and Parsons, 2002). Both models consider the effects of a changing socio-historical context.

As represented in Figure 3.6, the mediating model suggests social background is mediated via teenage educational achievements and aspirations onto adult occupational attainment. The model postulates that the influence of parental social class (assessed when the child was aged 16) on adult occupational attainment operates via teenage educational achievements and aspirations. It is assumed that aspirations and academic achievement are correlated (Sewell and Hauser, 1975), and that a direct path exists from family social class to occupational attainment mediated by unknown or inconsistent environment factors.

The contextual system model is represented in Figure 3.7 and is an elaboration of the mediating model, providing additional insights into the effects of distal and proximal contexts. Social class of the parents is considered as a distal system that is mediated through the more proximal family context, i.e., the material conditions in the home and the parental aspirations for the teenager. Thus, there are pathways in the diagram from parental social class to material conditions and parental aspirations.

In a comprehensive study of teenage aspirations, Schoon and Parsons (2002) used the mediating and contextual analytical models to examine the processes by which the social structure influenced teenage aspirations and subsequent career achievements. In a longitudinal study of two cohorts twelve years apart, Schoon and Parsons questioned over 17 000 respondents. Schoon and Parsons showed in both cohorts that that parental social class impacted on occupational attainment via educational attainment and aspirations. Furthermore, they suggested that social class operates as a distal system, influencing educational attainment and teenage aspirations via the proximal context in the family environment, especially through the material conditions in the home.
**Figure 3.8 Mediating Model of career development. Source: Schoon and Parson (2002)**

**Figure 3.7 Contextual Systems Model. Source: Schoon and Parsons (2002)**
3.9.3 Constructivism

This recent move has seen the career take on a constructivist approach which emphasises the career narrative as the unit of assessment (Cochran, 1997; Herr, 2001; Brott, 2004; Bujold, 2004). Constructivism proposes that through their experiences individuals cognitively process information and mentally their own world view of careers. Social Constructionism contends that knowledge is sustained by social processes and that knowledge and social action go together (Young and Collin, 2004a; Young and Collin, 2004b). Both views converge to challenge the basis of career extant career (ibid), particularly the there are predictable career stages and sequences; and that individuals can be evaluated objectively against these. In a special issue of The Journal of Vocational Behavior (Young and Collin, 2004a) which presented a broad range of articles devoted to constructivism and social constructionism, Young and Collin concluded their discourse by stating that these fields of study not only enrich the career canon but reframe the canon itself.

3.9.4 Personal Career Theory (PCT)

The central message in the new approaches to career thinking is that everyone has a career and that every one has a career theory. Personal Career Theory (PCT) suggests that the person cannot be detached from the career, they are one in the same and everybody constructs their own view of what their career is. According to Martin (1994, p.205)

Everyone has a theory about careers or work; it can range from invalid, primitive, and incomplete to valid, complex and comprehensive.

The continuing emergence of constructivism as a major force in the career field calls normative developmental assumptions into question (Young and Collin, 2004a; Young and Collin, 2004b). Herr (2001) argued that the term career implies two categories: one that conceptualises career behaviours across the life span (i.e., career theory and concepts) and one that assists career practitioners with interventions to
facilitate career behaviours (i.e., career interventions and practice, assessment, and technology) (Herr, 2001). In this regard, many career concepts speak to professional issues directly because they address the enhancement of services to various populations. A major paradigmatic shift in the careers theory sees a significant move towards embedding diverse voices into the career literature rather than continuing to marginalise them as exceptions to the mainstream career theory (Brott, 2001; Flores et al., 2003; Brott, 2004; Guindon and Richmond, 2005). This move sees diversity (race, gender, ethnicity, sexual orientation, socioeconomic status) as a key contributor to the major careers theories. This has constructivist emergence has sparked a parallel move toward contextual research and practice and literature concerning diverse populations rather than populations in general without attention to diversity (Young and Collin, 1992; Young et al., 1996; Collin, 1998).

3.10 Careers Defined in Context – A Working Definition

From the preceding discourse, careers and the term careers encompass a wide range of sequences and experiences; crossing both social, occupational and psychological boundaries. What is apparent from the literature is that the term career that we use everyday, in unproblematic discourse, can be applied to a whole variety of situations and contexts. This chapter represent a framework of concepts and theories which can be used in synthesis to formulate a working definition. Within the context of this study, careers will be defined as a dynamic sequence of occupational (work related) decisions, actions and consequences over time. This definition embodies seven key aspects:

Dynamic/s -
Sequence -
Occupational -
Decisions -
Actions -
Consequences -
Time -
These seven aspects, acknowledge key components to a career as expanded below:

3.10.1 Dynamic/s

The use of the term dynamic/s, acknowledges a career as an interactive system or process. While the interactions within the process are sometimes positive and complementary, the process is often characterised by competing or conflicting forces, especially psychological, social or political. This is due to the fact that the actors involved (employers and employees) view careers from differing lenses. The lenses are either internally or externally referenced (objective or subjective) based on any unique agenda.

3.10.2 Sequence

The working definition considers a career as the total constellation of psychological, sociological, educational, physical, economic, and chance factors that combine to shape the career of any given individual over the life Span. This refers to a continuous or connected series of interactions/activities. This acknowledges that activities, experiences and work roles connect with each other in predictable or unpredictable ways. Careers unfold in a series of stages (or phases). At each stage/phase, a persons skills, knowledge and interests may change or expand in a number of patterns, in line with their advancing age or social role.

3.10.3 Occupational

A persons positions, roles, activities and experiences feed into or result from a persons employment. This includes paid and unpaid work (including school work experience projects) which shape and direct a persons future employment patterns. This acknowledgement suggest a career is not necessarily confined to one work role.
and does not involve progressive indicators of status such as promotion or increased income.

### 3.10.4 Decisions

The working definition of careers in this study also attempts to acknowledge the cognitive, affective and behavioural processes undertaken by individuals within their employment. Decision making varies in the extent to which rationality is engaged by the individual. Careers can be seen as a process of balancing rationality and irrational cognitive behaviour. Critical social and psychological factors affect and impact upon the individuals decision making process. It is these factors which most clearly determine the achievement of relative career goals.

### 3.10.5 Actions and Consequences

The decisions an individual makes manifest into behaviour and organised activities in order to accomplish an objective. The actions suggested within a career process ultimate effect or influence the process. Each action has a consequence or result which may be positive or negative and subsequently effect future sequences, occupational roles, decisions and actions.

### 3.10.6 Time

The precise interpretation of a career entails that development takes place in the context of time. Although careers are often assessed as isolated snap shots in time, careers operate in a non-spatial continuum, in which events occur in apparently irreversible succession from the past through to the future. This definition sees time as the interval separating these two points on this continuum (past and future). Individuals discern a pattern in past experiences and this provides the basis of future action. All decisions, actions and consequences are viewed holistically based on their historical sequences.
This definition represents a synthesis of examples found in the literature. Traditional studies of careers have tended to approach careers from the perspective of a single academic lens – typically sociology or psychology. While psychologists suggest that "people make careers", sociologists claim "careers make people". However the literature exposes a dearth of cross referencing between these two frames of reference. Both approaches are partial and fragmented and fail to simultaneously capture the extent to which careers are constructed by individuals themselves; and the changing contexts of employability. As such, while this working definition may be used as a reference authority through the initial chapters of the thesis, it is by no means conclusive or intended as a definition of a trade and craft career. As suggested in section 2.2.4, the term can be highly subjective. In order to analyse the trade and craft career, the study must discover: the context in which careers are set; what the actors engaged within the sector refer to; what fundamental properties a trade and craft career has; and how all aspects are related. The specific meanings are explored within this study as well as the holistic processes involved in determining temporal career outcomes.

3.11 Chapter Conclusion

The range of literature presents (in concept at least) the process by which individuals assess personality, environments, environmental influence, expectations and aspirations and, circumscription and compromise. Occupations have been viewed as the individual's attempts to impose their personality on the world of work. This is done by matching one's own picture against pictures of people in occupations that they know. An ideal environment is said to exist for each corresponding personality. A state of congruence exists therefore when the right personality fits the right environment. Personal perceptions of personality and therefore ideal occupational environment would be shaped by certain socio-environmental factors. To this parents and their social class are a significant influence. These influences shape their nature of the individual's occupational goals as determined by the expectations they have and the level of aspirations they harbour. However, socio-structural conditions
emphasise social class and opportunity structures. Individuals may be circumscribed in their choices and have to make compromise to their originally defined choice.

From the range of theories, perspectives, approaches and concepts, it is clear that there is a need for debate on what in fact a career may be or entail. From this review of the literature it can be acknowledged that several well established themes of career theory can still be applied to research, although new and emerging themes will continue to tarnish these established views or build upon them. The blurred boundaries between disciplines and definitions represent both challenges and opportunities for theory development and practice.

This review of the theories, considers that a sequence of decisions and choices confront the individual; and that a series of compromises might be faced in choosing the right environment to match their subjective perceptions. There is considerable overlap between theories; and simultaneous disagreement. A dominating criticism, is of the normative model of careers (which is encouraged) that careers form in particular sequence of rational free choice. This often excludes certain populations from theory but also limits our understanding of the true nature of careers.

Various remedies are being offered to deal with the profusion and confusion related to careers theory and research. An overarching theme that emerges from the literature is of a need (that is currently in process) to a shift to a new, more change-oriented definition of careers and career philosophy. There will be more dialogue between the various disciplines interested in careers and, more studies examining past theories in relation to more diverse populations. The convergence of theory appears to be encouraged, as is the presentation of the individual narrative as a unit of analysis.

Given the history and depth of theory development, organising a complete anthology of what minimally is a hundred year process is daunting at best. Because the topic of careers is addressed by many disciplines this chapter mainly presents a descriptive view of career theory development. The aim of the chapter was to allow the dominant and significant themes as well as unique concepts to emerge from the literature and to summarize them in a concise manner that is meaningful to the process of further analysis. While the working definition presented in section 3.10 provides a
synthesised view of theories and concepts, it is not unique to trade and craft careers themselves. Unique links to the field of construction management are drawn in the proceeding chapter where the topic of trade and craft careers is initially addressed along with a rationale for addressing the unique voice of this populous through a narrative formation of themes.
Chapter 4

Career Pathologies - Conceptual Framework of Career Entrapment

Chapter 2 introduces career development in the context of employee retention and the application of work psychology principles to the construction management field. Chapter 3 discusses the term career and the range of associated arguments are presented. An introduction to the dominant themes within the literature is outlined and a discussion is held with regard to the changing nature of theory practice and experiences. While the previous chapter focused on the traditional and normative career view and, movement to its more recent conceptualisation; this chapter merges the two to discuss the negative inferences of the term career from a practical standpoint.

Effective career planning and management has been suggested as the key to eliciting career satisfaction. This involves a series of ongoing decisions, evaluations of effectiveness of decisions, reassessment and action. As such, by its nature, a career must be regarded as a self-directed project. However, this renders careers as susceptible to innate problems associated with serial decision-making processes experienced in managing projects. In management theory, entrapment is identified as a process by which individuals become locked into ineffective courses of action through the passage of time. This decision-making pathology is confounded by a
process of escalation, which involves active reinvestment in time, money and effort in a vain attempt to justify a previous sub-optimal decision, or achieve previously identified goals.

The general literature on career development provides a conceptual link between career decision making and entrapment. Using the metaphor of a project, this chapter examines career pathologies in relation to entrapment theory. Validation is given to using general notions of project related entrapment to the examination of careers. Consideration is given to the ramifications of entrapment on the individual and psychological mechanisms that act to perpetuate the entrapment process. A further consideration is the impact excluding notions of entrapment from both established career development literature and initiatives in practice.

4.1 A Pragmatic View

As Chapter 3 outlines, for the past 30 years in management practice and theory, careers have generally been seen in terms of progressive mobility of status, and power through organisational hierarchies (Adamson, 1997). As such a general assumption is that career progression, involving such factors as increased status and power, is an exponential function of overall careers satisfaction, or the degree to which the individual values their attachment to that career. From the employee’s perspective, career development encourages lifelong learning, enhances job prospects, motivating employees towards securing their future (Van Maanen and Schein, 1987). A paradoxical argument against established careers theory suggests that through consumption we are urged to shape our lives by the use of our purchasing power and individuals often become obliged to make their lives meaningful by selecting a career that identifies with lifestyle. To make sense of our social existence, individuals exercise their career choice while simultaneously assessing abilities to purchase products and services.

Rose (1989) suggests that from this perspective, no amount of re-jigging of the details of work and conditions of the labour process can transform the basic alienation that
lies at the heart of employment. This re-identifies the wage as the most attractive component of work rather than the pleasure of work, that drives employees (Rose, 1989). As Rose further contends “Work is made up principally, of the elements of obedience, self denial, and deferred gratification – it entails an essential subordination of subjectivity” (Rose, 1989 p.56).

The type of career an individual continues to pursue has implications across their whole life role. Russell (2001) suggested that individuals within the work environment expand and adjust knowledge about themselves through their careers across their pattern of working life. The career can be a means to self-fulfilment leading some authors to view the career as an individual’s life ‘project’ (Rose, 1989; Grey, 1994; Adamson, 1997). But it is the implications of paradox that establishes careers as a focus for analysis across disciplines (i.e. economics, sociology, psychology).

In revisions to earlier works, Holland (1997) suggested that individuals search for ideal environments and that behaviour is determined by the congruence or incongruence with their environment. Holland’s work rested on a key set of assumptions of: Consistency – some pairs of persons and environments are more closely related than others; Differentiation – some pairs are more clearly defined than others; Identity – pairings are identified by a clear and stable picture of goals, interests and talents; Congruence – person and environment must be in harmony. Veritable incongruence occurs when a person is in the wrong environment (i.e. Realistic in Artistic environments); and Calculus – the relationship between pairs can be ordered according to a hexagonal model in which the distances among the pairs are inversely proportional to the theoretical relationship between them.

The assumption of calculus points to incongruence if a person works in a different environment to their personality’s inclination. Hayes (1971) originally points to poor career choices being made due to partial self-concepts; and Ginzberg (1951), Gottfredson (1981), Gati (1993) and Gati et al., (1993) point to inappropriate choices due to compromises. Despite the numerous complementary and paradoxical approaches, comparatively little theory is devoted to the exploration of the reality of employee’s caught up in the malignancy of an unsuitable career (Carson, Carson &
Furthermore, until recently little attention had been devoted to the matter of transition from a failing career to a more suitable one (Louis, 1982; Arnold, 1997). Careers guidance and development interventions often assume stable relations between the individual, the organisation, the industry and prevailing career.

In the counselling psychology field at least various approaches have been preferred for career assistance. The Theory of Career Intervention and Change (TCIC; Martin, 1994) comprises three basic assumptions:

1. Everyone has a theory about careers or work; it can range from invalid, primitive, and incomplete to valid, complex and comprehensive.
2. When a personal career theory (PCT) leads to distress (i.e., fails to be helpful) that person may or may not seek help from non professionals (e.g. family, friends, co-workers etc.), professionals (e.g. counsellors, psychologists, psychiatrists etc.), or impersonal sources (e.g. books, tapes, computerised systems).
3. A successful career intervention is one that helps a person implement his or her career theory, revise it, resolve it, resolve a distressing work situation, or move to a more compatible job.

TCIC comprises many characterisations of contextual and constructivist typologies: recognising the individual narrative and narrative environment. However, in the present context of this study the realities remain far apart. Much of the interventions described (counsellors, therapists etc) might readily be available to managers within a management environment, although the typically male-dominated construction environment would be less supportive of such initiatives.

As the third PCT assumption alludes (Martin, 1994), perceived discrepancy between ideal career progression and reality often leads to career change or movement into a different vocational field. This can be motivated by a number of factors, such as obsolescence, underutilisation, or recognition of an inappropriate career choice (Schlossberg, 1997; Nicholson and West, 1998). Ultimately employee dissatisfaction and poor career development will have a negative affect on employee behaviour and subsequently impact on the wider construction labour market in terms of the labour
workforce and their quality of project delivery. Trade and craft workers will either leave an organisation (ultimately the industry) or engage strategies that become dominant factors in their employment. Cognitive and behavioural coping mechanisms may be employed by dissatisfied individuals. According to Rusbult and Farrell (1982), coping refers to an individual's efforts to either master, eliminate or temper the effects of any work related tension. Rusbult and Farrell (1982) proffer four such coping mechanisms: exit, voice, loyalty, and neglect. Exit, or voluntary turnover, is often the most rational coping strategy. Voluntary turnover would result in sacrificing the interests associated with employment such as; community ties, salary increases, organisational experience and retirement benefits. With the issues of turnover within the industry (cf CITB 2004a; 2004b) this is a recognised problem. However, another facet of retention is when it is negative (Kreisman, 2000).

4.1.1 Voice Coping Mechanisms

Voluntary turnover often results in the sacrificing of interests associated with employment; such as community ties, salary increases, organizational experience, and retirement benefits. Thus, restrictions on the use of exit cause the three remaining strategies to be more feasible options. Voice refers to actively and constructively trying to improve conditions through verbalization of concerns. Such expression may alleviate dissatisfaction either through a catharsis effect; or through motivating positive changes. Voice is used when labour force withdrawal is impossible, career enhancement appears likely, and individuals have a desire to preserve interpersonal relationships with colleagues. Voicing may be done externally (e.g., through trade unions) or internally (to employer or employing organizational channels). The study of Farrell's (1983) exit, loyalty, voice scenarios have received a lot of attention and a great amount of support. In a recent study Colvin et al., (2005) examined the impact of employee voice and compliance mechanisms on voluntary turnover and other workplace behaviours. The results from a unique, nationally representative sample of establishments in the telecommunications industry showed that voice mechanisms in the form of unions and problem-solving groups are associated with significantly reduced quit rates and dismissal rates. In addition, voice mechanisms in the form of self-directed work teams are associated with lower absenteeism and discipline rates.
By contrast, compliance mechanism of strict work rules were associated with both higher quit rates and higher dismissal rates, but lower absenteeism rates. Dismissal rates were said to partly mediate the relationship between employee voice and compliance mechanisms and quit rates (Colvin et al., 2005).

4.1.2 Loyalty Coping Mechanisms

However, the dangers of using voice include the possibility of employer retaliation, loss of reputation, and the emotional costs of being confrontational causing anger to surface. Hence there is the Loyalty mechanism, which involves passively but optimistically waiting for conditions to improve. As loyalty is a passive technique and concerns or often internalised by the individual. This may actively lead to more psychological manifestations as a result of skill atrophy, boredom, long-term career dissatisfaction and social detachment. This may subsequently lead to distress reactions such as, anxiety and/or more medically related conditions of stress, depression and psychological detachment.

4.1.3 Neglect as a Coping Mechanism

Neglect, however, is approached from a more calculative perspective in which individuals are viewed as remaining in an organization for extrinsic rewards and accumulated interests, while contributing minimally to the organisation. A further developed theory is described as Continuance Commitment (Hrebiniak and Alutto, 1972). Meyer and Allen (1984) developed a measure gauging continuance commitment to an organisation. They developed items to tap employees’ loyalty to an organization because of significant costs associated with leaving. This attachment can be defined as the tendency to persist in one’s commitment to an organization because of personal sacrifices associated with leaving and few perceived change alternatives; in a subsequent paper Meyer et al., (1993) concluded that “those with a strong continuance commitment remain because they need to”. This is echoed in Raedeke et al., (2000) suggested that two facets existed of swimming coaches; those that chose to stay, and those that stayed because they felt they had to (see Chapter 2).
4.2 Career Prototypes

A link may be draw to Rusbult and Farrell's (1982) coping mechanisms through Driver's (1979) depiction of Career Prototypes. Driver proffered four prototypes: Linear; Steady State; Spiral; and Transitory (Driver, 1979). Driver has called workers interested in traditional career promotions linear career prototypes. These are long-term achievers seeking to move upward through the ranks of an organisation and/or a vocation.

4.2.1 The Linear Career Concept

The linear pattern represents the traditional, upward-movement view of career success. In management, this concept centres on the notion that the best careers are those in which people can move fastest and farthest up a management ladder to positions of successively greater responsibility and authority. According to Driver, those who subscribe most strongly to the linear career concept are convinced that this is the only desirable way to move in a career. The linear concept tends to have an edge over other views of success. It is deeply rooted in the cultural emphasis societies places on upward mobility, as reflected in rags-to-riches stories.

4.2.2 The Steady State Concept

The steady state career concept differs sharply from the linear concept. From this perspective, the best career is one involving a lifelong commitment to some occupational field or specialty. Once the career choice has been made, the individual focuses on further developing and refining his or her knowledge and skills within that specialty. Relating to the construction industry upward movement, would occurs within three-narrow levels of progression from apprentice to tradesman to supervisor. In management, we might find a progression in which an individual begins as a staff analyst in some specialty area, then moves up to become a senior analyst, and finally takes a position as vice-president in charge of her or his specialty function for the organisation.
Those who view their careers in terms of the steady state, usually identify very personally with their chosen field of work. The occupational specialty becomes a central component of the person's self-identity. From this career perspective, a fast linear career path up the management ladder is frowned upon as it moves the individual further away from substantive, technical work. Driver (1997) suggested this becomes a self-alienating experience.

4.2.3 The Spiral Career Concept

Despite their obvious differences, both the linear and the steady state career concepts describe rather traditional perspectives on career success. The spiral career concept describes a distinctly less traditional pattern. In this pattern, the best career path is one in which a person makes periodic major moves across occupational areas, specialty areas, or disciplines. Ideally, these moves come every seven to ten years. The spiral career concept captures in career terms the essence of the seven-year itch. A seven-year span seems to permit individuals sufficient time to develop in-depth competence-in many fields, before moving on to new fields.

Even though the spiral concept places emphasis on lateral movement and change, the progression across fields is orderly. The ideal move is seen as one in which a person moves from one area (e.g., engineering or research) into an allied area (e.g., product development). The key here is that the new field draws upon knowledge and skills developed in the old field, and at the same time throws open the door to the development of an entirely new set of knowledge and skills.

4.2.4 The Transitory Career Concept

Of the four basic career concepts, the transitory concept is the least traditional. As a pattern, it can be described as one of consistent inconsistency. From the transitory perspective, the ideal career is one in which a person moves every three to five years from one field or job to a very different or, preferably, entirely unrelated field or job. According to Driver, people who pursue a transitory career pattern often do not think of themselves as actually having careers.
Table 4.1 Darr's "Career Orientation Model"

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Definition</th>
<th>Personality Descriptor</th>
<th>Career Strategy</th>
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<tr>
<td>Getting Ahead</td>
<td>These individuals are interested in climbing the corporate ladder. They are turned on by status, money, and power. They are fiercely competitive. While many individuals hold this orientation in the earlier stages of their careers, few are willing to make the personal sacrifices necessary to be successful at it. Assessment centres are considered by Darr to be a particularly appropriate organization career development/management intervention for identifying getting ahead individuals. Holders of this orientation are perhaps the easiest to manage.</td>
<td>• Want to be upwardly mobile, member of inner circle</td>
<td>• Put your job first</td>
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<td></td>
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<td>• Like lots of responsibility &amp; authority</td>
<td>• Have a career plan &amp; move quickly</td>
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<td></td>
<td></td>
<td>• Like to be very highly rewarded based on results</td>
<td>• Get a sponsor</td>
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<td></td>
<td></td>
<td>• Crave challenge</td>
<td>• Punch the right tickets</td>
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<td></td>
<td>Holders are willing to exchange loyalty to the organization for a sense of belonging. They are the preservers of the company's collective history. These workers usually take a &quot;local,&quot; as opposed to &quot;cosmopolitan,&quot; view. While getting secure types are interested in advancing in their organizations, they are often more patient and willing to wait for promotions than the get ahead types. The getting secure orientation has the fewest fallback orientations.</td>
<td>• Are very loyal to the company--&quot;married to the company&quot;</td>
<td>• Run on challenge</td>
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<td>Persons with this orientation want the freedom to do things their way. They are hard working, creative, and set high standards for themselves. They have little interest in climbing the corporate ladder. They are more interested in finding new and better ways of doing things than adhering to traditional practices.</td>
<td>• Want to move up but are willing to take their turn</td>
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<td></td>
<td></td>
<td>• Willing to do about any job to help the organization</td>
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<td></td>
<td></td>
<td>• Highly value job security</td>
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<td>Getting Free</td>
<td></td>
<td>• Find the right company</td>
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<td></td>
<td></td>
<td>• Study the company's culture &amp; fit in</td>
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<td></td>
<td></td>
<td>• Put organization's needs first</td>
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<td></td>
<td></td>
<td>• Become member of inner circle</td>
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<td></td>
<td></td>
<td>• Build up social debts</td>
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<tr>
<td>Getting Balanced</td>
<td>This is perhaps the newest of the orientations to emerge in the American culture. While these individuals hold this orientation in the earlier stages of their careers, few are willing to make the personal sacrifices necessary to be successful at it. Assessment centres are considered by Darr to be a particularly appropriate organization career development/management intervention for identifying getting ahead individuals. Holders of this orientation are perhaps the easiest to manage.</td>
<td>• Tough streak of Independence</td>
<td>• Pay your dues &amp; follow the rules</td>
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<td></td>
<td></td>
<td>• Hate conformity &amp; compliance</td>
<td>• Get a sponsor</td>
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<td></td>
<td></td>
<td>• Hard to get to know, aloof</td>
<td>• Keep your career strategy to yourself</td>
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<tr>
<td></td>
<td></td>
<td>• Like to carve out their little niche in which they possess irreplaceable expertise</td>
<td>• Resist tempting job assignments</td>
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<td>Getting High</td>
<td>In this more than any other orientation holders define career success in terms of the &quot;content,&quot; not the &quot;context&quot; of work. They look to the work itself as a major source of career satisfaction. They may be highly specialized in their fields. They may also love adventure or be highly successful entrepreneurs. Some may approach their work as a religious calling.</td>
<td>• Camouflage their orientation</td>
<td>• Pay your dues</td>
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<td></td>
<td></td>
<td>• Value having a personal life and a career</td>
<td>• Be ready to seize opportunities</td>
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<td></td>
<td></td>
<td>• Hard working and willing to pitch in during a crisis</td>
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<td></td>
<td></td>
<td>• Want to &quot;smell the roses&quot;</td>
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According to Driver, the passage of time clarifies and modifies values, and as they change, an individual may become dissatisfied with his or her chosen career, but may decide that he or she has too much invested to quit. Thus, a career becomes entrapping when investments, initially perceived as helpful to career development, are construed as irretrievable expenses. Psychological attachments and obligations also increase the cost of career change (Carson and Carson, 1997). Individuals may have an emotional stake in co-worker relationships, an increasingly salient issue because of the use of work teams. The intimacy of a mentor-protege relationship may also be difficult to give up. Individuals who have pursued prestigious vocations such as law or medicine may remain despite a poor fit because of the associated compensation, power and respect. While these are less likely to Spirals and transients, they are distinct possibilities with steady state and linear prototypes (compare also Darr's "Career orientation Model" Table 4.1).

4.2.5 Psychological Effects of Burnout

In Arthur Miller's fictional 'Death of a Salesman' (1949) the main protagonist is portrayed as a desperate character who fails to find an attachment to his career. Disillusioned by his work and reasons for working this character eventually commits suicide as the ultimate release. Carson and Carson, (1997) comment on this character as having parodies in reality and suggest that those grim and futile situations are all too real in organisations. The psychological symptoms of such occurrences have been examined in relation to occupational burnout (Pines and Kafry, 1978), emotional exhaustion and chronic stress (Edelwich and Brodsky, 1980; Cox et al., 1993; Pines, 1993). Individual cases of psychological trauma aside, outcomes from an organisational perspective are often significant, impacting on performance (Low et al, 2001) efficiency, productivity and ultimately labour turnover (Weisberg, 1994). The problem will be abjectly compounded if despite being disillusioned, the individual is unable to set aside the career in order to find a more suitable one, and becomes virtually trapped.
4.3 Background

For many years, organisational behaviourists, social psychologists and more recently management specialists, have studied phenomenon where decision makers - individuals or organisations - persist in their commitment to an ineffective course of action (Brockner and Rubin, 1985; Wilson and Zhang, 1995; Shapira, 1997; Drummond, 1997; Drummond and Chell, 2001). These phenomenon have variously been identified as ‘Entrapment’ (Brockner and Rubin, 1985 cited Brockner et al., 1986), which in turn is linked to ‘Escalation’, which is the active reinvestment in a failing course action (Staw, 1976; Staw and Ross, 1986). As well as financial investments and marriages, Staw and Ross (1986) suggested that such situations occur in careers, in which the decision maker has a difficult choice between greater efforts into the present line of behaviour, versus seeking a new alternative (p.228). Osherson (1980) suggested that such individuals become ‘simply entrenched in their careers, unable or not wanting to pursue other options’ (Carson et al., 1995). However, analysis of entrapment and the linked process of escalation in career roles remain limited in terms of theoretical and empirical assessment.

4.4 Escalation

Escalation in general terms, may be defined as 'persistence and reinvestment in a course of action beyond an economically defensible point' (Staw and Ross, 1986 p.229). Figure 4.1 describes a three-phase model of escalation in relation to a project. The first phase is dominated by the economics of the project, with the decision to begin a course of action made largely on the basis of the anticipation of economic benefits. However, when questionable or negative results are received (at phase two), the decision to persist is based not just on project economics, but also on psychological and social determinants. Assuming that psychological and social forces are strong enough to out weigh any negative economic forecasts, further investment is likely. If this additional investment does not turn the situation around and further negative results are received (at stage three), withdrawal tendencies may be heightened. At this advanced stage in the escalation process any withdrawal tendencies superceded by forces for persistence (Staw and Ross, 1986 p.233).
PHASE 1

Perceived Project Economics

Decision to begin a course of action

Action

Questionable or negative results

PHASE 2

Perceived project economics

Decision to persist

Action

Highly negative results

PHASE 3

Perceived project economics

Decision to persist

Highly negative results

Psychological and social forces for persistence

Organisational and contextual forces for persistence

Figure 4.1 A three-stage model of the escalation process, Source: Adapted from Staw and Ross (1986). 'Understanding Behaviour in Escalation Situations' in Staw (1995) Psychological Dimensions of Organisational Behaviour: 2nd Edition
4.5 Terms of Reference

For the most part, the literature on entrapment remains largely experimental (Brockner et al., 1986; Drummond, 1997; Drummond and Chell, 2001), and also largely inconsistent (Wilson and Zhang, 1995). Therefore, any subsequent theoretical development of career entrapment itself will remain experimental. A fundamental issue in the use of the entrapment terms is of confusion that remains with definitions of entrapment, which becomes critical when considering entrapment in empirical terms. For example, Staw and Ross (1986) adopt the use of the term’s escalation and entrapment to depict similar scenarios. However, the literature on escalation and entrapment (Drummond, 1997; Drummond and Chell, 2001; Main and Rambo, 1998; Brockner et al., 1986; Wilson and Zhang, 1995) has a tendency to apparently confuse the two terms, as it often punctuates the terms escalation and entrapment (Drummond, 1997; Drummond and Chell, 2001), or use the two terms in collaboration (Wilson and Zhang, 1995). While in Drummond and Chell (2001), one term is used intermittently to describe the other, Wilson and Zhang collaborate the two terms using i.e. entrapment / escalation.

Drummond and Chell (2001) further offer the term entrapment as a dimension of escalation. Drummond and Chell suggest that escalation is a two dimensional element inclusive of: unwarranted reinvestment; and entrapment. However, Brockner et al., (1986) used escalation as a definitive aspect of entrapment itself. Brockner et al., define entrapment as ‘The process by which decision makers escalate their commitment to an ineffective course of action’ (p. 109), suggesting the process of escalation as a facet of entrapment. They presented the results of two laboratory experiments that explored the effect of entrapment on. By manipulating feedback of a decision making task to participants, they determined that when the allocation of resources to a ineffective course of action had implications on the individual’s decision making abilities, commitment became greater as participants would further reinvest their commitment to their initial decision. The experiment showed that entrapment was greater when subjects believed that their ineffective performance reflected their self-identity, than when it did not. The binding condition was
considered as entrapment, and the process by which they became entrapped was considered escalation (Brockner et al., 1986 pp. 109 – 122).

On the face of it, this definition of entrapment appears feasible as it appears to offer causal effect as to the nature of entrapment, namely, active reinvestment in a sub optimal action, would lead to an individual becoming entrapped.

4.5.1 Mechanisms of Entrapment

In decision-making terms, entrapment represents unwarranted commitment to a previous course of action or behaviour. Cited in Brockner et al., (1986) and based on previous studies, Staw (1982) develops a four-fold categorisation of the variables affecting the commitment of individuals to their behaviour. The categories are said to refer to the more general notion of ‘ego involvement’ i.e. individuals attaching psychological importance to their behaviour. These categories include the following:

- Responsibility for the action; individuals generally feel more committed to those decisions that involved their participation.
- Responsibility for the consequences of the action; individuals commitment to a behaviour is greater when they are held accountable for the outcomes.
- The salience of the action; individuals feel more committed to behaviours that are performed publicly rather than privately.

The consequences of the action; the more irrevocable the consequences are deemed to be at the time the behaviour is performed, the greater is the individuals commitment to the behaviour (Brockner et al., 1986 p.110).

The suggestion is that because a course of action has become inextricably linked to an individual, that action persists. This leads to a fundamental commitment, virtually at all costs to that course of action. Consequently, the decision-maker may be especially reluctant to depart from their prior course of action, regardless of indicators suggesting that a particular course of action is ineffectual. Due to a fear of any subsequent ramifications, personal, financial, social or perceived, actions persist.
(Brockner et al., 1986). In such cases, commitment would be in line with continuance of commitment rather than value commitment.

4.5.2 Side Bets

Using two contrasting case studies, Drummond and Chell (2001), explore entrapment in career decisions in relation to Becker (1960) ‘Side Bets Theory’. Similar in comparison to binding actions, ‘Side Bets’ are suggested as extraneous interests, which may become attached to a particular course of action, and impact on any subsequent decision making processes. Two case studies were used to examine Becker’s theory in order to follow a guiding principle that although the factors that may bind individuals may be situational different, generically they would be the same. In relation to careers, a person may stake something of personal value, although relatively unrelated to that career, on being consistent if that career is continuously pursued. Becker suggests that people seldom change jobs or careers in accordance with the economics of a market due to such side bets, and that in such cases ‘The consequences of inconsistency’ are perceived to be ‘so expensive that inconsistency… is no longer a feasible alternative’ (Becker, 1960 cited Drummond and Chell, 2001). Drummond and Chell concluded that while there is support for Beckers’ theory, the question remains whether the actual events or whether individuals largely entrap themselves. While study and discussion in Drummond and Chell (2001) is important and was used extensively as a primer in uncovering many of the themes in the present study, the study and discussion make the assumption that individuals have sole charge of their career choice, and largely ignores factors influencing career decisions.

The present research questions whether the type of professional disengagement described in the entrapment literature would be found in the context of trade and craft careers.
4.5.3 **Entrapment in Decision making**

Describing general notions of entrapment, the literature depicts several psychological mechanisms, which serve to compound the problem and confound possible remedies. These are highlighted as: over-optimism/illusion of control, information processing errors, self-justification, framing, and sunk costs (Staw and Ross, 1986; Brockner and Rubin 1985; Main and Rambo, 1998).

4.5.4 **Over Optimism/Illusion of Control**

All too often, individuals and organisations uncritically assume that the benefits of a project are realistic, leading to inflated expectations for a project, and presume that an element of control may be imposed on a situation. Applied to a career project, assessments of fulfilment, achievement or successes are psychological, internal and subjective. These are based on perceived; talents and abilities; motives and needs; attitudes and values (Schein, 1978). However, the individual may have unrealistic expectations of their abilities in a particular role. When the subjective perceptions are not reciprocated in the rewards of the external and objective environment, incongruence may be seen to exist and the career may be seen by the individual as sub-optimal. As a result occupational moves may take place (Collin, 1998). Failure to recognise incongruence, or failure to act on unsuitability to a career role, may result in atrophy, escalating disillusionment and feelings of entrapment (Cooper, 1999). Although the individual may remain in that role expecting perceived rewards to manifest at some future point.

4.5.5 **Information Processing Errors**

According to Main and Rambo (1998), a particular characteristic of entrapment scenarios are the tendencies an individual may have on influencing the information selected for consideration before a decision is made. Studies suggest that in many cases individuals may renounce the self-management element in career choice, relinquishing responsibility to the employing organisation (Preston and Biddle, 1994).
As such the individual becomes an apathetic observer. Although an individual may continue to move through an organisational ladder this may be used as an indication of satisfaction. According to McKenna (1994) decision makers become more conservative as the complexity of the initial decision increases and use bias towards particular sets of information in order to rationalise the situation and invoke satisfaction with results (McKenna, 1994 p. 234).

4.5.6 Self-Justification

Staw’s (1976) self-justification theory suggests that individuals responsible for making a decision tend to commit more resources to action in order to justify their initial investment decision (Main and Rambo, 1998). In a careers context the individual may commit more effort to further study or actively seek promotion.

4.5.7 Framing

Main and Rambo (1998) suggest that the perspective from which a decision is framed or perceived can lead to entrapment. The perceived social cost of failure, leads to the individual to increase their risk, described as the ‘framing effect’ (Staw and Ross, 1986; Drummond and Chell, 2001).

4.5.8 Sunk Costs

Although other characteristics of entrapment such as framing and self-justification are both concerned with psychological effects (Staw, 1997), ‘sunk costs’ relate more to – although not exclusive of – tangible expenditure. Northcraft and Wolfe (1984) cited Brockner et al., (1986) describe the ‘sunk cost effect’ as the commitment individuals may have to continuing in persisting in a course of action based on a significant previous investment. Main and Rambo (1998) suggested that sunk costs tend to increase the likelihood of entrapment. The appeal of sunk costs may partly come from the need for self-justification if managers are arguing about not ‘wasting money already spent’ (Main and Rambo, 1998).
In such situations, individuals often believe they will save money or avoid losses by considering sunk costs. The misperception exist that when there is the possibility of loses, there is a relationship between continued investment, in the hope of avoiding loss, and the originally desired outcome of the decision may be achieved at some future point. Stated simply entrapment occurs due to previous investment. In a careers context many occupations require extensive training, effort and expense (Carroll et al., 1992; Adamson et al., 1996; Drummond and Chell, 2001), individuals may continue in order to realise the expected outcomes of their initial choice, whether promotion or innate career satisfaction.

4.6 Careers as Projects

Entrapment and contributing processes may be experienced in projects involving fairly extensive planning as well as constant reassessment of direction (Staw and Ross, 1986; Main and Rambo, 1998). The decision to continue with a project may be reassessed a number of times before a product/process is finally developed and put into action. Once the project is underway, the decision to continue may need to be reassessed periodically to judge the effectiveness and the benefits actually realised (Main and Rambo, 1998). Knowing when to quit from an unproductive project or activity may present a major obstacle to future progression of any kind. It is this dimension of the decision-making processes that warrants continued interest, and would require further analysis in the context of careers.

According to Rose (1989) the career has the ‘powerful potential to shape and direct lives’ (Rose, 1989 p.56). Rose (1989, p.115) further suggests:

The citizen, in work as much as outside it, is engaged in a project to shape his or her life as an autonomous individual driven by motives of self - fulfilment.

Supporting this Grey (1994) comments on the career as ‘a project of the self’ and Adamson (1997) further suggests the career as a ‘vehicle for the realisation of self’. In this analysis, careers can be viewed as a continuous developmental process or multiphase project; involving serial decisions, subsequent adjustment and
modifications (Rose, 1989; Grey, 1994; Adamson, 1987). Roberts (1975) suggests that this process has the potential to continue indefinitely or until a career that matches the individual's unique characteristics or aspirations are found. However, these modifications do not always materialise as a natural corollary of the work environment. Applying theories of entrapment in the careers context; due to the ambiguous nature of future, emotional investment, training costs, income revenue projections and of feedback from past decisions, many individuals may continue along a career path even when its future prospects appear dismal (Carson and Carson, 1997; Drummond and Chell, 2001).

4.7 Careers/Career Development Literature

As careers development theories are based in the field of psychology, they tend to be built on 'Self concept theories' (Super, 1957), which are based on the fundamental assumption that people attempt to implement knowledge of themselves in the type of work they choose. Vocational adjustment or satisfaction would be determined by the degree to which job and self are compatible (Speakman, 1980; Betz, 1994; Blustein, 1997). By studying individual personalities and their subsequent adjustments across occupational roles, vocational psychologists have focused on the outcome of matching personalities to careers (Holland, 1973); the principal interest from an organisational perspective being the assessment of suitability an individual may have to the work role. This is subsequently used as a predictive indicator as to ideal personality types for particular organisational roles (Adamson, 1997) or placing 'square pegs in square holes' (Roberts, 1975 p.134; Arnold, 1997, p.127). This literature reports a decided link between identity and careers (Grey, 1984; Adamson, 1997), although this proves innately problematic as both are separately constructed (Law, Meijers and Wijers, 2002). A further issue is the fact that such theories generally ignore the extent to which the individual's social environment dictates or influences the initial career choices made (Gottfredson, 1981; 1985; Betz, 1994). A fundamental question here is whether social and organisational conditions affect inappropriate career choices that subsequently prove hard to rectify; and whether skill
shortages lead social and organisational careers development mechanisms to shape pegs to fit the available square holes.

As such, and by contrast to the psychological perspective, the social science perspectives conclude that careers reflect the relationship between individual, society and employing organisation, how the individual is shaped by his/her social environment (Gottfredson, 1981; 1985) and how the relationship transpires over time (Arthur et al, 1995). Using a broad sociological framework Gottfredson (1981) pointed out that factors such as gender and desired prestige often became a determinant of career choices. She outlined how many career choices are stereotyped on the basis of masculinity-femininity or desired social standing and that people often settle for less than optimal careers. While a focus of this study was mainly on the compromise that are made in vocational development and not exclusively on academic attainment, it was reported that interest types and status could account for subsequent levels of educational attainment and varying income levels. Of interest would be the degree the social environment confounds career re-adjustments in light of a failed or inappropriate initial career choice.

4.8 Career Satisfaction

Job satisfaction is an important attribute which organisations desire of their employees (Dunnette, 1976). Much of the traditional research in this area has been based on the explicit assumptions that job satisfaction is a potential determinant of absenteeism, turnover, in-role job performance and extra-role behaviours; and also that the primary antecedents of job attitudes are within management's ability to influence.

A sizeable amount of work in the job satisfaction literature has been devoted to developing conceptual and operational definitions of the job satisfaction construct; including overall or general job satisfaction and satisfaction with facets of jobs such as the work itself, co-workers, supervision, pay, working conditions, company policies and procedures and opportunities for promotion (Lofquist and Dawis, 1969;
The general agreement is that job satisfaction is an affective reaction to a job that results from the comparison of actual outcomes with those that are desired. Lofquist and Dawis (1969, p. 53) noted that satisfaction is "a function of the correspondence between the reinforcer system of the work environment and the individual's needs". Locke (1976, p. 1300) stated that job satisfaction can be viewed as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experience". Locke and Henne (1986, p. 21) wrote that "the achievement of one's job values in the work situation results in the pleasurable emotional state known as job satisfaction" and Porter et al., (1975, pp. 53-54) characterised satisfaction as a feeling about a job that "is determined by the difference between the amount of some valued outcome that a person receives and the amount of outcome he (sic) feels he should receive".

One of the arguments often brought against theories of job satisfaction is that they take little account of differences between people. What is wanted by one group of individuals in terms of a job is often different from what is wanted by another group. Personal correlates of job satisfaction have become a recent focus of at least some researchers' interest (Hickson and Oshagbemi, 1999). While there are numerous publications on job satisfaction, and these continue to grow, there has been little research on the job satisfaction of trade and craft workers. As suggested in section 2.6.2, the little interest in worker satisfaction has been restricted to the motivational aspects of employee productivity.

In light of society and organisational influence, the career can be seen as operating on two broad dimensional scales, the 'Internal' and the 'External' (Schein, 1978) or the 'Subjective' and 'Objective' (Collins, 1986) bringing an element of ambiguity to career focus and orientation. A career can then be seen as the dialectic materialisms of individual's own perceptions of their career (Internal/Subjective) and the organisational or labour market view (External/Subjective).

Arnold (1997) examined the career concept in terms of its subjective elements in that "it is partly the product of our own ways of viewing the world" (Arnold, 1997 p.16). The subjective element of careers suggests that careers may be viewed in terms of a personal possession, implying careers may in some way be managed and that the way
a career unfolds may be at the discretion of the individual (Stewart and Knowles, 1990), hence the concept of career management. Effective career management involving successful planning is suggested as a guide to eliciting satisfaction. Lee (2002) examined the career goals and career management strategies used by IT professionals with regard to the career management. The results indicate that computer professionals who plan, manage and strategize their careers are professionally progressive. They also experience greater career satisfaction. The correlation coefficients show that career planning and management is positively correlated with career strategy. Career strategy is also positively correlated with professional enhancement and career satisfaction. However, the assumption is made, as with much of the literature, that those individuals are engaged in the career path of optimal choice. Cohen (2003) would contend that career satisfaction and stability is obtained only when there is a correspondence between the vocation and the meaning and opportunities for authentic career decisions and management of career that the vocation may provide. Acknowledging the objective or external element of the career is to acknowledge that career satisfaction would be beyond the remit of individual effort.

Adamson et al., 1998) calls for a continual re-examining and re-conceptualising of current understanding of the notions of career, career development and career management, highlighting the rate of change in the general nature of careers. An emphasis is placed on individual ownership of a career; and continuous construction and maintenance of a healthy self-concept. This would be in light of changing strengths and weaknesses, shifting beliefs and attitudes, emotions and future aspirations (Adamson et al., 1998). This calls for a constant reassessment of one’s career choice and requires making the necessary adjustments in light of new knowledge (Cohen, 2003). The prescriptive remedy for resolving situations where a career appears unsuitable is ‘Exit’ (Rusbult and Farrell, 1982), which involves discontinuance along that particular career path. However, once an individual has embarked along a particular career path, which subsequently proves unattractive or unsuitable, it becomes difficult to make the transition into another (Speakman, 1980). At this point, career stability may become viewed more in terms of economic tangibles, such as financial reward, rather than the intangibilities of emotions and attitudes.
4.9 Commitment

It becomes important to the analysis of entrapment in careers to assess reasons for individuals continuing along a career path in terms of commitment. Narrowly speaking in a careers context, commitment may be defined as an individual's continued attachment to an industry, organisation or occupation (Blau, 1985). However, a narrow definition would suggest that an individual remaining within an organisation or occupation would retain ultimate efficiency within the role. Lack of commitment to organisational goals has been attributed towards high costs and poor services (Sherwin, 1972). Commitment can be seen from two perspectives: 'continuance of commitment' described as mere acceptance of organisational values, acting purely in terms of rewards and punishments; and 'value commitment' which involves active extension of extra effort (Raju and Srivastava, 1994).

From a commitment perspective, Raedeke et al., (2000) conducted a survey of 295 swimming coaches in order to assess the theoretical determinants of 'burnout' to feelings of entrapment. Burnout was considered the 'psychological syndrome of emotional exhaustion'. Feelings of entrapment were considered to occur when swimming coaches did not really want to maintain involvement, but continued for reasons other than enjoyment of the sport. Entrapment was seen to occur when coaches: perceived a lack of alternatives to coaching; believed they had invested too much in training to quit; or there was an expectancy of others for them to continue coaching.

However, feelings of entrapment refer particularly to medical conditions. Burnout has been associated with deep psychological trauma (Weisberg, 1994; Low et al., 2001). Of the sample used in the study, a fairly favourable outlook on their careers was maintained; and subsequently low levels of burnout were detected. The assertion in Raedeke et al., (2000) would suggest that feelings of entrapment would be conscious to the individual in order for burnout to be significant. The literature on entrapment (Staw and Ross, 1986; Brockner et al., 1986; Main and Rambo, 1998), suggests that subjects of entrapment may not be aware of its occurrence or choose alternative evaluations of situations. Individuals would often show an inability to
systematically relate the effects of entrapment to their decision making and maintain a continuance of commitment. One of the objectives of further study would be to assess whether respondents possess the ability to relate entrapment to their circumstances, if they were to consider their career as sub-optimal.

4.10 Career Entrenchment

A definitive link between extant theories of career development and the literature on entrapment exists by way of the limited literature on career entrenchment. Career entrenchment is defined as a three-dimensional construct career investment; emotional cost; and limitedness of career alternatives. Career entrenchment is the tendency to stay in a vocation because of investment, psychological preservation, and a perception that there are few career opportunities (Carson et al., 1995).

However, the three proposed dimensions of career entrenchment form an overlapping adjustment of the characteristics alluded to in the entrapment literature. Similar to Drummond and Chell (2001) career investment has as its basis with Becker’s (1960), Side Bets Theory. As with the relative tangibility of side bets (Becker, 1960) and sunk costs (Staw, 1986), career investment relates more to such quantifiable items as time, money and effort in developing a career (Carson et al., 1995; Blau, 2001). Further linking to side bets, although from a psychological perspective, emotional cost relates more specifically to less tangible social-psychological attachments such as; loss of status, detachment from professional associations and breaking of interpersonal ties with colleagues (Becker, 1960; Carson, Carson and Bedeian, 1995).

Carson et al., (1995) suggestion of limited career alternatives as a third dimension to career entrenchment provides support for previous discussions of framing and information processing biases. It is suggested that this dimension relates to the individual’s attention being diverted from scanning the external environment for suitable alternatives, due to extended effort in maintaining the current career. In this respect, individuals experience a reconstruction of perceived career options.
However, rather than the three dimensions of Carson et al., model, Blau (2001) contended career or occupational entrenchment may be better represented as a two way dimensional construct namely: accumulated costs; and limited alternatives. Results showed that commitment, job satisfaction, job involvement and organisational support were more strongly correlated to accumulated costs than limited alternatives, while externality or locus of control and lower work ethic were more strongly related to limited alternatives than accumulated costs. Blau pointed out that Investment model research (such as Farrell and Rusbult, 1983; 1987), ‘time and money’ and ‘emotions’, both constitute investment/resources and that their only weak correlation evidence for demonstrating the discriminant validity between the two (Blau, 2001).

By examining organisational commitment, career continuance and job satisfaction amongst academic librarians, Lanier et al., (1997) developed a two by two matrix, using measurements of job satisfaction (Brayfield and Rothe, 1951) and measures of continuance of employment (Meyer and Allen, 1984). Lanier et al., (1997) developed four workplace profiles; Mobile Contents; Immobile Contents; Immobile Discontents; Mobile Discontents. The results showed that amongst academic librarians there existed a group of individuals (Immobile Discontents) who displayed low organisational and career commitment, job involvement levels and career planning. They concluded that such employees displayed many of the entrapment characteristics of career entrenchment highlighted in previous investigations by Carson and Carson. The literature depicts such immobile discontents as a burden on the organisation (Carson and Carson, 1997; Lanier et al., 1997), although to the individual it may be symptomatic of more medical problems such as the psychological syndrome of emotional exhaustion (Raedeke, Granzyk and Warren, 2000).

4.11 Chapter Conclusion

The notion of becoming ‘locked into’ particular career choices has led to an evaluation of a phenomena regarded in this review as ‘Career Entrapment’. Career Entrapment can be defined as the occurrence of inconsistencies with the subjective
and objective career, perpetuated by re-investment or escalation along sub-optimal efficiency paths.

The literature on entrapment and escalation generally views entrapment scenarios as being experienced in projects or situations that require continued assessment, adjustment and re-evaluation. Fundamentally these characteristics may be related to careers, as they also require effective planning and management in order to attain significant goals. As such, it may be plausible to assume that entrapment may be experienced in careers. In viewing careers as a project, justification may be granted to applying entrapment theory to careers. Career entrenchment provides a theoretical link between careers and entrapment theories. However, the models have not been subjected to any comparative scrutiny, further examination would be required if any theoretical differences exist between entrenchment and entrapment models.
Research Design and Methodology

From the preceding chapters (Chapters 2, 3 and 4) conclusions may be drawn that the subject of careers, while vastly studied, is under-researched and there are still great contributions to be made to the research community. This is particularly true when researching populations who have received little research attention. Researching trade and craft careers, whilst simultaneously explaining the interplay of factors, is highly problematic as careers are both objectively and subjectively derived. The subject matter of this chapter is marked out by two particular aspects of the research: a focus on the particular type of data gathered; and integral to this, issues of method which the types of data raise. This chapter presents the research design and methodology adopted to meet the aims and objectives set out in Chapter 1. The aim and objectives of the research are initially restated along with the devised and the methodology used to explore the research questions.

5.1 Clarifying Research Questions, Aims and Objectives

This research is conducted through a range of procedures and approaches via: research questions; an aim; and a set of research objectives.
5.1.1 The Research Question

As outlined in section 1.6, the major research question directing the research is that given the prevalence of anecdotal suggestions: *What is the nature of craft workers' career dynamics and are there opportunities available to such workers to meet their expectations and aspirations?* This question is very broad and so may be broken down into subsets of questions (Appendix A).

5.1.2 Negating a Research Hypothesis

The research did not use any overarching hypothesis or sets of hypotheses. Several authors suggest that qualitatively based research seldom accords with the use of predefined hypothesis (Popper, 1992; Longino, 1993; Atkinson and Hammersley, 1994; Hammersley and Atkinson, 1995; Maxwell, 1996; Holliday, 2002). As Popper (1992 p.25) suggests "only when certain events recur in accordance with rules and regularities, as is the case with repeatable experiments, can our observations be tested."

The weakness of using hypothesis is that qualitative research does not require a demand that theories "understand, predict or control events" (Denzin and Lincoln, 2000 p. 58). Although research hypothesis are not wholly inappropriate to qualitative research, their inappropriate application is partly a matter of applying "quantitative standards to qualitative research" (Denzin and Lincoln, 2000). Maxwell (1996) suggested that the distinction between hypotheses in qualitative research is that they are typically formulated after the research has been analysed (ibid). The widespread view of hypothesis formulation is that they are framed in advance of data collection. If the hypothesis is framed after seeing the data the assumption of the statistical test is violated and the research becomes a fishing expedition to find what seem to be significant relationships. Maxwell further suggested that the main risk of explicitly formulating hypothesis in qualitative research is that they can act as blinders (Maxwell, 1996 pp. 69–70), or as Longino (1993) suggested they may constrain the formation of social knowledge. The aim of qualitative research is often in "producing" rather than testing hypothesis (Holliday, 2002 p.35).
This was based on six related premises namely: 1) exploring the subjective careers of the trade and craft operatives requires data to be collected from the individual frame of reference (Dainty, 1998; Pepper, 2005); 2) it is unlikely that identical issues would emerge from any two informants simultaneously (Dainty, 1998); therefore 3) a flexible data collection approach would be necessary, requiring various methods of data analysis (Routledge, 1983; Collin, 1984a); 4) hypothesis would need to be continually modified for differing informants and data collection approaches (Dainty, 1998; Pepper, 2005); 5) any modification in hypothesis will have the potential to invalidate the research (Popper, 1992); and 6) the research is essentially an ethnographic study. It is normally thought inappropriate to use hypothesis in ethnography; which is seen as exploring the nature of particular social phenomena rather than setting out to test hypotheses about them (Atkinson and Hammersley, 1994; Holliday, 2002). Hammersley and Atkinson (1983; 1995) argue that all perspectives and cultures are rational and provide all the structure necessary for exploration with little need for hypothesis or hypothesis testing.

5.2 The Aims of the Study

The aim of this research was to understand trade and craft career dynamics from the perspective of individual workers. The industry is rife with anecdotes about trade and craft workers, yet little evidence exists to support often outlandish assumptions. One particular anecdote, is a suggestion that the majority of trade and craft workers are only interested in financial rewards and do not consider long-term implications of career choice such as career development. The construction industry relies on carefully managed activities within the project delivery process (Langford et al., 1995; Olomolaiye et al., 1998; Loosemore et al., 2003a; Loosemore et al., 2003b). Trade and craft careers are a categorical component of project delivery. Not understanding the factors that contribute to forming the careers, leads to a process of managing by ambiguity. By comparing the influences, preferences, constraints and opportunities of developing careers at trade and craft level, the research aims to supersede anecdotal assumptions and lay empirical foundations for further research.
Further research may draw on conclusions; and recommend solutions to the process of managing trade and craft operatives within their careers.

5.2.1 Setting Objectives and Leading Proposition

The research aim can be broken down into a series of research objectives. These objectives have been greatly influenced by: previous career studies (Routledge, 1983; Collin, 1984a; Collin, 1984b); research into career mobility (Routledge, 1983; Nicholson and West, 1998); research into manual and non-salaried employees (McDonald et al., 2002; Milman, 2003); and literature on blue collar careers (Thomas, 1989). It also used several methodological cues from previous construction management theses (Price, 1986; Dainty, 1998; Raiden, 2004; Pepper, 2005). The broad objectives as highlighted in Chapter 1 are elaborated below and explained in relation to a theoretical framework which gave the analytical structure to making sense of the primary data.

5.2.2 Objective 1

The first objective was to develop a broad review identifying the career issues relating to trade and craft employees. The careers literature account for many cross disciplinary fields such as: Management Theory (HRM; Strategic; CMS – Critical Management Studies); Management Practice; Careers Theory; Psychodynamic Theory; Sociology; Economics; Self Help; and Psychology (social; clinical; and counselling). In addition to this, there are numerous construction management reports, statistics and contextual data that service the industry (CITB, 1999; Murray and Langford, 2003; CITB - ConstructionSkills, 2004a; CITB - ConstructionSkills, 2004b). Converging theories and data in a construction management context, served as a framework for assessing the careers at trade and craft levels. This objective was conducted in two ways: a review of literature, balancing extant and emergent theoretical perspectives of career’s, with empirical and contextual data on the industry; an initial scoping study, consisting of qualitative interviews with employers,
employees and training providers, in order to gain a quality perspective of key drivers for the research.

Objective 1 informed and directed the literature outlined in Chapter 2, 3 and 4 and formed the basis for outlining the further objectives of the study (2 – 8). From the meeting of this objective, an initial proposition was formulated:

**Proposition**

The careers literature and contextual data on the construction industry does little to inform understanding or address the development of trade and craft careers.

Although as stated in 1.6 and 5.1.2, hypothesis are rarely employed in qualitatively based studies (cf. Maxwell, 1996), as exemplified by several authors (Popper, 1992; Simister, 1994; Dainty, 1998; Pepper, 2005) propositions are often used to guide qualitative research. These are used as an alternate process to working hypotheses, which interacts with emerging findings from the research (Simister, 1994). This preferred approach to hypothesis was determined as more suited to this study as it was formulated after analysis of the data found in the scoping study (cf. Maxwell, 1996 pp.69 – 70; section 5.1.2).

Trade and craft operatives form a quantifiably large percentage of the construction workforce (DTI, 2003; CITB - ConstructionSkills, 2004a; CITB - ConstructionSkills, 2004b). Aside from the built assets, they are the most visible (noticeable) part of the industry. So why is it that their careers are discounted from the literature? The initial proposition was used at a judgement level, allowing the relationship between theoretical and contextual data to be explored and tested on two levels: does the secondary data relate to trade and craft careers?; and are their any natural links to trade and craft careers? This merely provided a guiding principle upon which aims and objectives could be set.
The information attained from this data was used to develop an outline theoretical framework. This was to guide the analysis process. Although the careers literature is rich and many concepts and theories may be proffered as a starting point to the examination of trade careers; careers theories are largely segmental, with each theory neglecting other theories, and no comprehensive theories or concepts which explain the dynamism at trade and craft level exist. Employment within these strata is ultimately hinged on complex sets of factors which interact dynamically. These can only be studied within a framework that recognises the multiple interactions of psychological personality characteristics, the technological environment, and sociological aspects of character context and content. Without an academically robust framework, many theories may only serve to examine the problem superficially. A useful framework that synthesises individual and structural viewpoints has been long overdue.

5.2.3 Redesign

The formulation of the proposition meant a fundamental shift in the original research proposals and subsequently the later aims and objectives. The original research proposals entitled “Strategies for Improving the Retention of Construction Workers” is summarised in Appendix F. At the core of this change is the basic premise that careers operate at the point of balance between objectivity and subjectivity. In order to understand the careers of a particular group, both aspects must be understood. In view of the knowledge gap uncovered during the initial literature search and subsequent scoping study, it was considered that the testing of subjective perceptions; as well has conducting a comprehensive study of the organisations and organised bodies within the industry was beyond the scope of this study. Tangible results would have involved parallel investigations of private and public organisation, as well as a suitably sized sample of workers (the research envisaged 30 public and private organisations; and 500 operatives). It is well documented that the industry is highly fragmented (Latham, 1994; Egan, 1998) with - for instance - a cluttered array of educational and professional bodies (Langford et al., 1995; Lees and Ashworth, 2005). Given the temporal parameters of the research, this form of research would have been constrained and only yielded cursory results. This study viewed the
individual as the unit of analysis. In this new approach, the study sought to examine the subjective element of trade and craft careers, in order to inform any further empirical tests and investigations.

5.2.4 Objective 2

Objective 2 was to explore New Entrant Trainees (NETs) perspectives of trade and craft careers. Further anecdotes suggest that new entrants fall into construction due to failed academic levels or lack of alternatives. The sustainability of any industry is dependent on the continued influx of new entrants to maintain depleting ranks through natural wastage (retirement). Entering into the construction industry as a trainee is often age-specific. How adolescents see their future plays an important part in their career exploration, long-term career identity and commitment (Marcia, 1980). Decisions will often concern expected outcomes (Bandura, 1986; Neisser, 1976); and future career oriented decisions crucially influence their later adult life. Therefore, initial perceptions of the industry are often a proximal indicator of future intentions. Exploring what decisions new entrants make and how they prioritise potential outcomes are important to recruiting new entrants for the industry’s future.

Objective 2 was achieved using a multi-methodological approach involving questionnaires, post hoc discussions and interviews. The method and activities involved to achieve objective 2 are outlined in Table 5.1:
Table 5.1 Objective 2 activities and methods

<table>
<thead>
<tr>
<th>Ob</th>
<th>Objective</th>
<th>Method</th>
</tr>
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<tbody>
<tr>
<td>2(a)</td>
<td>Define the term career</td>
<td>Group discussion &amp; interviews</td>
</tr>
<tr>
<td>2(b)</td>
<td>Assess respondents influence on initiating a trade and craft career</td>
<td>Likert scale questionnaire item, interviews &amp; discussions</td>
</tr>
<tr>
<td>2(c)</td>
<td>Identify the attractive aspects as antecedents to initiating a trade and craft career</td>
<td>Likert scale questionnaire item, interviews &amp; discussions</td>
</tr>
<tr>
<td>2(d)</td>
<td>Identify NET objective and subjective evaluations of future possibilities:</td>
<td>Likert scale item (i) and forced choice questionnaire item (ii), interviews &amp; discussions</td>
</tr>
<tr>
<td></td>
<td>i) expected career outcomes; and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ii) anticipated career outcomes.</td>
<td></td>
</tr>
<tr>
<td>2(e)</td>
<td>Identify NET perceptions of potential work related barriers and enablers within their work role:</td>
<td>Open ended questionnaire item, interviews &amp; discussions</td>
</tr>
<tr>
<td></td>
<td>i) positive work related factors; and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ii) negative work related factors</td>
<td></td>
</tr>
<tr>
<td>2(f)</td>
<td>Assess NET priorities in towards work related stimuli</td>
<td>Paired comparison item, interviews and discussions</td>
</tr>
</tbody>
</table>

Ob = Objective Number  
NET = New Entrant Trainee

Objective 2 was achieved during the Phase 1 study (P1). A questionnaire was devised and distributed amongst NETs at five further education institutions around the East Midlands. To enhance this data, discussions were held with groups of NET informants and interviews were held with individual NETs.

5.2.5 Objective 3

Objective 3 was to explore Qualified and Experienced workers (QE) perspectives of trade and craft careers. The purpose of this objective was to examine the careers as described by those who occupy them. This was done by identifying, recording and analysing the changes which occur in an individual’s job and job environment. This approach will allow not only inter-positional changes to be examined but also the far more common intra-positional changes. All career positions change and develop over time (Arthur et al., 1989; Latham, 1994; Arnold, 1997; Collin, 1998; Bujold, 2004) and so any comprehensive analysis of careers, should account for change. Organisational career outcomes are often related to organisational mobility which is described in the literature as movement of individuals between organisational
positions (Routledge, 1983; Arnold, 1997; Nicholson and West, 1998). However, in project based industries like construction, a main characteristic is the transient nature of project membership. Project membership is constantly in a state of flux as individuals move between teams as and when their knowledge and skills are required (Langford et al., 1995; Barlow and Ashok, 1998). Any research on careers cannot ignore these inter and intra-positional changes. Also examining the changes which occur in jobs and job environments, the variety and impact of career outcomes can be studied (Routledge, 1983). It was necessary to identify and record the changes taking place for particular individual’s in particular organisational circumstances during particular periods of time. The resultant changes were then analysed for similarities and differences in order to gain insight into career outcomes. The method and activities involved to achieve objective 3 are outlined in Table 5.2:

Table 5.2 Objective 3 activities and methods

<table>
<thead>
<tr>
<th>Ob3</th>
<th>Objective</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>3(a)</td>
<td>Asses individuals career change and the nature of that change - (history; attitude; behaviour; emotions over time).</td>
<td>Semi-structured interviews</td>
</tr>
<tr>
<td>3(b)</td>
<td>the nature of trade and craft career progression – change in; career trajectory; promotions; power; status; reward;</td>
<td></td>
</tr>
<tr>
<td>3(c)</td>
<td>career development – advances in knowledge and work content; duties; responsibilities; education; training; on the job skills</td>
<td></td>
</tr>
<tr>
<td>3(d)</td>
<td>Identify determinants that underpin existing the industries career initiatives (nature of the industry and its organisations career processes)</td>
<td></td>
</tr>
<tr>
<td>3(e)</td>
<td>Examine how determinants of that strategy affect individuals: i) positive- what invokes positive commitment? (intention to stay) ii) negative- what invokes negative commitment? (intention to leave)</td>
<td></td>
</tr>
<tr>
<td>3(f)</td>
<td>Examine strategies employed by individuals to cope with these strategies: i) reaction strategies - how do i) positive; &amp; ii) negative commitment manifest? ii) consequences - subsequent effects on productivity, delivery and quality</td>
<td></td>
</tr>
</tbody>
</table>

Ob = Objective number
QE = Qualified and Experienced Employees

Semi-structured interviews were conducted in order to gather the data in achieving objective 3.

5.2.6 Objective 4

Objective 4 was to compare and contrast the perspectives of NETs and QEs to see if career needs change over time. Chapter 2 outlines that as well as recruitment
problems, the industry is witnessing considerable problems retaining its workers. Several factors may cause this. Construction work is often seen as dirty and low skilled (SFC - Strategic Forum for Construction, 2002) and long working hours are commonly seen as an inherent characteristic of construction work (Smithers and Walker, 2000; Lingard and Sublet, 2002; Cochrane, 2002). Compounding this, is the fact that career aspirations expressed by adolescents are generally believed to be unstable and likely to change many times before mid-adulthood (Phipps, 1995; Super, 1980; Trice and McClellan, 1993). The industry generally has a low commitment to human resource development (Dainty et al., 2000; SFC - Strategic Forum for Construction, 2002) which in the wider literature contributes to turnover (Schein, 1978; Schein, 1980; Schein, 1987; Arnold, 1997). By assessing both new entrants and established workers the research aims to assess what actually impacts on employee tenure. As such, the research has the potential ability to simultaneously address two management concerns; recruitment to careers and retention within careers.

5.2.7 Objective 5

Objective 5 was to develop a conceptual view of trade and craft careers in relation to extant and emergent careers theory and develop a model definition of trade and craft careers. In everyday language, the term career embraces political and economic dimensions and has come to mean the sequence of successive attempts to gain power, status or influence, or more simplistically, the sequence of attempts to move onward and upward through organisational hierarchies (Arnold, 1997). In the construction industry, trade and craft labour has received little research attention. Little is known about trade and craft careers and little research has been used to form links to wider careers theory. This short-sighted focus also ignores the developmental nature of trade and craft careers, and the complex array of factors associated with career progression. By viewing trade and craft careers in the traditional way, individuals are ignored as they do not fit the upwardly mobile criteria. By viewing "career" in the simplistic way, there is a danger that we may fail to appreciate the full richness and value of the concept. In order to bring some of this richness into the theorising of construction management practice, there is a need to re-examine the historical
development of career theory, and in a construction management context, to consider sociological conceptions and conceptions deriving from the life course/developmental psychology literature.

As identified in section 3.1.2, the term career has many definitions and a unifying definition agreed upon by all academic disciplines is not yet formed (Arnold, 1997). The fact that there are several definitions of the term in the Oxford English Dictionary (1995) ranging from "one’s advancement through life," or "the progress through history," to "a profession or occupation offering advancement" (p.197), attests to the variety in it’s meaning. Similarly, a review of various authors will show disagreement amongst them (Holland, 1985; Derr, 1986; Young and Collin, 1992; Vondracek, 1995; Arthur and Rousseau, 1996; Cochran, 1997; Collin and Young, 2000; Russell, 2001; Zunker, 2002; Super et al., 2006). In addition, a different meaning is adopted for the term career according to the perspective from which it is viewed (Collin, 1984a). These definitions speak to the comprehensive and longitudinal nature of the career concept. The differences underscore the fact that all views of careers are essentially theories, designed to communicate or explain facts and/or perceptions economically (Healy, 1982). Thus, every person is entitled to a theory that is personally useful (Healy, 1982; Martin, 1994). Defining careers from the perspective of the informants themselves has the potential to reveal aspects of trade and craft careers excluded from the broad careers theory.

5.3 Stages of the Research

The research design comprised three distinct stages: a scoping study (ScS) to identify the range of issues outstanding; a Phase 1 (P1) a multi-methodological approach to understand the perspective of New Entrant Trainees (NETs) starting at trade and craft level; and Phase 2 (P2) semi-structured interviews to explore the perspective of the Qualified and Experienced (QE’s) populous, established or working from trade and craft positions (P2). The research used ScS to establish the parameters of the research; and compared P1 and P2 to reconcile any differences in NET and QE perspectives. The link between the objectives, stages and chapters of this thesis may
be seen in Figure 5.1. The figure shows the data flows, literature links and primary outputs (chapters) across the duration of the research project. This follows a chronological sequence of research events and illustrates the complex interplay of literature, data sets and primary outputs.
Objective 5 - Develop a conceptual view of trade and craft careers in relation to extant and emergent careers theory and construct a model of trade and craft careers

Objective 4 - Compare and contrast NETs and QEs perspectives to see if career needs change over time

Objective 3 - Explore Qualified and Experienced (QEs) perspectives of trade and craft careers

Objective 2 - Explore New Entrant Trainee (NETs) perspective of trade and craft careers

Objective 1 - Develop a broad review of the career issues relating to trade and craft employees

Aim - to understand trade and craft career dynamics from the perspective of individual workers

Figure 5.1 Data flows within methodology

Key
- Literature links
- Primary Data Flows
- Secondary Data Flows
5.4 Research Framework

It is customary for academic research to take account of three elements: ontology; epistemology; and methodology and methods (Creswell, 1998; Saunders et al., 2000; Creswell, 2003). This "ontology" is of key importance to assessing trade and craft careers. The following section introduces reference to an 'ontological approach' being advocated by the research and the relations to pragmatism.

5.4.1 Ontological Philosophy

Aside from the products of the construction world (built assets), the most visible aspect of the industry is often its trade and craft population. Several authors consider people as instrumental to project delivery, rather than systems and processes (Lechler, 1998; 2000; Cooke-Davies, 2002). By focussing on the career needs of its people the construction industry may fulfil the dual purpose of enhancing productivity and retaining its key employees.

As established in Chapter 3, the term career has a number of connotations. The research assumes the stance that any enquiry must first establish what in fact is under investigation. To this extent it was established that the research required the utilisation of semantic knowledge that is establishing a meaning of career as a frame of reference.

Ontology has one basic question: "What are the fundamental categories of being?" i.e. "What exists" (Blackburn, 1994 p.269). In philosophy, ontology is the most fundamental branch of metaphysics. It studies being or existence as well as the basic categories in an effort to find out what entities and what types of entities exist (Blackburn, 1994). Ontology has strong implications for the conceptions of reality. In the present research this was: "What is the trade and craft career reality"? The research insists that the individual's career perspectives need to be understood. These include the social, political, economic, physical and cultural milieu which serve as barriers or enablers to the contingent career development processes (Vondracek et al.,
The research seeks to develop understanding of the context in which careers emerge within the sector. Of particular interest were the technical, social and economic structures that can influence to employment or filter individuals into different occupational sectors.

5.4.2 Epistemology

From an epistemological standpoint, the research adopted the approach of "Pragmatism". Pragmatism about knowledge holds that what is important about knowledge is that it solves certain problems that are constrained both by the world and by human purposes. The place of knowledge in human activity is to resolve the problems that arise in conflicts between belief and action (Creswell, 1994; Blackburn, 1994; Saunders et al., 2000; Creswell, 2003). Pragmatists are also typically committed to the use of the experimental method in all forms of inquiry, a non-sceptical fallibilism about our current store of knowledge, and the importance of knowledge proving itself through future testing (Blackburn, 1994). Mirroring this sentiment, the research adopted the approach that initial assumptions may be less than certain, and that revisions may be made to the research at any point. Another characteristic of pragmatism is that it often draws liberally from both qualitative and quantitative methods in order to provide an understanding to the problem at hand.

5.4.3 Methodological Implications

As alluded to in Chapter 1, the research approaches careers from a Developmental, Context and Construct (DCC) orientated position. This acknowledges that individuals construct and reconstruct their own meanings of careers and how their careers develop within their changing environments. This views trade and craft careers from a developmental perspective while also allowing for more contextualist and constructivist approaches to take the lead in the research. Career theory within the sciences is now questioning the adequacy of its more positivist roots and the research methodologies that it has generated (Collin, 1998; Flores et al., 2003; Guindon and Richmond, 2005). Whereas the criticisms of career theory had first been
expressed in terms of the need for a phenomenological approach, they have more recently been reconstructed in terms of contextualism and constructionism (Young et al., 1996; Collin, 1998; Flores et al., 2003; Guindon and Richmond, 2005). These approaches are all concerned with developing meaning from careers within the social interaction of individuals (Young and Valach, 1996; Collin, 1998; Guindon and Richmond, 2005) a term also described as a “Personal Career Theory” (Martin, 1994). Hence, it is now argued that career is “an overarching construct that serves to frame and organise the complex pattern of intentional actions; chance occurrence and environmental consequences over longer segments of life (Young and Valach, 1996).

These new approaches offer a new construction of the individual, as diverse an key element in career theory (Giddens, 1991). Rather than just regarding the individual as a passive entity, determined by external influences, or static personalities in mechanistic environments. The career is seen more as a reflexive project, for which the individual can be responsible for changing.

Embedded in the ethos of the term “Career”, is a search for development and or progression. Therefore, careers cannot only be studied from a dispositional level where individual attitude, values and effort alone dictate vertical mobility. The role of the objective career perspective is an equal if not greater influence on the outcome of initial and future decisions. Thus, while prior career choice and perceived expectations are often vital in setting the foundations of a career, the consequences of choice are usually measured by what transpires within the work environment. As such, the research also adopts a structural approach to career development. What particularly alleviates process approaches from this study is its failure to link specific individual characteristics to a focus on features of the work environment (recall the structural approach Chapter 3). The focus here is on the developmental pattern of the individual and the processes (external to work) that are significant at a given time in his or her life. While this cannot be discounted this is seen as a detraction from the present research aims. Thomas (1988, p.356) suggested that careers and career progression are not the simple aggregation of individual choices as individuals rarely command the resources to consciously and purposefully fashion their careers.
5.5 Standpoint of Previous Research

The gamut of attempts to understand the labour market and productivity problems have tended to rely on quantified demand forecasts (Dainty et al., 2004). Invariably, these dominate research agendas and influence researchers to adopt a quantitative approach although these approaches often fail to capture the complexity of human action and emotion. For instance many researchers have sought to establish what turns on the primary production generators inside workers (Olomolaiye and Price, 1989), adopting quantitative approaches in the process. Olomolaiye et al., (1998) described trade and craft productivity as: skills, qualifications, training and experience; innate physical and mental ability; and the intensity of application of both skill and innate ability to the production process. As such, productivity relates to the physical, social, psychological actions of employees. However, while it is possible to measure physical action in quantifiable terms; social and psychological process - and their interactions - are less quantifiable and unpredictable. In an examination of labour productivity, Radosavlevic and Horner (2002) concluded that productivity is not normally distributed and are based on chaotic systems. As such, basic statistical diagnostics are either non-applicable or misleading. Characteristics of quantitative methods are that while they may easily measure quantifiable aspects of productivity, they fail to adequately measure the human emotion factors that often govern socio-psychologically guided actions.

The issue of whether research should be conducted according to qualitative or quantitative paradigms are a highly contentious. Though quantitative methods hold that behaviour can be explained through objectively derived facts, which aim to eliminate bias they are often criticised for disregarding unpredictable variables such as human agency, emotion and irrational choice. Qualitative methods express the assumption through a phenomenological paradigm that there are multiple realities that are socially and cognitively derived. As such, rich descriptions make sense of phenomenon by the researcher becoming immersed in the settings of the subjects. The continued debate focuses on whether there is a necessary connection between method type and research paradigm, that polarises the different approaches and makes
them incompatible (Firestone, 1987). There are four differences in their methods and paradigms:

a) assumptions: quantitative researchers tend to come from a positivist paradigm which assumes that social facts exist and an objective reality that is examinable, while qualitative researchers come from a phenomenological paradigm and assume reality is socially constructed through definitions of the situation;

b) purposes: quantitative researchers attempt to explain causes and consequences, while qualitative researchers tend to press for understanding of social phenomena;

c) approach: whereas quantitative researchers tend to use observations, correlational, or experimental designs, in which great effort is expended to assure objectivity and accuracy; qualitative researchers tend to use ethnography in ways that permit the reader to understand the world in the same terms as the actors; and

d) roles: quantitative researchers try to be detached and neutral, while qualitative researchers strive to be immersed to gain understanding (Firestone, 1987).

5.6 Meta-Level Perspective

The methodological differences between the paradigms often lead to differences in rhetorical purposes and styles. However, the study of careers encompasses both qualitative and quantitative dimensions (e.g. process, time and structure). Essentially, a rapprochement is required, combining both paradigms. This increases the complexity of the investigative process since both "soft" and "hard" data are necessary for a complete career analysis. Although much research explores the various strategies and methods of each, such research only explores the associated advantages and disadvantages or evaluate and compare the approaches in the context of the research experience. A false dichotomy is often assumed between qualitative and quantitative approaches and in reality few studies wholly exemplify the ideal criteria characteristics of either paradigm (Creswell, 1994). Cogent discussions on the
issue are presented in Firestone (1987) and Creswell (1994) who suggested that the connection is in fact rhetorical and the two methodologies are fundamentally complementary.

As both authors (Firestone, 1987; Creswell, 1994) imply, research can never truly associate to one paradigm or the other. The extrapolation of both quantitative and qualitative results often negates a subscription to one paradigm or the other. Typically, when faced with this challenge, researchers argue for multiple data collection methods whereby methods are combined as and when deemed appropriate (Bryman, 1988). However, while quantitative data are uni-dimensional, qualitative data are unique in that they can be analysed and interpreted both qualitatively and quantitatively. This allows for correlations and/or grouping to be made amongst all data sets, i.e. job role or age to emotion. Through inductive phenomenological research, a richer, deeper and process-based set of data are gathered (Taylor and Bogdan, 1984; Bryman, 1988, Strauss and Corbin, 1990). This is a critical advantage for qualitative data and means that analysis can be conducted into the "What", "How" and "How Many" in relation to careers. That is, an approach that integrates the interpretation of qualitative data with statistical analysis of that data.

5.7 The Phase 1 Study (P1)

The Phase 1 (P1) study was largely used as the scientific basis of a three approach rationale. The first approach sees the P1 study as purely exploratory; in order to explore trade and craft New Entrant Trainees (NETs) conditions, perceptions and behaviours prior to the Phase 2 qualitative research. Second, the P1 study generated first degree constructs concerning conditions, perceptions and behaviour which can be reconciled against – Third – second degree constructs, as generated by examining the conditions, perceptions and behaviours of trade and craft Qualified and Experienced workers (QEs).
5.7.1 P1 Instrument Design

The questionnaire for the Phase 1 study (Appendix C) was developed and scrutinised through discussions with industry stakeholders including employers and training providers. It was then pilot-tested on a small group then pre-tested. At each of these phases amendments were made based on responses and a test re-test method was employed to indicate reliability.

5.7.2 Career Questionnaire

As shown in Table 5.3 and 5.4, the Career Questionnaire consisted of six sections and sixty three items.

Table 5.3 Itemised breakdown of questionnaire

<table>
<thead>
<tr>
<th>Section 1 (Q. 1 - 6a)</th>
<th>P - Profile (7 items: P1 – P7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 2 (Q.7.1 - 7.10)</td>
<td>CCDI - Career Choice/Decision Influence (10 items: CCDI1 - CCDI10)</td>
</tr>
<tr>
<td>Section 3 (Q.8.1 - 9.13)</td>
<td>CAA - Career/Aspect Attraction (13 items: CAA1 - CAA13)</td>
</tr>
<tr>
<td>Section 4 (Q.9.1 - 9.6)</td>
<td>CE - Career Expectations (6 items: CE1 - CE6)</td>
</tr>
<tr>
<td>Section 5 (Q.10.1 - 10.6):</td>
<td>CA - Career Aspirations (6 items: CA1 - CA6)</td>
</tr>
<tr>
<td>(Q.11.a1 - 11a3):</td>
<td>PIC - Positive Industry Characteristics (3 items: PIC1 - PIC3)</td>
</tr>
<tr>
<td>(Q.11.b1 - 11b3):</td>
<td>NIC - Negative Industry Characteristics (3 items: NIC1 - NIC3)</td>
</tr>
<tr>
<td>Section 6 (Q.12.1 - 12.15):</td>
<td>PCRO - Paired Comparison for Rank Order (15 items: PCRO1 - PCRO15)</td>
</tr>
</tbody>
</table>

Table 5.4 Itemised description of questionnaire items

<table>
<thead>
<tr>
<th>Section 1</th>
<th>Biographical data (Profile)</th>
<th>P</th>
<th>Q1 - 6a</th>
<th>P1 – P7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 2</td>
<td>Career Choice/Decision Influence</td>
<td>CCDI</td>
<td>Q7.1 - 7.10</td>
<td>CCDI1 - CCDI10</td>
</tr>
<tr>
<td>Section 3</td>
<td>Career Aspect/Attraction</td>
<td>CAA</td>
<td>Q8.1 - 8.13</td>
<td>CAA1 - CAA13</td>
</tr>
<tr>
<td>Section 4</td>
<td>Career Expectation</td>
<td>CE</td>
<td>Q9.1 - 9.6</td>
<td>CE1 - CE6</td>
</tr>
<tr>
<td>Section 5</td>
<td>Career Aspirations</td>
<td>CA</td>
<td>Q10.1 - 10.6</td>
<td>CA1 - CA6</td>
</tr>
<tr>
<td>(a) Positive Industry Characteristics</td>
<td>PIC</td>
<td>Q11.a1 - 11a3</td>
<td>PIC1 - PIC3</td>
<td></td>
</tr>
<tr>
<td>(b) Negative Industry Characteristics</td>
<td>NIC</td>
<td>Q11.b1 - 11b3</td>
<td>NIC1 - NIC3</td>
<td></td>
</tr>
<tr>
<td>Section 6</td>
<td>Paired Comparison for Rank Order</td>
<td>PCRO</td>
<td>Q12.1 - 12.15</td>
<td>PCRO1 - PCRO15</td>
</tr>
</tbody>
</table>

The final instrument comprised of items that were developed from the literature review and a review of previous instruments used in careers research, and comprised six definitive sections (Appendix C). Questions were assembled based on: the initial scoping study and subsequent review of the relevant literature; and a number of assumptions or assertions that were factored. Each questionnaire included a
demographic information section (seven items). The demographic information collected on each student included: gender, study characteristics, occupation type and construction experience. Likert items along a five point scale within the questionnaires sought to illicit responses to: career influences (10 items); features of importance within work roles (13 items); career possibilities – i.e. ‘do you think your career could offer: the chance to move into a managerial role?’ - (six items).

A forced choice item (Question 5(a) and (b)) consisting of six possibilities assessed career aspiration in relation to 1) working as a Professional/Manager (i.e. Architect, Structural Engineer); 2) owning a business/working for themselves; 3) moving into a technical occupation; 4) progress into supervision; 5) horizontal progression into other trades; or 6) working in an alternate industry.

An open-ended questionnaire section invited participants to state (not ranked), ‘The three most positive things about your career’, and ‘the three most negative things about your’ career. As it was envisaged that some of the participants would lack formal working experience in the construction environment, some respondents were encouraged to use perceptions based on anecdotal information.

5.7.3 Section Six

Section six of the questionnaire, contained a paired comparison instrument where respondents were asked to compare six work related stimuli. Factors were identified through the literature and an initial scoping study with senior construction stakeholder (employers, employees and training providers). From this process, five alternate stimuli were identified: 1) Career Development; 2) Job Security; 3) Work Conditions; 4) Job Content; 5) Financial Incentives; and 6) Social Relations \((n=6)\). The component of these factors are given in Table Factors were arranged in pairs so that every factor was compared against each other. The total numbers of pairs presented were fifteen \((n (n-1)/2 = 15)\). While there are several methods for computing values (Torgerson, 1958; Baird and Noma, 1978) descriptive statistics were ascertained using a simple set of matrices and easily discernable computations (Chinyio, 1998).
Table 5.5 Typical aggregate of factors and attribute components

<table>
<thead>
<tr>
<th>Work Attribute/Dimensions</th>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career Development (M)</td>
<td>Advancement, Achievement</td>
</tr>
<tr>
<td></td>
<td>Status</td>
</tr>
<tr>
<td></td>
<td>Formal Training</td>
</tr>
<tr>
<td></td>
<td>Informal Training</td>
</tr>
<tr>
<td></td>
<td>Education</td>
</tr>
<tr>
<td>Job Security (M)</td>
<td>Transferability</td>
</tr>
<tr>
<td></td>
<td>Continuity</td>
</tr>
<tr>
<td></td>
<td>Psychological Contract</td>
</tr>
<tr>
<td>Financial Incentives (H)</td>
<td>Salary</td>
</tr>
<tr>
<td></td>
<td>Bonuses</td>
</tr>
<tr>
<td></td>
<td>Overtime</td>
</tr>
<tr>
<td>Working Conditions (M)</td>
<td>Working hours</td>
</tr>
<tr>
<td></td>
<td>Travel Time</td>
</tr>
<tr>
<td></td>
<td>Health and Safety Issues</td>
</tr>
<tr>
<td></td>
<td>Welfare</td>
</tr>
<tr>
<td>Job Content (H)</td>
<td>Autonomy</td>
</tr>
<tr>
<td></td>
<td>Responsibility</td>
</tr>
<tr>
<td></td>
<td>Duties</td>
</tr>
<tr>
<td></td>
<td>Use of Cognitive Skills</td>
</tr>
<tr>
<td>Social Relations (M)</td>
<td>Style of leadership</td>
</tr>
<tr>
<td></td>
<td>Working with competent peers</td>
</tr>
<tr>
<td></td>
<td>Relations with peers</td>
</tr>
<tr>
<td></td>
<td>Relations with senior employees</td>
</tr>
<tr>
<td></td>
<td>Relations with subordinates</td>
</tr>
<tr>
<td></td>
<td>Relations with other trades</td>
</tr>
</tbody>
</table>

M= Motivators, Satisfiers  
H= Hygiene, Dissatisfiers

5.7.4 A Rationale for Paired Comparison

The method of paired comparisons provides a simple experimental technique but one with a literature rich in model development (Bradley, 1976). Although many tests employ Likert scales to rate statements – a technique also used in this study – concerns arose as to social desirability responses (Dillman, 1978) and acquiescence (Saunders et al., 2000). It was found that for certain statements respondents are often likely to make judgements based on a belief that certain responses are more socially desirable than others (Dillman). As noted by Hofstede (2001), a problem when identifying attitude towards goals is 'yes man-ship' (Schuman and Presser, 1996) or what is commonly referred to as 'Acquiescence' (Hofstede, 2001 p.56). Acquiescence can be defined as the tendency to agree with an item regardless of its
content (yeah-saying). Findings by Hofstede in an international survey which included a test on work goal importance, suggested that lower educational levels amongst respondents tended to increase acquiescence. In view of this, although rating responses would allow for a computation of values attached to each stimulus, they often provide little information about individual differences in item evaluations when respondents use extreme ratings to judge separately constructed stimuli equally. The paired comparison method enforces a comparative assessment allowing each item to be rated separately.

5.7.5 P1 Interviews and Post Hoc Discussions

Qualitative interviews and post hoc discussions were just two components of a number of techniques available, but were proposed in this research as they are often used in conjunction with quantitative and further qualitative research methods (Garee and Schori, 1996), although as often the case, they are used as a precedent to formulating a quantitative research instrument.

5.7.6 Post Hoc Discussions

The post hoc discussions were similar in nature to “Focus Groups” and took the form of brain-storming sessions (homogeneous to occupation) following each questionnaire session. The discussion areas began with a determination of the meanings of career and proceeded in discussing issues that emerged from respondents’ experience. The post hoc discussion was designed as an interpretive approach to the research; to provide a fundamental analysis of ‘career’ as a stimuli for interpretation during the quantitative (questionnaire) analysis phase of the research, and also to provide a definitional focal point whilst analysing the in depth-interview phase. As previously enumerated (Chapter 3: Literature Review), the term career poses particular problems with analysis, as it is “all things to all people”, lacking a universal interpretation across disciplines. Focus group methodology is recommended when the study is exploratory and when factors related to complex behaviour or motivation are being examined (Krueger, 1994, pp. 44-5). Differing to McDonald et al., (2002), data were
sought in terms of definitions that emerged from the group rather than an imposed
definition of careers. A comparison in the meanings of career was made and
distinguished in terms of whether they are more intrinsically related to instant reward-
such as pay - or deferred reward related to long term career development and
progression.

Many authors attest to the implications of flexibility involved in the focus group
methodology (Goldman (1962; Johnson, 1988; Stewart and Shamdasani, 1990). It is
stressed in the literature that they are a method for listening to respondents, allowing
them to use their own words to describe what they think. Schutz (1972) used the term
‘inter-subjectivity’, and described this as the conceptions and ordinary explanations
shared by a set of social actors. Calder (1977) provides a well-reasoned explanation
of this approach, highlighting the primary need for the researchers to experience their
respondents, rather than researching them.

The literature highlights purposes and reasons for using post hoc discussions (Stewart
and Shamdasani, 1990; Kinnear and Taylor, 1996 Saunders et al., 2000), advantages
(Stewart and Shamdasani, 1990) and limitations (Stewart and Shamdasani, 1990;
Saunders et al., 2000), which are summarised in Table 5.6.

However, drawing attention to the range of limitations exemplified are suggestions of
bias, validity and reliability. Typically, Kennedy (1976) categorises the potential for
bias into three types: personal bias by the views of the researcher; “please the client”
bias by unconsciously seeking certain answers; and “consistency bias” by seeking to
create consistency, when in fact humans may be very inconsistent and complex
(Rodgers, 1993).
Table 5.6 Reasons, alternatives and limitations to Focus Groups.

<table>
<thead>
<tr>
<th>Reasons for using focus groups</th>
<th>Advantages of focus groups</th>
<th>Limitations of focus groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>To generate hypotheses that can be tested quantitatively</td>
<td>Synergism: producing wider information from a group than from individuals</td>
<td>The small number of participants limits the degree to which one can generalise the results</td>
</tr>
<tr>
<td>To develop information useful in structuring consumer questionnaires</td>
<td>Snowballing: producing a trigger for discussion and information</td>
<td>The recruiting method can bias those who attend so may not represent the population</td>
</tr>
<tr>
<td>To provide overall background information on a product category</td>
<td>Stimulation: excitement to express ideas</td>
<td>A dominant member of the group may influence others’ opinions</td>
</tr>
<tr>
<td>To get impressions on new product concepts for which there is little information available</td>
<td>Security: an ability to express their views safely</td>
<td>Analysis and interpretation is much more difficult than for other research</td>
</tr>
<tr>
<td>To stimulate new ideas about older products</td>
<td>Spontaneity: no pressure to answer and no correct or wrong answers</td>
<td>The moderator can bias results to their conclusions or opinions</td>
</tr>
<tr>
<td>To generate ideas for new creative concepts</td>
<td>Serendipity: ideas will “drop out of the blue”</td>
<td>Lack of trust in other group members may inhibit contributions</td>
</tr>
<tr>
<td>To interpret previously obtained quantitative results</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.7.7 Hermeneutic Traditions

The approach adopted towards data analysis followed in the ‘Hermeneutic tradition’ (Parker and Roffey, 1997) which involves the interpretation and extraction of meaning from text (Ibid). This involved an iterative process that seeks out the basic significance of events and goes through a process which seeks to search for themes that can explain the myriad of facts (Kets De Vries and Miller, 1987) This approach is supportive of pedagogical and research objectives as it involves the development of critical, historical and interpretative thinking (Costea and Crump, 1999). The aim in the analysis was to derive meaning by understanding the standpoint of those involved.
Emergent themes were formulated against existing theories and reformulated using a five stage analytical schema (Crinson, 2001).

5.7.8 Analytical Schema

The data were digitally recorded. Using the analytical schema summarised in Table 5.6, the recordings were analysed under five distinct stages. Each column in Table 5.6 (i to v) corresponds to the individual stages: Stage (i) involved transcribing recordings; Stage (ii) comprised an interpretation process, whereby all responses were assessed. A principle component of this stage was not to exclude any data, thus avoiding any bias or preordained selection. Statements, issues and ideas raised were then interpretatively abstracted into a further set of indexed themes or conceptual categories (Stage iii). These themes essentially represent the accumulative perspective of participants (through interpretation). The “Theorisation” Stage (iv) involved relating the findings back to the working definitions derived from the literature (section 3.10). A “Retroduction” process (Stage v), involved identifying the contextual factors under which the findings emerged (see Crinson, 2001).

Table 5.7 A analytical schema for the generation indexed themes of the concepts from qualitative focus group data. Source: Adapted from Crinson (2001).

<table>
<thead>
<tr>
<th>(i) Transcription</th>
<th>(ii) Interpretation</th>
<th>(iii) Index &amp; Index Testing</th>
<th>(iv) Theorisation</th>
<th>(v) Retroduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taken from focus group discussion</td>
<td>Inductive method of abstracting conceptual themes. Analytically induced through interpretative understanding of data.</td>
<td>Non-exclusive coding of focus group discursive material. These represent conceptual category’s derived from the sets of specified deductive frameworks</td>
<td>Theories applied to identify theme setting abstractions to concrete. This is postulated through a process of synthesis</td>
<td>Conceptualisation or retroduction. Which identifies the necessary and contingent causal mechanisms which are the conditions for the phenomena and individuals under investigation</td>
</tr>
</tbody>
</table>
5.8 Phase 2 (P 2) - Rationale Towards a Qualitative Approach

Structured interviews by their very definition, are rigid and specific to the parameters of the interview questions. These are very similar in kind to quantitative questionnaires and do not often allow for deviance from their structure or additional probing to add clarity to data. Conversely, unstructured interviews entirely resist attention to a particular format allowing the interviewer to probe freely within the boundaries of the research. A link between these two approaches may be found in semi-structured interviews. Within this process, interviewers prepare a question framework although the interviewer remains free to probe particular issues as and when necessary. In this phase of the research, a semi-structured interview process was employed as it gave form to the interviews while simultaneously allowing flexibility to explore any emergent issues. Objectivity is gained through a detailed investigation of individual career patterns and process using career analysis techniques. Subjectivity is added by assessing the narrative content of respondent’s dialogue according to the relative objective measures.

In Phase 2, a career analysis was conducted of QEs which entailed an exploration into individual career histories. Their essential quality is that their careers span (in many cases) over considerable period of time, which enables them to identify the unique and changing nature of the industry. The issues of method which this type of data raises includes issues of data collection, data manipulation, theoretical perspectives, interpretation and conceptual, computational and quantitative problems (Dex, 1991).

5.8.1 Paradigmatic Meaning

In Young and Collin, (1990), the authors discuss the contributions and challenges of opportunities in the career field and presented information on “dominant discourses”: “the way people talk, think, and act about the concept of a career” (p. 376). These discourses are dispositions (matching internal traits to occupational characteristics), contextualising (locating people within social, economic, cultural, and other contexts),
subjectivity and narrative (interaction of self and social experience in a unique life "story"), and process (the processes by which career develops, e.g., decision making, life-span development). The authors suggest that the career or and individuals PCT is one that can be understood through discourse and narrative.

5.8.2 Sociological-Systematic Perspective

Phase 2 represented the characteristics of an ethnographic study. Ethnographic research in general involves intensive, face to face participant observations in natural settings over long periods of time. The aim is to produce a systematic narrative of the behaviour and idea systems of the actors in a particular culture, organisation, profession, or community of some sort including their conceptions, discursive practices, and interrelationships with each other. Within this the past or lapse of time is a crucial factor in understanding the present. They represent the overlap in chronology between individuals and related individuals as well as social and institutional structures (Dex, 1991; Baker and Elias, 1991).

5.8.3 The Requirements of the Research Design

A methodology capable of examining the issues raised in ScS and Phase 1 was required. This also included a careers analysis of how the trade and craft careers unfolded. Key to the research is the expressions of meaning and values in the trade and craft career dynamic. The aim was to develop what has been termed a "Rich Portrait" (Gilmore and Carson, 1996). In this respect an approach to the data collection process that followed qualitative paradigmatic traditions was preferred.

As is the case with much research, particular problems associated with data collection are in gaining physical access to respondents in their work environment, maintaining access and creating sufficient scope during the interview process to fully address the research aims and objectives (Saunders et al., 2000). Request for access and cooperation may fail to interest due to: a lack of perceived value; or the sensitive nature
of the research and subsequent concerns for confidentiality. Access may also be limited in terms of ability to meet specified participant targets (Ibid).

In order to combat these problems, a particular strategy was adopted:

- using existing contacts from within the research group combined with personal and social networks;
- using collaborators from the P1 study;
- providing a clear account to organisations of project aims, objectives and type of access required;
- establishing credibility with intended participants;
- identifying benefits to the organisation and wider construction communities; and
- adopting appropriate and suitable language.

5.8.4 Qualitative Instrument – Interview Content Checklist (ICC)

In addition to the aforementioned problems, organisations (or individuals) may not be prepared to participate if there are any cost implications of “down time” during lengthy interviews. A compact interview schedule was facilitated using an “interview content checklist” (ICC) following the example in Raiden et al., (2003) (Appendix D). Following the gathering of biographical information, respondents were encouraged to provide narrative accounts according to five principal questions beginning with “describe your career history since leaving school”. The checklist comprised probe cells which were used to mark responses according to specific themes. Principal questions and probe cells could be marked off as and when responses corresponded to the checklist items. Aspects of the narrative account were explored using directive probes i.e. “How was that important to you?”, or “Why is that important to you?” These probes were also used if it was felt that responses were lacking in content (whereby a check box cannot be filled). Subsequently each “Principal” question was explored further using a technique called "Laddering.” Laddering techniques are used to determine what attributes participants use to discriminate, and why those attributes are important. These are used in an effort to sample emotions. A differentiation is determined of ‘Laddering Up’ and ‘Laddering Down’. Laddering Up involves asking why a particular set of actions or experiences
were important i.e. “why was that important to you?” and ‘Laddering Down’ is where the interviewee is asked to give an example or asked to elaborate i.e. “Give me an example of that?” The laddering techniques were used to refine thoughts into concepts and affective statements. The directive probes can help determine interviewee’s: preference; view of importance; links between consequences/values of actions; but critically, about opportunities within the sector; and personal motivations.

5.8.5 Analysing and Coding Data

The research collected 6620 paragraphs of text. This required the data to be reduced into analysable portions. From the initial tape-recorded interview material, data was analysed using a verbal protocol and content analysis techniques, coded using NVivo and later frequency counts were examined using SPSS and Ms Excel. These enabled various statistics to be extracted and representative graphs plotted.

5.8.6 Nominal Scaling – The assignment of units to qualitative categories

Qualitative data are characteristic of nominal scaling. Nominal scaling connotes classification, that is: the objects or events of concern are examined for underlying similarities (or differences) and subsequently grouped on the basis of observed qualitative distinctions (Saunders et al., 2000; Pallant, 2001).

If the number of subjects falling into respective categories of a variable such as gender or ethnic background is recorded, the resultant counts constitute nominal data. Nominal data consist of counts or frequencies observed within categories. These are referred to as nominal or categorical variables. Qualitative data are also characteristic of ordinal data, for instance were various categories are ranked.
5.8.7 Content analysis - Emergent vs. *a priori* coding

Two approaches were used for coding data. With *emergent coding*, categories are established as they emerge from the data while with *a priori* coding, the categories are established prior to the analysis based upon some theory (Saunders *et al.*, 2000;
As the research dealt with often separately constructed data from both historical fact to perceptual judgement both coding processes were used.

Using information from ScS, literature reviews, Phase 1, and some preliminary examination of the data. The process followed the steps outlined in Haney et al., (1998). First, material was reviewed from the enumerated phases and a characteristic set of feature themes were used to form a checklist. Second, data were compared against field notes and any anomalies, ambiguities or analogous occurrences were reconciled against the checklists. Third, this consolidated checklist was used to apply coding.

5.8.8 Sampling Emotions – The Emotional Circumplex Model

Emotion plays a central part in the relative nature of careers. A person may have a good job that pays well although they are detached emotionally from the work. As well as themes and categories, the passages from interview data were assessed in relation to their affective components (emotions). A useful model for this process was the Emotional Circumplex Model (ECM) suggested by Russel (1980). According to ECM, emotions can be categorised in terms of two underlying dimensions: pleasure and arousal (Russell, 1980; Russell et al., 1989). Combining these two dimensions results in four major emotion groupings (i.e., quadrants of the circumplex). Emotions such as stress, anger and frustration are situated in the high-arousal/low-pleasure quadrant; depression and sadness fall in the low-arousal/low-pleasure quadrant; contentment and relief are classified a high pleasure/low-arousal; and, finally, emotions such as excitement and surprise are considered high-pleasure/high-arousal.

In the present research, emotion terms from each quadrant were sampled in order to examine whether disruptions in patterns of relating would be associated primarily with high-arousal emotions (as the ECM would predict) or whether disruptions would have their strongest impact on the pleasure dimension.
5.9 Computer Based Tools – The Use of NVivo; SPSS; and Ms Excel

A multi-level coding system was used following the analytical schema outlined in section 5.7.6. A thematic analysis was used to analyse the interview transcripts several times to sample and code and re-code sentences for different themes. For this the QSR NVivo software was used. The software is a “code and retrieve” system, allowing for multi-level coding of unstructured data, assisting in maintaining large data sets. This contributed to the maintenance of precision and rigour in data analysis. Linked passages were used as the unit of analysis. These passages were chosen to reflect the importance and intensity of the respondents experience, emotion, career chronology and future goals. Thus, if a respondent mentioned the importance of their career position or nature of their role, this was interpreted as being an important issue. Similarly with emotional responses. If a respondent reported that they liked a particular career event this was coded as a positive pleasure. Similarly, if a respondent reported feeling angry then this was interpreted as the intensity of their arousal. Conversely, if a respondent mentioned that it “didn’t bother them” this was coded as a negative arousal. Table 5.4 shows the Ms Excel coding for plotting emotions.

<table>
<thead>
<tr>
<th>Table 5.8 Calculation emotions using the emotional circumplex model</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>X</strong> = pleasure</td>
</tr>
<tr>
<td><strong>X(_1)</strong> = High pleasure: I was really happy</td>
</tr>
<tr>
<td><strong>X(_2)</strong> = Low pleasure: I don’t like it when it happens</td>
</tr>
<tr>
<td><strong>Y</strong> = Arousal</td>
</tr>
<tr>
<td><strong>Y(_1)</strong> = High Arousal = I felt really happy; I felt really disappointed</td>
</tr>
<tr>
<td><strong>Y(_2)</strong> = Low Arousal = not bothered; didn’t really matter</td>
</tr>
</tbody>
</table>
The interview schedule helped to focus the discussions on exploring the perceptions of careers, personal career development needs and preferences. It also helped to detail industry-wide protocols, organisational procedures, managerial practices and how these corresponded with the needs of the individual. The probe cells which contained the issues and topics formed the basis for the coding structure although many added themes emerged. During this process, interviews also yielded complex demographic data. Being essentially quantitative in nature, it was essential to input some of this data into more suitable formats. Thus, the statistical package SPSS and Ms Excel were also used during analysis. For instance, using the emotional circumplex model, the coded data was plotted \((X,Y)\) using Ms Excel where Pleasure was \(X = x_1 - x_2\) \((x_1 = \text{high pleasure}; \ x_2 = \text{low pleasure})\); and Arousal \(Y = y_1 - y_2\) \((y_1 = \text{high arousal}; \ y_2 = \text{low arousal})\).

5.9.1 Frankenstein’s Monster

In recent discussions about software use in qualitative research, Coffey et al., (1996) emphasised the danger of a “Frankenstein’s monster” methodology, when researchers use software. It was said that this has the potential to alienate the researcher from his or her data or which leads to a “new orthodoxy” in qualitative research (Coffey et al., 1996). The authors argued that this would go strictly against current postmodernist and poststructuralist trends within ethnography which foster the acceptance and celebration of diversity. The article by Coffey and colleagues represents the most recent in a series of concerned warnings regarding potential methodological dangers of computer-aided qualitative data analysis software (cf. Seidel, 1991; Agar, 1991; Seidel and Kelle, 1995; Kelle and Laurie, 1995). This study stuck rigorously to its stated research philosophy and true to its purpose NVivo, SPSS and Ms Excel were only used to store, describe the sample, retrieve, tabulate and present data, rather than to meaningfully analyse it.
5.10 Reliability

Following from section 5.9.3, the fourth part of the coding process was a check for the reliability of the coding. One way to measure reliability is to measure the percentage of agreement between raters. This involves using two or more coders or "Ratters". This is done by adding up the number of cases that are coded by different raters and dividing this by the total number of cases. The problem with this percentage agreement approach, is that it does not account for the fact that raters are expected to agree with each other a certain percentage of the time simply based on chance (Cohen, 1960). In order to combat this shortfall, reliability may be calculated by using Cohen's Kappa, which approaches 1 as coding is perfectly reliable and goes to 0 when there is no agreement other than what would be expected by chance (Haney et al., 1998). Kappa is computed as:

\[
k = \frac{P_A - P_c}{1 - P_c}
\]

where:

\[P_A\] = proportion of units on which the raters agree

\[P_c\] = the proportion of units for which agreement is expected by chance.

Table 5.9 Example of Inter-Rater Agreement Matrix

<table>
<thead>
<tr>
<th>Ratter 1</th>
<th>Career development</th>
<th>Job Security</th>
<th>Work Conditions</th>
<th>Margin Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career Development</td>
<td>.42 (.29)*</td>
<td>.10 (.21)</td>
<td>.05 (.07)</td>
<td>.57</td>
</tr>
<tr>
<td>Job Security</td>
<td>.07 (.18)</td>
<td>.25 (.18)</td>
<td>.03 (.05)</td>
<td>.35</td>
</tr>
<tr>
<td>Work Conditions</td>
<td>.01 (.04)</td>
<td>.02 (.03)</td>
<td>.05 (.01)</td>
<td>.08</td>
</tr>
<tr>
<td>Margin Totals</td>
<td>.50</td>
<td>.37</td>
<td>.13</td>
<td>1.00</td>
</tr>
</tbody>
</table>

*Values in parentheses represent the expected proportions on the basis of chance associations, i.e. the joint probabilities of the marginal proportions.
Given the data in Table 5.8, a percentage agreement calculation can be derived by summing the values found in the diagonals (i.e., the proportion of times that the two raters agreed):

\[ P_A = .42 + .25 + .05 = .72 \quad \text{Weber (1990)} \]

By multiplying the marginal values, we can arrive at an expected proportion for each cell (reported in parentheses in the table). Summing the product of the marginal values in the diagonal we find that on the basis of chance alone, we expect an observed agreement value of:

\[ P_c = .29 + .18 + .01 = .48 \quad \text{Weber (1990)} \]

Kappa provides an adjustment for chance agreement factors. Thus, for the data in Table 5.5, kappa would be calculated as:

\[ k = \frac{.72 - .48}{1 - .48} = .462 \quad \text{Weber (1990)} \]

In practice, this value may be interpreted as the proportion of agreement between raters after accounting for chance (Cohen, 1960). Crocker and Algina (1986) point out that a value of \( k = 0 \) does not mean that the coding decisions are so inconsistent as to be worthless, rather that it may be interpreted to mean that the decisions are no more consistent than we would expect based on chance, and a negative value of kappa reveals that the observed agreement is worse than expected on the basis of chance alone. Most assumptions state that a 95% agreement is suggested (0.8 for Cohen's kappa). If the level of reliability is not acceptable, then the researchers repeat the previous steps. Once the reliability has been established, the coding is applied on a large-scale basis. The final stage is a periodic quality control check (Weber, 1990; Stemler, 2001). However, Kvalseth (1989) suggested that a kappa coefficient of 0.61 represents reasonably good overall agreement. In addition, Landis and Koch (1977, p.165) have suggested the following benchmarks for interpreting kappa:
Table 5.10 Benchmark for interpreting Cohen's Kappa value. Source: Adapted from Landis & Koch (1977, p.165)

<table>
<thead>
<tr>
<th>Kappa Statistic</th>
<th>Strength of Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;0.00</td>
<td>Poor</td>
</tr>
<tr>
<td>0.00 - 0.20</td>
<td>Slight</td>
</tr>
<tr>
<td>0.21 - 0.40</td>
<td>Fair</td>
</tr>
<tr>
<td>0.41 - 0.60</td>
<td>Moderate</td>
</tr>
<tr>
<td>0.61 - 0.80</td>
<td>Substantial</td>
</tr>
<tr>
<td>0.81 -1.00</td>
<td>Almost Perfect</td>
</tr>
</tbody>
</table>

5.10.1 Validity

A methodology is always employed in the service of a research question (Cohen, 1960; Saunders et al., 2000). As such, validation of the suggestions made by the research are often encouraged. Saunders et al., (2000) suggested that if at all possible, the researcher should try to have some sort of validation study built into the design.

In some qualitative research triangulation is the preferred method of validation (Erlandson, Harris, Skipper and Allen, 1993). Triangulation lends credibility to the findings by incorporating multiple sources of data, methods, investigators, or theories. However, depending on their philosophical perspectives, some qualitative researchers reject the framework of validity that is commonly accepted in more quantitative research in the social sciences (cf. Templeton, 1994). This is on the basis of a realist assumption that there is a reality external to our perception of it. Consequently, it does not make sense to be concerned with the "truth" or "falsity" of an observation with respect to an external reality (which is a primary concern of validity). These qualitative researchers argue for different standards for judging the quality of research.

Few authors addressing these issues are critical of trying to apply traditional scientific constructs to a focus group methodology. In particular, Templeton (1994) stated that "there is nothing in qualitative methods that should engage or mesh with scientific consideration" (p.11). Templeton makes a particularly comparison of focus groups
with traditional research (p.54) where it is illustrated that 'some truth invariably is lost when the entirety is decomposed into 'characteristics' (p.97). In that, it is suggested that, the desire for validity or reliability often warrants a complete dissection of the phenomena being studied into such specific parts. What is thus achieved is a scientific rationale that the knowledge of each part is true, not that one has found the 'truth' about the phenomenon (Templeton, 1994, pp.11 - 97). Further interjection from Calder (1977), suggested a three approach rationale for the scientific basis of qualitative. The first approach is seen as purely exploratory. The researcher uses the data to explore human conditions and behaviours prior to the second scientific stage of quantitative research. The research is used to generate first degree constructs concerning human behaviour which can be tested by generating three second degree constructs. These can, if necessary, be quantified.

Guba and Lincoln (1990) proposed four criteria for judging the soundness of qualitative research: Credibility - establishing that the results of qualitative research are believable from the perspective of the participant in the research; Transferability - the degree to which the results of qualitative research can be transferred to other contexts or settings; Dependability - whether we would obtain the same results if we could observe the same thing twice; and Confirmability - the degree to which the results could be confirmed or corroborated by others. They felt that their four criteria better reflected the underlying assumptions involved in much qualitative research. Their proposed criteria and the "analogous" quantitative criteria are listed in Table 5.10.

<table>
<thead>
<tr>
<th>Traditional Criteria for Judging Quantitative Research</th>
<th>Alternative Criteria for Judging Qualitative Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal validity</td>
<td>Credibility</td>
</tr>
<tr>
<td>External validity</td>
<td>Transferability</td>
</tr>
<tr>
<td>Reliability</td>
<td>Dependability</td>
</tr>
<tr>
<td>Objectivity</td>
<td>Confirmability</td>
</tr>
</tbody>
</table>
5.11 Chapter Conclusions

This particular research adopts a more qualitative perspective. The aim of qualitative analysis is a complete, detailed description. The attempt is made to assign frequencies to the linguistic features which are identified in the data, and rare phenomena received the same amount of analysis attention as more frequent themes. Qualitative analysis allows for fine distinctions to be drawn because it is not necessary to adopt a reductionism approach of limiting data to a finite number of classifications. The guiding philosophy of the research was to search for career ambiguities, which are inherent in the career process and can be discovered through the analysis of respondent’s everyday language.

This chapter reports on the particular data gathering strategy used in the research process. The parameters of choice for a suitable research methodology were that it:

- allowed participants to be examined within their social context;
- allowed the researcher to get close to the population;
- allowed for unique sensitivities to be observed;
- facilitated understanding of the holistic nature of the population;
- allowed for any patterns of chronological behaviour to be observed; and
- allowed participants to express critical, historical and interpretative thinking.

The method, techniques and philosophical standpoint allowed for the unique dynamics of the industry to be observed; and for the sampling of emotions towards careers in the sector. In essence, it was the “how and why” of industry, organisational and individual action that needed to be observed. From a review of the literature it was observed that these conditions could be met through the adoption of a qualitative research design. While there are various techniques associated with this research paradigm, they all stem from the belief that reality is psychologically, socially as well as objectively constructed. Qualitative research is essentially an inductive approach to theory generation. The focus tends to be on dynamic processes with the aim of explaining rather than predicting phenomena (Taylor and Bogdan, 1984), and essentially concerned with understanding rather than measuring (Bryman, 1988; Strauss and Corbin, 1990).
Chapter 6

The Phase 1 Study of New Entrant Trainees (NET)

This chapter presents the findings of the Phase 1 (P1) study of New Entrant Trainees (NETs) and meets the second objective of this thesis as presented in section 1.5 and 5.3.3. Phase 1 adopted the emerging principles of multi-methodology design (c.f. Mingers, 2001) by combining both quantitative and qualitative datasets in order to generate a more robust understanding of a trade and craft career choice. The research was divided into three approaches: a structured questionnaire; post hoc discussions (informal focus groups); and semi-structured interviews. The questionnaire was designed to enable the perspective of a large number of craft trainees to be discerned. The focus group and interview data were used to enrich the analysis in terms of revealing how the factors came together to shape the careers of individuals.

This chapter presents the career concept as defined by New Entrant Trainee respondents. Essentially a heuristic model, this formed a core reference authority for describing the trade and craft career. The chapter initially defines the Phase 1 sample and then: defines the term career; outlines the primary influences in career choice; examines elements of working life considered important to that choice; considers respondents career expectations; and considers respondents career aspirations. The chapter then identifies respondent’s perceptions of the sector by examining what they consider positive and negative about working in construction. The chapter further
assesses the relevant importance of career development in relation to other considerations involved in working within the sector a detailed analysis and discussion is presented, as well as the contribution to the research that the Phase 1 stage has. The results of the Phase 1 research are to be used as an analytical framework for Phase two research.

6.1 The Sample

The respondents were drawn from five Further Education institutions across the East Midlands. The research was aided by five facilitators (F#1; F#2; F#3; F#4; and F#5), each of whom were tutors of construction related courses. These also helped in the reliability and validation process during analysis. In total, a broadly stratified sample of 579 participants were drawn from fifty-four post hoc discussions, representing the major construction craft occupation. The groupings were primarily categorised by faculty department (Brickwork; Carpentry and Joinery; Painting and Decorating; Plumbing/ Heating and Ventilation; Electrical Installation and Maintenance; and General Construction), although these cut across twelve separate employment specialisations (Bricklaying; Plumbing; Pipe Fitting and Welding; Refrigeration and Air-conditioning; Site Joinery; Bench Joinery; Painting and Decorating; Sign-Writing; Plastering; Wall and Floor Tiling; Electrical Installation & Maintenance). Fifty-three of the post hoc discussions (563 participants) were NVQ or Tech Certificate students. A further opportunistic group discussion was held with a HNC group consisting of sixteen participants. These were speculatively held to generate any further themes. One group was categorised as General Construction and included full-time BTEC ONC students who were not employed or linked to a particular trade occupation (Table 6.1). Most of the respondents were aged 16-18, white and male, with a small percentage being either female, over 25 or from a minority ethnic background.

A small sample of the participants (n=26) were also interviewed in order to provide some specific case vignettes of individual’s career choice processes. The interviews and focus group discussions were transcribed and their content analysed (using NVivo) for references that reflected the ways in which their career decisions and
choices had been shaped. These data were coded and categorised under the themes and principal component characteristics. As the questionnaire was designed for Level 1 to Level 3 students, it was not deemed appropriate for HNC level students to complete it as they were further along the career path than the Phase 1 questionnaire design was intended. The additional focus group was conducted amongst a group of sixteen students working towards a Higher National Certificate (HNC). The group included fifteen males and one female. These respondents had completed either a higher entry level qualification or had completed their NVQ Level 3. The age range of these students was 23–45 years. Thirteen of the group had worked up from craft positions. All of this sample were white-European.

Table 6.1 Programme and occupational categorisation

<table>
<thead>
<tr>
<th>Faculty Department</th>
<th>Occupational Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brickwork</td>
<td>Bricklaying</td>
</tr>
<tr>
<td>Pipe-Work</td>
<td>Plumbing</td>
</tr>
<tr>
<td></td>
<td>Pipe Fitting &amp; Welding</td>
</tr>
<tr>
<td></td>
<td>Heating &amp; Ventilation</td>
</tr>
<tr>
<td></td>
<td>Refrigeration &amp; Air-Conditioning</td>
</tr>
<tr>
<td>Carpentry &amp; Joinery</td>
<td>Site Joinery</td>
</tr>
<tr>
<td></td>
<td>Bench Joinery</td>
</tr>
<tr>
<td>Interiors &amp; Finishing's</td>
<td>Painting &amp; Decorating</td>
</tr>
<tr>
<td></td>
<td>Sign Writing</td>
</tr>
<tr>
<td></td>
<td>Plastering</td>
</tr>
<tr>
<td></td>
<td>Wall &amp; Floor Tiling</td>
</tr>
<tr>
<td>Electrical Installation</td>
<td>Electrical Installation &amp; Maintenance</td>
</tr>
<tr>
<td>General</td>
<td>General Construction</td>
</tr>
</tbody>
</table>
6.1.1 Nature of Group Samples

Table 6.2 Summary of participant sample by institution, faculty and academic level

<table>
<thead>
<tr>
<th>Institution Characteristics</th>
<th>Qualification Level</th>
<th>No. of Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution</td>
<td>Faculty</td>
<td>Level 1</td>
</tr>
<tr>
<td>A</td>
<td>Brickwork</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Carpentry &amp; Joinery</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Plumbing/Heat &amp; Vent</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Electrical Installation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Painting &amp; Decorating</td>
<td>2</td>
</tr>
<tr>
<td>B</td>
<td>Brickwork</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Carpentry &amp; Joinery</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Plumbing/Heat &amp; Vent</td>
<td>4</td>
</tr>
<tr>
<td>C</td>
<td>Brickwork</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Carpentry &amp; Joinery</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Plumbing/Heat &amp; Vent</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>General Construction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Painting &amp; Decorating</td>
<td>1</td>
</tr>
<tr>
<td>D</td>
<td>Brickwork</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Carpentry &amp; Joinery</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Plumbing/Heat &amp; Vent</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Painting &amp; Decorating</td>
<td>3</td>
</tr>
<tr>
<td>E</td>
<td>Painting &amp; Decorating</td>
<td>1</td>
</tr>
</tbody>
</table>

Total No. of Groups 54

Research Method N

Total No. of Focus Group Participants 579
Total No. of Questionnaire Responses 563
Total No. of Interviews 26

Respondents to the questionnaire were asked to provide biographical data. This data included gender, age, study characteristics, qualification level, awarding body, occupation type and length of construction experience. Although there was an assumption that NVQ, Tech Certificate, City and Guilds and BTEC participants would be of the 16-18 age group; a variety of age groups were represented, ranging from 16-50, giving an average age of 19.81. Overall, the majority of respondents did fit the assumption, being aged 16-18 (58.6%).
6.1.2 Gender Profile

The gender distribution between males and females was 97.5 per cent and 2.5 per cent respectively, a total of 549 male and fourteen female respondents. While somewhat unbalanced, the proportion of women is higher than the 1 per cent national average of females engaged in manual construction related employment (CITB, 1999). The female respondents were aged between 17-45 (4 x 17-20; 5 x 21-30; 5 x 30-45), one of which was of Indian decent and thirteen were from a white European background. Only three of this group where in construction employment (one as a Plumber and two in painting and decorating), all were employed for less than one and a half years (2 x 4 months and 1 x 13 months). Six of the female participants were enrolled on Level 1 courses, seven at Level 2, and one at Level 3.

6.1.3 Minority Ethnic Profile

From the output shown in Table 2, the ethnic spread is uneven: white European (92%); Indian (2.1%), Pakistani (0.5%), Black Caribbean (5%) and Black African (0.2%). This gives a cumulative figure of 7.8 per cent ethnic minority representation, higher than the 2 per cent of all those employed within the industry (Ibid).

6.1.4 Qualification Characteristics

Most of the respondents were part-time students on NVQ at Level 2. Table 6.4 provides a breakdown of respondents into level of qualification: with NVQ level 1 and Foundation Construction Awards (FCAs) grouped together; Level 2 and Intermediate Construction Awards (ICAs); and NVQ Level 3, Advanced Construction Awards (ACA) or Higher National Certificates (HNC) grouped accordingly. 23.3 per cent of the respondents considered themselves full-time students, while 76.7 per cent considered themselves part-time.
### Table 6.3 Sample by Gender and Ethnicity (including age)

<table>
<thead>
<tr>
<th>Gender</th>
<th>%</th>
<th>Age</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>97.5</td>
<td>&lt; 17</td>
<td>35.2</td>
</tr>
<tr>
<td>Female</td>
<td>2.5</td>
<td>18 - 19</td>
<td>33.9</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>%</td>
<td>19+</td>
<td>30.0</td>
</tr>
<tr>
<td>Indian</td>
<td>2.1</td>
<td>Statistics</td>
<td></td>
</tr>
<tr>
<td>Pakistani</td>
<td>.5</td>
<td>Min Age</td>
<td>16</td>
</tr>
<tr>
<td>White European</td>
<td>92.5</td>
<td>Max Age</td>
<td>50</td>
</tr>
<tr>
<td>Black Caribbean</td>
<td>5.0</td>
<td>Mean</td>
<td>19.81</td>
</tr>
<tr>
<td>Black African</td>
<td>.2</td>
<td>Median</td>
<td>18.00</td>
</tr>
<tr>
<td>N</td>
<td>563</td>
<td>Std. Deviation</td>
<td>5.142</td>
</tr>
</tbody>
</table>

### 6.1.5 Occupation and Employment Profile

Table 6.4 reveal the respondents’ employment status; the occupational category (i.e. the specific occupation they were training for or employed in) and if employed, length of service. Of the 563 respondents, 79 per cent considered themselves as being directly employed within construction. The average length of employment was 1.94 years as indicated by the mean value. During interviews and post hoc discussions, most respondents indicated that they considered themselves as having a good understanding of the industry and their relative trade. While they acknowledged that they had a lot more to learn, their experiences were broad and set a firm foundation as to particular cultures, practices, work conditions and what they were to expect in the future.

### Table 6.4 Consolidation of main data sample

<table>
<thead>
<tr>
<th>Awarding Body</th>
<th>%</th>
<th>College Status</th>
<th>%</th>
<th>Employment Status</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>C. Award/Tech Cert</td>
<td>21.1</td>
<td>Full-time</td>
<td>23.3</td>
<td>Not Employed</td>
<td>21.0</td>
</tr>
<tr>
<td>NVQ</td>
<td>72.8</td>
<td>Part-time</td>
<td>76.7</td>
<td>Employed</td>
<td>79.0</td>
</tr>
<tr>
<td>City &amp; Guilds</td>
<td>4.8</td>
<td>Faculty Department</td>
<td>%</td>
<td>Occupational Category</td>
<td>%</td>
</tr>
<tr>
<td>B’Tec</td>
<td>1.2</td>
<td>Brickwork</td>
<td>15.6</td>
<td>Bricklaying</td>
<td>15.6</td>
</tr>
<tr>
<td>Level 1</td>
<td>22.1</td>
<td>Pipe-Work</td>
<td>24.0</td>
<td>Plumbing</td>
<td>18.8</td>
</tr>
<tr>
<td>Level 2</td>
<td>56.1</td>
<td></td>
<td></td>
<td>Pipe Fitting &amp; Welding</td>
<td>.5</td>
</tr>
<tr>
<td>Level 3</td>
<td>21.1</td>
<td></td>
<td></td>
<td>Heating &amp; Ventilation</td>
<td>2.8</td>
</tr>
<tr>
<td>Length of Service Statistics</td>
<td></td>
<td></td>
<td></td>
<td>Refrig &amp; Air-Con</td>
<td>1.8</td>
</tr>
<tr>
<td>Min</td>
<td>.00</td>
<td>Carpentry &amp; Joinery</td>
<td>27.0</td>
<td>Site Joinery</td>
<td>16.2</td>
</tr>
<tr>
<td>Max</td>
<td>34.00</td>
<td></td>
<td></td>
<td>Bench Joinery</td>
<td>10.8</td>
</tr>
<tr>
<td>&lt;1yr</td>
<td>30.2</td>
<td>Interiors &amp; Finishing’s</td>
<td>27.4</td>
<td>Painting &amp; Decorating</td>
<td>18.5</td>
</tr>
<tr>
<td>1 – 2 yrs</td>
<td>26.8</td>
<td></td>
<td></td>
<td>Sign Writing</td>
<td>2.2</td>
</tr>
<tr>
<td>2yrs &gt;</td>
<td>22.0</td>
<td></td>
<td></td>
<td>Plastering</td>
<td>4.1</td>
</tr>
<tr>
<td>Mean</td>
<td>1.94</td>
<td>Electrical Inst</td>
<td>4.8</td>
<td>Wall &amp; Floor Tiling</td>
<td>2.7</td>
</tr>
<tr>
<td>Median</td>
<td>1.25</td>
<td>General</td>
<td>1.2</td>
<td>Electrical Ins &amp; Main</td>
<td>4.8</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>3.498</td>
<td>General Construction</td>
<td>1.2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6.2 The Development of the Trade and Craft Career Paradigm

The term "career" has a number of connotations, thus resulting in a profusion of definitions and subsequent ambiguity (Young, 1990; Adamson, 1997; and Arnold, 1997). The ambiguity is both compounded and confounded when the terms "Career", "Vocation" and "Occupation" are used synonymously (Hall, 1976); and when the term "Career" is combined with other words such as "Development", "Management" and "Planning" (Routledge, 1983; Collin, 1984; and Young, 1990). Thus, in order to perform an analysis of construction craft careers, a deconstruction of the term is necessary in order that a cogent definition can be developed for the target population.

The first research question posed by the Phase One study was "How do trade and craft trainees define the term career?" This was to be achieved during discussions with participants in a focus group setting. Many authors have demonstrated the advantages of the focus group methodology (Goldman 1962; Johnson, 1988; and Stewart and Shamdasani, 1990). These studies have shown that they are an effective method for listening to respondents, allowing them to use their own words to describe what they think. Schutz (1972) coined the term "inter-subjectivity" to describe the way in which conceptions and ordinary explanations shared by a set of social actors can emerge using this type of approach. This was deemed appropriate for this heuristic and exploratory phase of the research. A fundamental purpose of the post hoc discussions was to aggregate the accounts of respondents.

6.2.1 Career as a Defined Term

From the transcripts, 614 responses were gathered. Important to each definition of the term career was the element of subjectivity within a work-related context. Respondents were explicit in reference to an individual or subject as the central focus of a career. By eliminating nuances and analogous statements, 91 distinct responses were catalogued. The theorisation process allowed responses to be coded into generic groups to reveal sixteen particular indexed themes. Included with (1) The individual,
others were: (2) status; (3) reward; (4) power; (5) instrumental; (6) function; (7) skills; (8) responsibility; (9) education; (10) training; (11a) content related security; (11b) context related security; (12) situation; (13) past; (14) present; and (15) future. The indexed themes and descriptors are contained in Table 6.5. An inter-rated analysis was conducted between the Analyst (A1) and facilitators at the five institutions (F#1; F#; F#3; F#4; F#5). The facilitators were introduced to the contextual and theoretical underpinnings of each theme and were asked to code random samples of the transcribed data. In most cases, disagreement concerned semantic inferences and addition or omission of some themes by the differing facilitators. This was to some degree expected as the career theory has many differing and complex perspectives. However, the final themes were agreed upon by consensus resolution (Larsson, 1993) and produced an overall reliability of amongst Analyst (A#1) and facilitators (F#1 – F#5) of: A#1 – F#1 = 0.43; A#1 – F#2 = 0.57; A#1 – F#3 = 0.60; A#1 – F#4 = 0.51; and A#1 – F#5 = 0.59. The average level of agreement across A#1 and all facilitators was 0.53, which according to Koch (1977) is a moderate reliability assessment (see Section 5.11).

Table 6.5 Career definition – Index of themes and descriptors

<table>
<thead>
<tr>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Individual Response - in relation to:</strong></td>
</tr>
<tr>
<td><strong>Instrumental</strong> - rudimentary obvious and basic statements</td>
</tr>
<tr>
<td><strong>Function</strong> - reflecting actions and roles</td>
</tr>
<tr>
<td><strong>Skills</strong> - intrinsic and transferable skills (role specific)</td>
</tr>
<tr>
<td><strong>Responsibility</strong> - reflect implicit duties</td>
</tr>
<tr>
<td><strong>Education</strong> - reflecting requisite academic knowledge</td>
</tr>
<tr>
<td><strong>Training</strong> - reflecting specific training</td>
</tr>
<tr>
<td><strong>Content related Security</strong> - labour market demand/relative bargaining power afforded as dictated by skills</td>
</tr>
<tr>
<td><strong>Context related Security</strong> - economic stability (industry and/or organisation)</td>
</tr>
<tr>
<td><strong>Situation</strong> - employer; lateral dynamics; vertical dynamics (a. industry and/or b. organisation)</td>
</tr>
<tr>
<td><strong>Power</strong> - political influence/subordinator role</td>
</tr>
<tr>
<td><strong>Reward</strong> - relative remunerative evaluator</td>
</tr>
<tr>
<td><strong>Status</strong> - social stratification (actual &amp; perceived)</td>
</tr>
<tr>
<td><strong>Past</strong> - work history (relative)</td>
</tr>
<tr>
<td><strong>Present</strong> - current work related activities</td>
</tr>
<tr>
<td><strong>Future</strong> - prospects/aspirations /role succession</td>
</tr>
</tbody>
</table>

181
At the indexing phase; present, past and future were distinguished. For example: present - "the type of job you do"; past - "when you have been in a job for a long time"; and future - "what you want to do in the future". Items indexed as reward were typically statements that translated as "jobs where you earn a lot of money". These were treated as distinct from statements of "what you do to earn money," which were indexed in the instrumental category.

Throughout discourse the terms of "Work", "Career" and "Job" were punctuated intermittently, although discussion at length, relating to the words and syntax, realised a semantic differential. While work and jobs were seen as activities relating to a financial imperative, they lacked subjective input, opportunities for stimulation, or the element of choice. Careers, on the other hand, were seen as something that people wanted to do and choose to participate in. Across all levels, the respondents distinguished careers from jobs; by suggesting that the latter involved choice autonomy and the opportunity for hierarchical advancement (either socially - status, or politically - power). Suggestions of: "a good job"; "a management job"; "office job"; or "one where people work under you" were closely expressed. However, respondents' views of advancement were less in terms of power and status afforded within hierarchical organisational structures, but more of the autonomy afforded an individual as "your own boss."

Statements regarding actual activities were highly prominent throughout the post hoc discussions. For example, a career was defined as "what your occupation revolves around" (function) or "type of work." Another issue discussed was the size and nature of the industry and/or organisation the individual was employed within (situation); the stability of which impacted on long-term tenure (context related security). Some examples of the responses inferred security in terms of knowledge and transferable skills, suggesting practical and academic investments (education; training; skills), which also impact on an individuals desirability or relative bargaining power for jobs within the labour market (content related security).
6.2.1.1 NVQ Level 1

A few differences emerged from the NVQ Level 1 respondents across definitions (mostly 16 – 17 year-olds). These definitions were often narrow in scope; examples defined a career as a “job” or “something you do to make money”. This suggests that this group relates to work that is more a function of circumstance not through choice, but of necessity. However, statements such as: “a career is like work, but more important”, reflected the continued hierarchy of careers over jobs. Reflecting on the terms status and power, these groups considered careers to be “management jobs” or a “job in an office”. Overall, there was a “yes” majority when asked explicitly if they regarded themselves as having careers.

6.2.1.2 NVQ Level 2

This group viewed a career as permanent, chosen employment or a specific field of work. However, some additional themes did emerge. Jobs were not only associated with extrinsic rewards but the desire for transferable skills in relation to long-term security and career succession. The concept of responsibility also became apparent within the work role and also in the wider social context with regard to taking care of family. It was considered that a greater variety of choice became a function of training and development. Individuals discussed career strategies and planning, and the concept of owning a career arose. This more sophisticated view of the career reflects a greater understanding of the individual’s responsibility in setting goals and the subsequent active reinvestments of time associated with these processes.

6.2.1.3 NVQ Level 3

This group placed greater emphasis on intrinsic motivational factors and the dimension of career Content, in particular, the importance of enjoying work. There appeared to be an increase in the belief that additional skills and training were required in order to develop a career. The introduction of “life role” themes was of particular importance because of: the participants increased long-term interests; and the identity that they perceive will emerge throughout their working life. In addition, responsibility became a more prevalent theme. Statements such as “commitment to
your choice of work” and “long-term job” begin to suggest dedication and commitment. Although respondents did interpret the term career in relation to the status of official positions, its significance in value was less in terms of an economic imperative, but an individually-derived sense of achievement and personal development.

6.3 Influences

The second research question posed in the study focused on the influences that affected career decision and subsequent choice; these in fact were generally considered as the pre-cursors to college course selection. Respondents were asked to indicate along a Likert scale the extent to which particular individuals, groups and institutions influenced their career choice (section 5.7.2, from 10 items on the CCDI scale - Section 2, Q.7.1 – 7.10; see also Appendix C). Mean scores and standard deviations were calculated and ranked in descending order. Given that higher scores (3.46-5.0) reflected factors that positively influenced participants and low scores (0.0-3.44) reflected factors that were non-influential or negative influences, the ranking reveals factors that very positively to very negatively influenced the participants’ decisions.

In descending order of importance, the most influential factors were: Fathers (M=4.07); Mothers (M=3.91); Family (M=3.83); Friends (M=3.59); Others (M=3.55); College promotions (3.45); Professional Careers Advisors (PCA) (M=3.28); Teachers (M=3.19); Media and Marketing (M=3.07); and Internet and Electronic Resources (I & ER) (M=2.96). Table 6.6 summarises the mean scores and standard deviations of the influence variables items from the respondents.

Of the ten variables that formed the influences scale, the results suggest that electronic resources, schools and professional advice centres had the least influence on the respondents’ career choices. The interviews and post hoc discussions confirmed that contact with the construction industry, which was initiated through parental, sibling and extended family ties, was more significant to eventual career choice. However,
these discussions also confirmed the influence of academic attainment on career choice, with many indicating that a lack of academic interest at school had been a factor in choosing a construction occupation. Similarly, perceptions of the social environment of the industry, flexible working hours and interaction with people of similar social backgrounds were also seen as key subjective influences.

During the discussion sessions and interviews many respondents suggested that their first choice of career had been that of construction. However, the majority of respondents had considered other careers and/or harboured deep-rooted ambitions of moving into other occupations. Typical responses included the following:

"I wanted to go into music but it’s not a real job really"

"Well I really wanted to be a footballer but I didn’t get a trial"

"I thought about being a chef but I didn’t think I had the grades"

A number of respondents suggested that a career in the fire service or army was an ultimate ambition. In this regard, construction craft training was seen as a stopgap or interim measure until they could develop a qualification base in realising their ultimate career ambition.

Table 6.6 Influences on career choice

<table>
<thead>
<tr>
<th>Rank</th>
<th>Influences</th>
<th>n</th>
<th>Mean Value</th>
<th>Std. Dev</th>
<th>Co. Var</th>
<th>Value Judgement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fathers</td>
<td>558</td>
<td>4.07</td>
<td>.813</td>
<td>19.97</td>
<td>Positive Influence</td>
</tr>
<tr>
<td>2</td>
<td>Mothers</td>
<td>557</td>
<td>3.91</td>
<td>.764</td>
<td>19.53</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Family</td>
<td>555</td>
<td>3.83</td>
<td>.760</td>
<td>19.84</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Friends</td>
<td>550</td>
<td>3.59</td>
<td>.783</td>
<td>20.44</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Others</td>
<td>434</td>
<td>3.55</td>
<td>.878</td>
<td>24.73</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>College open day</td>
<td>549</td>
<td>3.45</td>
<td>.815</td>
<td>23.62</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Connexions/PCA</td>
<td>551</td>
<td>3.28</td>
<td>.919</td>
<td>28.02</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Teachers</td>
<td>551</td>
<td>3.19</td>
<td>.818</td>
<td>25.64</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>News &amp; Media</td>
<td>549</td>
<td>3.07</td>
<td>.748</td>
<td>24.36</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Internet/ER</td>
<td>544</td>
<td>2.96</td>
<td>.659</td>
<td>22.26</td>
<td></td>
</tr>
</tbody>
</table>

N=563

* Co. Var= Coefficient of variance
Std Dev= Standard Deviation
6.3.1 Career influence categories

In order to identify or dispel suggestions that results were due to random or chance occurrences, an experimental factor analysis was used to identify consistency, regularity and any order within participant's responses. Significance to the research was that this also aided in reducing the ten variables into any significant groups. During factor analysis, all quantitative measurements and observations are resolved into distinct patterns of occurrence. Using SPSS for this process, random error and invalidity are compensated for, and complex interrelationships within variables are ordered according to their distinct regularities. The data's suitability for factor analysis was established through a preliminary exploration, which showed no violation of criteria assumptions (Tabachnick and Fiddell, 1996; Pallant, 2001). Several correlation coefficients had a presence of 0.3 and above, the measure of sampling adequacy (KMO) value was at 0.704 (0.6 > required), and the statistical significance value was at p=0.000 (Bartlett's test, <0.05 required). In application, factor analysis is mathematically complicated and entails diverse and numerous considerations. Nevertheless, it is an established tool for validating results and reducing data into comprehensible groupings (a palatable introduction to this procedure may be explored in Pallant, 2001).

The factor analysis grouped the influences emerging from the questionnaire findings. A principal component factor analysis revealed the presence of three components with the required eigenvalues exceeding one (Tabachnick and Fiddell, 1996; Pallant, 2001), explaining 23.54 per cent, 16.56 per cent and 10.84 per cent of variance respectively. Based on the screeplot examination, three components were identified and retained. These represented the most significant patterns of consistency and regularity amongst informants' responses. The rotated solution (Varimax) revealed the presence of a number of strong loadings. The three components accounted for 50.94 per cent variance: Component One explaining 21.43 per cent of variance; Component Two explained 17.91 per cent variance; and Component Three explained 11.60 per cent variance. Five variables had a clean loading on Component One: Media/Marketing; Internet and Electronic Resources (I&ER); College Promotion; Professional Careers Advisors (PCA); and Teachers. Three variables had a clean
loading on Component Two: Mothers; Fathers; and Family. ‘Friends’ was loaded on both Component One and Component Two, although the higher value remained on Component Two. The open-ended variable ‘Other’ was loaded on Component Three. Components One, Two and Three were labelled as, Professional Guidance/Proactive Exploration; Relational; and Individual Significance respectively (Table 6.7). This categorisation broadly accords with the literature-derived set of influences namely:

- industry promotion and careers information (professional guidance);
- relational networks (relational); and
- other career choice influences (individual significance).

<table>
<thead>
<tr>
<th>Table 6.7 Rotated factor analysis components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variables</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Media/ Marketing</td>
</tr>
<tr>
<td>I &amp; E R</td>
</tr>
<tr>
<td>College Promotion</td>
</tr>
<tr>
<td>PCA's</td>
</tr>
<tr>
<td>Teachers</td>
</tr>
<tr>
<td>Mothers</td>
</tr>
<tr>
<td>Family</td>
</tr>
<tr>
<td>Fathers</td>
</tr>
<tr>
<td>Friends</td>
</tr>
<tr>
<td>Others</td>
</tr>
</tbody>
</table>

The ways in which these three sets of components combined to influence career choice were further elaborated within the post hoc discussions and interviews, as explained below.

6.3.1.1 Professional Guidance/Proactive Exploration

Component One factors mainly related to proactive searches typical of discrete and autonomous models of decision-making (see Deci and Ryan, 1985). However, respondents in the 16-17 and 17-18 age ranges were on the whole limited in their
individual sourcing of information, and amongst the sample many suggested a distant relationship to teachers and professional advisors. While text-based information was made available in schools, colleges and careers centres, respondents stated that text-based information about vocational training in the industry did not raise the profile of the industry to any significant degree. Respondents also suggested that this information did not highlight any major benefits of the industry, but rather it was subordinated in relation to other occupational fields. For more mature respondents aged over 19; particularly those who had undertaken a work role transition; it was found that text-based information and professional support was more appropriate to their own requirements. In general, the more mature the respondent, the more they engaged in information searches and career exploration prior to entering into the sector. This was not to the exclusion of, but in addition to, relational networks.

6.3.1.2 Relational

Component Two items were mainly linked to the influences of friends and relations in career choice process. Contrary to mainstream careers theory (e.g. Otto, 2000), fathers were considered more of an influence on career choice than mothers. This may be because of the male dominated nature of the construction sector. Siblings and extended family were also instrumental in influencing career choice. The post hoc discussions revealed that mothers and friends were more passive in terms of their influence, providing support to decision and choice making processes. The relational literature describes parents, peers and family as a valuable mediating factor in the career decision/career choice process, serving as both bridge and filter between the individual, information and professional networks (Shanteau, 1988; Bowlby, 1982; Phillips et al., 1983; Blustein et al., 1997). It should be noted that there were no discernable differences for those from different trade or ethnic backgrounds, nor did gender have a significant effect on these influences.

6.3.1.3 Individual Significance

Component Three items related to the personal circumstances of the individual making their career choice and embodied the items taken from the open-ended item
"Other" on the influences scale. The qualitative data showed these to include: financial factors (overt considerations of remuneration); situational factors (the constraints on choice brought about by the respondents' individual circumstances such as educational attainment); individual factors (elements of self-determination brought about by personal need or conviction); and extended social factors (those factors stemming from other informal relationships and networks outside of the family).

6.3.2 Analysis of Post Hoc Discussions

The post hoc discussions and in-depth interviews further served to add context to the analysis outlined within quantitative results. During discussions within the 53 focus group; participants where asked "How was your choice in construction career influenced?" and "How important were alternate influencing factors to you?" As a result, the context in which each influence was used was identified. The basis of such questioning was also used during interview sessions. From direct interpretation of transcripts, and using themes and categories from Philip et al., (2001) and Schultheiss (2001), the data were coded revealing: the three conceptual themes of "Actions", "Recruitment" and "Independent"; and twenty-one categories, reflecting how each variable was used in participants' decision and choice making processes. Actions represented variables participants' regarded as instrumental in: directing, supporting or providing information.

Table 6.8 Thematic and categorical representation of data

<table>
<thead>
<tr>
<th>Actions</th>
<th>Recruitment</th>
<th>Independent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Encouragement/Emotional support</td>
<td>1 Lack of efficacy/Negation</td>
</tr>
<tr>
<td>2</td>
<td>Passive support</td>
<td>2 Pathological dependency</td>
</tr>
<tr>
<td>3</td>
<td>Provision of Information</td>
<td>3 Collaboration</td>
</tr>
<tr>
<td>4</td>
<td>Alternative options</td>
<td>4 Cautionous decision making</td>
</tr>
<tr>
<td>5</td>
<td>Asserted direction</td>
<td>5 Confirmation of choice</td>
</tr>
<tr>
<td>6</td>
<td>Forced guidance</td>
<td>6 Tangible Assistance</td>
</tr>
<tr>
<td>7</td>
<td>Critical appraisal</td>
<td>7 Seeking information</td>
</tr>
<tr>
<td>8</td>
<td>Instrumental/Social Integration</td>
<td>8 Sounding board</td>
</tr>
<tr>
<td>9</td>
<td>Passive Action/Role model</td>
<td>9 Unsuccessful recruitment</td>
</tr>
</tbody>
</table>
Recruitment represented variables participants called upon to aid in the decision and choice making process. Independent variables were those participants engaged with in a proactive relationship.

The matrix given in Table 5.9 displays the relationship of each category to the ten influence variables, in terms of the context to which each influence was set. Each variable was analysed against each category within the matrix to identify the magnitude to which each variable served as an influencing factor. From the matrix analysis, the variables loaded on Component One (Media/Marketing, I & E R, College Promotions, PCA's and Teachers) were used in 47.62 per cent of their contextual settings. Component Two items (Fathers, Mothers, Family and Friends) were used in 76.19 percent and Component Three (Other including sub-set items: Situational, Individual, Financial and Extended Social) accounted for 31.43 per cent within context.

Table 6.9 Diagnostic matrix of factor analysed and qualitative data

<table>
<thead>
<tr>
<th>Influence Variable</th>
<th>Experienced Category</th>
<th>Recruitment (R)</th>
<th>Independent (I)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Actions (A)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 2 3 4 5 6 7 8 9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Media/Marketing</td>
<td>x x x x x x x x x x</td>
<td>x x x x x x x x</td>
<td></td>
</tr>
<tr>
<td>I &amp; E R</td>
<td>x x x x x x x x x x</td>
<td>x x x x x x x x</td>
<td></td>
</tr>
<tr>
<td>College Promo</td>
<td>x x x x x x x x x x</td>
<td>x x x x x x x x</td>
<td></td>
</tr>
<tr>
<td>PCA's</td>
<td>x x x x x x x x x x</td>
<td>x x x x x x x x</td>
<td></td>
</tr>
<tr>
<td>Teachers</td>
<td>x x x x x x x x x x</td>
<td>x x x x x x x x</td>
<td></td>
</tr>
<tr>
<td>Component 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mothers</td>
<td>x x x x x x x x x x</td>
<td>x x x x x x x x</td>
<td></td>
</tr>
<tr>
<td>Family</td>
<td>x x x x x x x x x x</td>
<td>x x x x x x x x</td>
<td></td>
</tr>
<tr>
<td>Fathers</td>
<td>x x x x x x x x x x</td>
<td>x x x x x x x x</td>
<td></td>
</tr>
<tr>
<td>Friends</td>
<td>x x x x x x x x x x</td>
<td>x x x x x x x x</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>x x x x x x x x x x</td>
<td>x x x x x x x x</td>
<td></td>
</tr>
<tr>
<td>Sub-scale</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Situational</td>
<td>x x x x x x x x x x</td>
<td>x x x x x x x x</td>
<td></td>
</tr>
<tr>
<td>Individual</td>
<td>x x x x x x x x x x</td>
<td>x x x x x x x x</td>
<td></td>
</tr>
<tr>
<td>Financial</td>
<td>x x x x x x x x x x</td>
<td>x x x x x x x x</td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>x x x x x x x x x x</td>
<td>x x x x x x x x</td>
<td></td>
</tr>
</tbody>
</table>
6.3.2.1 Actions

Categories A1 – A9 within this theme included narrative accounts of the voluntary participation of others, reducing the participants to a subordinate role. As a proactive external engagement, this included variables that factored against Component Two (relational variables) and accounted for 50 per cent of accounts related to this theme. Professional Guidance/Proactive Exploration and Extraneous components accounted for 24.2 per cent and 25.8 per cent respectively.

**Action 1 – Encourage/Emotional Support:** As found in Schultheiss (2001), this category included narrative accounts of those variables that promoted encouragement through active emotional support. Participants encountered this particularly from parents, relatives, peers and Other (Social sub-set): ‘My mother offered me loads of support when I wasn’t sure of what to do she would say, “You always need builders …don’t worry it’s a fine trade,”’ although in one instance this was encountered from educational staff: ‘I didn’t have an idea what I wanted to do but when I got a bit down about it one of my teachers offered loads of support and guided me through the options.’

**Action 2 – Passive Support:** as distinct from Action 1, this referred to general support with no construction inference. Typically this was minimally intrusive. Although encountered amongst all relational variables this was particularly true of mothers: ‘My Mum would be there in the background telling me to “go for it” she would have supported me whatever I did but she seems glad I chose this.’

**Action 3 – Provision of Information:** As distinct from information search, this category reflects variables instrumental in provided information to participants. This was particularly true of close family members: ‘My uncle turned up and gave me all this stuff about joinery, how you had all the figures about how you needed joiners… he said I’d always find work.’

**Action 4 – Alternative Options:** This reflected accounts where the participant was provided with career options: ‘My friends and family all said I should try what they
were doing. Most of the options seemed good. Quite a few of them were in like building, plumbing, joiner and that so I knew this was the kind of thing I'd end up doing.'

**Action 5** - Asserted Direction: This reflected meaningful influential variables which focused career options on the construction sector: 'It was almost certain that I was going to end up doing this kind of work...all my family do it and they encouraged me in this type of work...but we didn't really think of any other careers.'

**Action 6** - Forced Guidance: Accounts of this nature reflected overbearing involvements in which participants adopted a subordinate role in the process. Particularly parents, this typified influences that disregarded individual preferences. Often a collaborative process involving all relational variables, this was linked to a lack of self-efficacy, esteem or confidence, and often reflected a pathological dependency on the family: 'My mum and dad kept shouting at me when I left school telling to go and get a job and all that. I didn't really think I wanted to do it, then my uncle got involved and found me a job.'

**Action 7** - Critical Appraisal: As a negative involvement this was often seen as a denigrator towards the individuals' skills and abilities: 'I wanted to go into something else but my teachers said I didn't really have the grades for it, and kind of told me this would be better for me; my parents thought I'd be better suited to this than in computing which I wanted to do.'

**Action 8** - Instrumental/Social Integration: This example portrays direct action: My uncle gave me a job; my friend's dad gave me a job. Characteristic of this were bonds developed which aided in the school-to-work or school-to-college transition: 'My brother worked there, so I got used to it easier... he showed me the ropes.' An example to this (in isolation) is given: 'The Careers Advisor brought me down to the college and I enrolled then. He introduced me to the head of construction and told me if I had any problems to call him.'

**Action 9** - Passive Action/Role Model: These were relational experiences where participants expressed meaningful admiration for someone working within the sector:
'I have seen guys working on jobs and I thought "I'd like to do that"." Also related to an emphasised financial imperative and certain nuances were coded under the financial sub-set: 'My uncle's a plumber and he's always got a flash car. I always sort of looked up to him, so when I left school I thought "Right...that's for me".'

6.3.2.2 Recruitment

This theme of categories focused on participants' active and voluntary engagement of other persons or resources within the decision and choice process. In these instances, participants are often clear about the utility and information that individuals and resources may bring to the process. In the majority of cases, the participants act autonomously in their engagement, although some suggestions point to the negation of their own subjective involvement. From analysis represented in the matrix Component One items were used in 62.22 per cent of their contextual settings; Component Two items were used at 84.21 per cent; and Component Three items were represented at 40 per cent.

Recruitment 1 – Lack of self esteem/Negation: It was found that many participants took a passive role; relinquishing decision and choice processes to others significant in their relationship. This often involved parents, although was approached on multiple vectors: 'I didn't know what I was going to do work-wise, so I asked quite a lot of people what to do...I asked my parents and one of my teachers... eventually my brother got me a chance at his work place.'

Recruitment 2 – Close Collaboration: Similar to R1, except in this instance participants emphasised a less subordinated role. The role of relational variables was highly apparent within this category: 'We all sat down really ... my mum, dad they're all working in the trade... my mum is a secretary in the same firm.'

Recruitment 3 – Information Seeking: In this instance, participants emphasised the role of non-relational factors: 'I had looked around ... got a few magazines and looked on the internet, the guy at the job centre helped a bit too really. I was sure in the end that I was happy with it all.'
**Recruitment 4** – Rational Decision Making: Examples were given of the recruitment of all variables systematically: 'I got information all over really. I knew a few people in the trade and they got me in...I talked to DW and P, and got a few leaflets and booklets on it all.'

**Recruitment 5** – Cautious Decision Making: The complexity of decisions and choice were highlighted by information gathering amongst workers within the sector: 'It’s quite hard really, but you have to do your homework before you find out what’s best... I talked to people within the industry.'

**Recruitment 6** – Alternative Options: Informal and formal networks were used in conjunction with information to weigh up alternatives to construction careers. This was considered a more systematic process: 'It takes a long time to find out what’s about. But if you keep looking and asking questions you can find the right way to different jobs... that’s what I did and a had a few choices of what I could do.'

**Recruitment 7** – Tangible Assistance: While A8 suggested career augmentation by another party, these accounted for dual participation: 'I knew some people working on sites and I asked them the best way to get in. I was introduced to one of the site foremen and I got a job after enrolling at college.'

**Recruitment 8** – Confirmation of Choice: As a post-hoc activity, these instances represented participants use of formal and informal information sources to justify acceptance of construction careers: 'I told the careers teachers what I wanted, to see what they thought...I had spoken to my parents as well to get their idea about it; after I decided to go to college I got my brother to think about it too...then I just tried to find the best ways to get to college and get a job doing what I wanted.'

**Recruitment 9** – Unsuccessful Recruitment: Initial information and guidance by sources was not always found to be successful: 'You always get people saying this and that’s good...I tried talking to teachers and I went to look at what jobs were around...I tried to get ideas from all over...I nearly ended up doing something else.'
6.3.2.3 Independent

Categories I1 – I3, represented narrative accounts of autonomous, reflective of extended and systematic exploration. These were subjective influences which, while representing the use of professionals and information sources, often ignored or minimised informal social networks within the selection process. Component One items were significant here, representing 66.67 per cent of accounts. Components Two and Three were represented at 13.33 per cent and 53.33 per cent respectively.

**Independent 1 – Systematic Process:** As distinct from R4 (section 6.3.2.2 above), these reflected a higher level of autonomy, often considering all potential career trajectories. Often involving older participants, information was central and less guidance typified such responses: ‘Nobody can really help you when it comes down to it...you sort of shop around.’

**Independent 2 – Confident Independence:** Participants often indicated none or limited use of people or information, although this was considered distinct from negative or negation of career importance: ‘I can do most things when I put my mind to it, this is just what I chose to do.’ ‘Can’t say anyone helped or anything.’ Such accounts were not focused intrinsically on construction careers.

**Independent 3 – Direct Vision:** As distinct from category I3, such data was more reflective or intrinsic to the nature of construction careers: ‘I’ve always wanted to work with my hands...’. ‘I don’t think I wanted to do anything else, so I can’t really say anybody influenced me.’ ‘Just saw a job going and got it.’ Although positive in a self-directed career assertion, this was often linked to: a lack of academic attainment; lack of career efficacy; or fear of failure, all leading to a lack of perceived career options. It was considered that this aspect may warrant further examination.
6.4 Important Career Characteristics

Respondents were also asked what they found to be the important determinant in choosing a career in construction amongst other alternatives. From the quantitative assessment, respondents indicated from a predefined list that the potential of the industry to develop their skills was very important. Table 6.10 reveals the mean values in descending order of importance.

Table 6.10 Important characteristics for choosing construction as a career

<table>
<thead>
<tr>
<th>Rank</th>
<th>Characteristic</th>
<th>Mean Value</th>
<th>Value Judgement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Improve Skills</td>
<td>4.74</td>
<td>Very Important</td>
</tr>
<tr>
<td>2</td>
<td>Working with Hands</td>
<td>4.48</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Appreciated</td>
<td>4.39</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Active social life</td>
<td>4.29</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Earn a lot of money</td>
<td>4.26</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Receive a good pension</td>
<td>4.26</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Secure long term job</td>
<td>4.25</td>
<td>Important</td>
</tr>
<tr>
<td>8</td>
<td>To be well managed</td>
<td>4.15</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Take on greater responsibility</td>
<td>4.13</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Good relations with colleagues</td>
<td>4.13</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Pleasant physical work conditions</td>
<td>4.12</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Gain promotion</td>
<td>3.75</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Live close to work</td>
<td>3.14</td>
<td>Moderately Important</td>
</tr>
</tbody>
</table>

From the questionnaire analysis, improving skills was considered the most important aspect of their careers (4.74 mean), with 76.9 per cent (433) respondents suggesting it to be very important to their career, as opposed to living close to work to which only 10.7 per cent of respondents expressed as being very important to their career (60 respondents). Conversely 0.2 per cent of respondents (1 respondent) suggested the improvement of skills to be of "No importance" (lowest response) and 6.7 percent (38 respondents) expressed living close to work as being of "No importance." However, with the exception of "live close to work", the analysis suggest that respondents found that all of the remaining characteristics of importance to their careers.
Interviewees elaborated on these elements and produced a range of alternative reasons for choosing to go into the construction industry. Most frequently they reported that they found construction interesting and that they enjoyed the work. In some cases, the expressions related to a disinterest in academic related occupations, construction providing the alternative. Other reasons were that the construction industry contributed to their long-term goals, as it was a "secure"; "long-term job"; "career for life"; "respectable"; and a "worthwhile career". However, as expressed in post hoc discussions a small number of interviewees stated that they chose the construction industry simply because the job was available and did not attach a high level of significance or importance to any characteristics of the industry. This was mainly a function of encounters and forced encouragement from parents due to lack of career motivation.

6.5 Career Expectations

From Table 6.11, it can be seen that respondents indicated clearly what progression possibilities they expected the industry to offer in the future. However, the order of the expectations yielded surprising results, as it did not accord with occupational linearity. The development of skills, knowledge and experience to equip you to "Work for oneself" was seen as the highest expectation (m=4.30); professional occupations such as Architecture or Structural Engineering was also seen as a high expectation (m=4.15). Learning skills in other occupations (m=3.95) was considered higher expectation than moving into: Supervisory roles (m=3.72); Managerial roles (m=3.63); and Technical roles (m=3.43).

Table 6.11 Rank order of career expectations

<table>
<thead>
<tr>
<th>Rank</th>
<th>Expectation</th>
<th>Mean Value</th>
<th>Value Judgement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Work for oneself</td>
<td>4.30</td>
<td>Strong Possibility</td>
</tr>
<tr>
<td>2</td>
<td>Professional occupation</td>
<td>4.15</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Horizontal job enlargement</td>
<td>3.95</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Supervisory role</td>
<td>3.72</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Managerial occupation</td>
<td>3.63</td>
<td>Moderate Possibility</td>
</tr>
<tr>
<td>6</td>
<td>Technical occupation</td>
<td>3.43</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>563</td>
<td></td>
</tr>
</tbody>
</table>
Analysing the descriptive statistics suggests that all but technical occupations were expected. This was surprising as technical occupations often require less duration in academic endeavours than professional status (i.e. Architect). The same being true of management positions; and supervisory competence is a required component of NVQ level 3. Analysis of qualitative results indicated that the majority of Level 1 respondents expected to be working for themselves or advancing into a professional capacity in future. In the case of bench joiners many expressed that there was a possibility of moving into Architecture. The possibilities of job enlargement and moving into supervisory roles were seen as likely possibilities to those in brickwork trades. The majority of respondents expressed with certainty that developing skills beyond their current occupation was of particular interest:

"Once I learn this job my boss says I can have a go at plumbing."

"If you can do more than one kind of job you’ll always be able to find work."

"Bosses obviously want you to learn more than one trade as it’ll save them money."

Contrary to the qualitative results, many expected to move into supervisory roles as a natural corollary of their present employment:

"Once you’ve done your training you work a few years...then become a supervisor, then into the office probably, then work for yourself."

"When you get your head down it’s easy to become a supervisor."

"You usually become a supervisor or something after you get your NVQs."

This may point to an indication that the levels of expectation expressed were more to do with desires and occupational goals for the future.
Moving into Management or Technical occupations were considered less likely possibilities amongst those in painting and decorating trades. This was often considered as the result of low previous academic attainment:

“I’m better at working with my hands than an office job or management.”

“I don’t think I’d be very good as a manager ... too much paper work.”

“You need to have been a brain box at school for those jobs.”

Concern was expressed as to the degree to which career progression was promoted, particularly beyond Level 2 qualifications:

“Some bosses don’t want you to progress as they make more money from good tradesmen”

“I had to try really hard to get my boss to let me do my NVQ 3... he said it was a waist of money.”

6.5.1 Career Aspirations

A definitive link was established between the nature of respondents’ expectations and their subsequent aspirations. Once again owning one’s own business or self-employment was considered a high aspiration consideration. Three hundred and sixteen respondents (56.1%) aspired this as a future career outcome. One hundred and nine respondents (19.4 %) expressed a relatively low aspiration in terms of movement beyond their present position; although their aspirations did extend to achieving their full qualification and progressing horizontally across the industry, continually learning and taking on board new skills. Sixty five (11.5%) aspired to either a professional or managerial occupation; forty nine (8.7%) aspired to a supervisory occupation; fourteen (2.5%) suggested they would leave the industry altogether; and eight (1.4%) intended to move into technical occupations.
Table 6.12 Frequency and percentage of respondents aspirations

<table>
<thead>
<tr>
<th>Aspirations</th>
<th>Freq</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Own Business/Self Employed</td>
<td>316</td>
<td>56.1</td>
</tr>
<tr>
<td>Fully Qualified</td>
<td>109</td>
<td>19.4</td>
</tr>
<tr>
<td>Professional/Managerial</td>
<td>65</td>
<td>11.5</td>
</tr>
<tr>
<td>Supervisory Role</td>
<td>49</td>
<td>8.7</td>
</tr>
<tr>
<td>Another Industry or Occupation</td>
<td>14</td>
<td>2.5</td>
</tr>
<tr>
<td>Technical Occupation</td>
<td>8</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td><strong>563</strong></td>
<td></td>
</tr>
</tbody>
</table>

6.5.2 Stratified Boundaries

An awareness of stratified boundaries was apparent in respondent's reference to the "office." While not considered as being beyond their capabilities or possibility (see career expectations), managerial and technical occupations seemed less desirable to respondents' aspirations:

"You usually have to take a drop in salary when you move into the office."

"You have more of a laugh in the trades."

"Manager's jobs and those in the office are boring."

"You have more opportunities to travel as a joiner and you can work outside."

Irrespective of reservations, most respondents believed that their particular aspirations were achievable within a period of five to ten years. Around half of the respondents said they would achieve their goals in five years or less. Amongst Level 1 and 2 respondents; apart from unforeseen circumstance; there appeared few perceived barriers to achieving career objectives. However, similar to expectations, amongst Level 3 + respondents there was a realised suggestion of barriers. Respondents suggested that employers regarded training beyond Level 2 to be more personal to the individual, than instrumental to the work role.
6.5.3 Differences Amongst the Trades

During discussions it was interesting to note, however, that the relative focus on certain aspirations shifted according to trade groups. Those in plumbing trades seemed more focused on financial rewards and associated aspirations, while those in brickwork discussed camaraderie and “having a laugh”, so desired to stay amongst trade peers. Interest in job security was primary amongst finishing trades such as painting and decorating, so an emphasis was on improving job content and learning new skills in other trades. In the case of bench joiners, a desire was expressed to move into Architecture or advance into a more professional capacity. Job enlargement and moving into supervisory roles was seen as desirable by those in brickwork trades. A summary of this data ultimately showed that the majority of respondents expressed a clear desire to advance beyond their current occupation.

6.5.4 Social class vs. Material conditions of the home

It became possible to identify the intervening structures or processes through which the context affects the course of individual aspirations. The influence effect of the individual’s or their parent’s social class was largely mediated via the material condition available to the young person. The sample could discern differences in interpersonal relations and resources within the family environment that convey with higher social class; although material conditions changed the identification with certain outcomes:

“My father earns a lot of money in the trades. Some people recon that you need a job like a bank manager to earn loads of money but you can earn it as a plumber.”

“Everyone knows things have changed now. You don’t really have to move into the office to get a good career. It used to be that brickies were considered lower class, but my uncle does well.”

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6.6 Positive and Negative Industry Perceptions

In two open-ended items of the questionnaire (Section 5, Question 11; Appendix C), respondents were asked to identify three things about the industry they viewed as: positive; and negative. An inter-rated analysis was conducted between the Analyst (A#1) and facilitators at the five institutions (F#1; F#2; F#3; F#4; F#5). Although themes identified in the literature were introduced to each facilitator, the facilitators were relatively detached from the underlying theory; and facilitators were encouraged to introduce their own codes if necessary. This was in order for the coding process to remain as objective as possible. The inter-rater reliability was calculated based on a random representative sample of questionnaires. Coding decisions that were not agreed upon were re-examined and final categorisation was achieved by consensus resolution (Larsson, 1993). The proportion of agreement between A#1 and F#1 - F#5 were: A#1 - F#1 = 0.89; A#1 - F#2 = 0.72; A#1 - F#3 = 0.85; A#1 - F#4 = 0.77; and A#1 - F#5 = 0.82. The average level of agreement across A#1 and all facilitators was thus 0.81 which according to Curral et al., (1999) is an acceptable level; and an almost perfect level of agreement according to Koch (1977; see section 5.11).

6.6.1 Conflicting Views

Through this process the open-ended questions matched the themes identified by the scoping study and literature review (Career Development; Financial Incentives; Job Security; Social Factors; Work Conditions; and Job Content); although a further category (Other) was introduced to accommodate more arbitrary comments and those that were unresolved. Tables 6.13 and 6.14 provide examples of descriptive statistics relating to an overall distribution of positive and negative responses.

Table 6.13 identifies that career development was considered the most positive aspect of the sector followed by financial incentives with 25.93 per cent and 25.81 per cent respectively. Conversely, work conditions were considered the most negative aspect of the industry (Table 6.14). However, this was often adjusted according to season, for instance several respondents outlined “working outdoors in summer” as a positive, and “working outdoors in winter” as a negative. Similar views were expressed as
regards financial incentives, with "potential earnings" cited as a positive and "current salary" outlined as a negative by the same respondent.

Table 6.13 An aggregate of positive construction related factors

<table>
<thead>
<tr>
<th>Rank</th>
<th>Positive</th>
<th>Freq</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Career Development</td>
<td>438</td>
<td>25.93</td>
</tr>
<tr>
<td>2</td>
<td>Financial Incentives</td>
<td>436</td>
<td>25.81</td>
</tr>
<tr>
<td>3</td>
<td>Job Content</td>
<td>278</td>
<td>16.46</td>
</tr>
<tr>
<td>4</td>
<td>Social Relations</td>
<td>183</td>
<td>10.83</td>
</tr>
<tr>
<td>5</td>
<td>Job Security</td>
<td>148</td>
<td>8.76</td>
</tr>
<tr>
<td>6</td>
<td>Work Conditions</td>
<td>106</td>
<td>6.28</td>
</tr>
<tr>
<td>7</td>
<td>Other</td>
<td>46</td>
<td>2.72</td>
</tr>
</tbody>
</table>

Total No. of Responses 1635

N 563

Key:
- Career Development
- Financial Incentives
- Job Security
- Social Factors
- Work Conditions
- Job Content
- Other

Table 6.14 An aggregate of negative construction related factors

<table>
<thead>
<tr>
<th>Rank</th>
<th>Negatives</th>
<th>Freq</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Work Conditions</td>
<td>826</td>
<td>48.91</td>
</tr>
<tr>
<td>2</td>
<td>Job Content</td>
<td>174</td>
<td>10.30</td>
</tr>
<tr>
<td>3</td>
<td>Financial Incentives</td>
<td>147</td>
<td>8.70</td>
</tr>
<tr>
<td>4</td>
<td>Social Relations</td>
<td>144</td>
<td>8.52</td>
</tr>
<tr>
<td>5</td>
<td>Job Security</td>
<td>69</td>
<td>4.09</td>
</tr>
<tr>
<td>6</td>
<td>Career Development</td>
<td>47</td>
<td>2.78</td>
</tr>
<tr>
<td>7</td>
<td>Other</td>
<td>43</td>
<td>2.55</td>
</tr>
</tbody>
</table>

Total No. of Responses 1450

N 563
6.7 Calculating NET Priorities

Using an Analytical Hierarchy Process (AHP) as a decision-making framework (Saaty, 1980), the six stimuli of: career development; financial incentives; work content; job security; work conditions; and social relations were assessed in order to structure NET priorities. The six factors were developed by aggregating the job attributes from Hertzberg (1968) original work dimensions/job attributes and those identified through the construction motivation literature (e.g. Olomolaiye, 1988; Price, 1992; Olomolaiye et al., 1998; Jayawardane and Gunawardane, 1998; Rathankoon and Ogunlana, 2003).

Although Likert scale responses allow for a computation of values attached to each stimulus, they often provide little information about individual differences when respondents use extreme ratings to equally judge separately constructed stimuli (Chinyio et al., 1998; Tsai and Bockenholt, 2002). AHP uses Thurstone’s (1959) law of comparative judgement to demonstrate that attitudes can be scaled along a “psychological” or one-dimensional continuum (Tsai and Bockenholt, 2002). This enables the relative intensity of a factor to be measured directly against its counterparts (Chinyio et al., 1998), rendering an “absolute judgement” (Torgerson, 1967).

The factors were systematically paired against each other and respondents were asked to express a preference for one factor over another. The total numbers of pairs presented were fifteen \( n (n-1)/2 = 15 \). While there are several methods for computing values (Torgerson, 1958; Baird and Noma, 1978) descriptive statistics were ascertained using a simple set of matrices and easily discernable computations (Chinyio, 1998). Following this process, participants’ responses were collated and tabulated to assess the number of times each factor was preferred over its counterpart. A binary solution (Torgerson, 1958) was used where unselected factors were given a value of 0. In incomplete cases where no preference was indicated across a pairing, each factor was assigned a value of 0.5. In total, the expected number of responses across all pairs was 8445 (563 x 15; the number of participants, multiplied by the number of paired items). Of the returned instruments there were 8415 fully
completed, a completion rate of 99.6 per cent. An initial rank order was achieved by computing the total number of times a factor was selected. The factors were then ranked according to the number of times each factors was preferred over its counterparts. This provides a useful alternative to the use of rating scales since it enforces bilateral assessments and thus simplifies the judgmental task (David, 1988).

The results from the pair-wise comparisons are presented in Tables 6.15 to 6.19. These indicate the number of times the factor listed in the column was preferred over that identified in the corresponding row. The raw scores indicating the number of times one factor was preferred over another were tabulated (Table 6.15). These were converted into proportions \( P_{ij} \) (Table 6.16) using the formula \( P_{ij} = \frac{F_{ij}}{N} \) (where \( F_{ij} = \) frequency with which factor \( j \) is preferred over \( i \); divided by \( N \), the total number of participants). In Table 6.17, the values of the normal deviates of these proportions were extracted using standard statistical tables. In Table 6.18, a least squared approach was adopted using the formula presented below (Torgerson, 1958).

\[
S = \frac{1}{n} \sum \left( X_{i,j} - X_{i,j}^* \right)
\]

Starting with the column with the lowest values, corresponding columns were subtracted from each other and the mean value extracted. From these extractions, the participants' total preferences could be calculated (see Table 6.19). This indicates the relative intensity that each factor was desired over its counterpart. Scale values were converted into standardised values (ranging from 0 to 100) in order to enhance objectivity. These are interval quantities describing the scale of separation between corresponding factors. It is by enabling the conversions in Table 6.19 that further statistical analysis could be performed in respect of validity testing (Chiniyo et al., 1998).

Validation of the factor rankings was achieved by assessing the nature of participant's responses following each post hoc discussion. These results were recorded and the content analysed to assess the relative correlation between quantitative and qualitative data.
Table 6.15 Raw score data indicating relative preferences

<table>
<thead>
<tr>
<th>Factor</th>
<th>Career Development</th>
<th>Job Security</th>
<th>Financial Incentives</th>
<th>Work Conditions</th>
<th>Job Content</th>
<th>Social Relations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
</tr>
<tr>
<td>Career Development</td>
<td>-</td>
<td>275</td>
<td>214</td>
<td>214</td>
<td>127</td>
<td>150</td>
</tr>
<tr>
<td>Job Security</td>
<td>288</td>
<td>-</td>
<td>208</td>
<td>269</td>
<td>192</td>
<td>217</td>
</tr>
<tr>
<td>Financial Incentives</td>
<td>349</td>
<td>355</td>
<td>-</td>
<td>215</td>
<td>133</td>
<td>183</td>
</tr>
<tr>
<td>Work Conditions</td>
<td>349</td>
<td>294</td>
<td>348</td>
<td>-</td>
<td>301</td>
<td>179</td>
</tr>
<tr>
<td>Job Content</td>
<td>436</td>
<td>371</td>
<td>430</td>
<td>262</td>
<td>-</td>
<td>283</td>
</tr>
<tr>
<td>Social Relations</td>
<td>413</td>
<td>346</td>
<td>380</td>
<td>384</td>
<td>280</td>
<td>-</td>
</tr>
<tr>
<td>No. of Participants (%)</td>
<td>21.73</td>
<td>19.43</td>
<td>18.71</td>
<td>15.91</td>
<td>12.23</td>
<td>11.98</td>
</tr>
</tbody>
</table>

Table 6.16 Relative preferences to factors expressed in relative proportionality

<table>
<thead>
<tr>
<th>Factor</th>
<th>Career Development</th>
<th>Job Security</th>
<th>Financial Incentives</th>
<th>Work Conditions</th>
<th>Job Content</th>
<th>Social Relations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
</tr>
<tr>
<td>Career Development</td>
<td>0.500</td>
<td>0.488</td>
<td>0.380</td>
<td>0.380</td>
<td>0.226</td>
<td>0.266</td>
</tr>
<tr>
<td>Job Security</td>
<td>0.512</td>
<td>0.500</td>
<td>0.369</td>
<td>0.478</td>
<td>0.341</td>
<td>0.385</td>
</tr>
<tr>
<td>Financial Incentives</td>
<td>0.620</td>
<td>0.631</td>
<td>0.500</td>
<td>0.382</td>
<td>0.236</td>
<td>0.325</td>
</tr>
<tr>
<td>Work Conditions</td>
<td>0.620</td>
<td>0.522</td>
<td>0.618</td>
<td>0.500</td>
<td>0.535</td>
<td>0.318</td>
</tr>
<tr>
<td>Job Content</td>
<td>0.774</td>
<td>0.659</td>
<td>0.764</td>
<td>0.465</td>
<td>0.500</td>
<td>0.503</td>
</tr>
<tr>
<td>Social Relations</td>
<td>0.734</td>
<td>0.615</td>
<td>0.675</td>
<td>0.682</td>
<td>0.497</td>
<td>0.500</td>
</tr>
</tbody>
</table>

Table 6.17 Relative preferences expressed as normal deviates

<table>
<thead>
<tr>
<th>Factor</th>
<th>Career Development</th>
<th>Job Security</th>
<th>Financial Incentives</th>
<th>Work Conditions</th>
<th>Job Content</th>
<th>Social Relations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
</tr>
<tr>
<td>Career Development</td>
<td>0.000</td>
<td>-0.030</td>
<td>-0.305</td>
<td>-0.305</td>
<td>-0.752</td>
<td>-0.625</td>
</tr>
<tr>
<td>Job Security</td>
<td>0.030</td>
<td>0.000</td>
<td>-0.335</td>
<td>-0.055</td>
<td>-0.410</td>
<td>-0.292</td>
</tr>
<tr>
<td>Financial Incentives</td>
<td>0.305</td>
<td>0.335</td>
<td>0.000</td>
<td>-0.300</td>
<td>-0.719</td>
<td>-0.454</td>
</tr>
<tr>
<td>Work Conditions</td>
<td>0.305</td>
<td>0.055</td>
<td>0.300</td>
<td>0.000</td>
<td>0.088</td>
<td>-0.473</td>
</tr>
<tr>
<td>Job Content</td>
<td>0.752</td>
<td>0.410</td>
<td>0.719</td>
<td>-0.088</td>
<td>0.000</td>
<td>0.008</td>
</tr>
<tr>
<td>Social Relations</td>
<td>0.625</td>
<td>0.292</td>
<td>0.454</td>
<td>0.473</td>
<td>-0.008</td>
<td>0.000</td>
</tr>
</tbody>
</table>
Table 6.18 Proportional difference between factors

<table>
<thead>
<tr>
<th>Column Arithmetic</th>
<th>Job Content - Social Relations</th>
<th>Work Conditions - Job Content</th>
<th>Financial Incentives - Work Conditions</th>
<th>Job Security - Financial Incentives</th>
<th>Career Development - Job Security</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.000</td>
<td>-0.279</td>
<td>0.335</td>
<td>0.030</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.127</td>
<td>0.447</td>
<td>0.000</td>
<td>0.275</td>
<td>0.030</td>
</tr>
<tr>
<td></td>
<td>-0.117</td>
<td>0.355</td>
<td>0.300</td>
<td>0.335</td>
<td>0.030</td>
</tr>
<tr>
<td></td>
<td>-0.265</td>
<td>0.419</td>
<td>0.300</td>
<td>0.335</td>
<td>-0.029</td>
</tr>
<tr>
<td></td>
<td>0.561</td>
<td>-0.088</td>
<td>0.300</td>
<td>-0.245</td>
<td>0.250</td>
</tr>
<tr>
<td></td>
<td>-0.008</td>
<td>-0.088</td>
<td>0.807</td>
<td>-0.309</td>
<td>0.342</td>
</tr>
<tr>
<td></td>
<td>-0.008</td>
<td>0.481</td>
<td>-0.020</td>
<td>-0.161</td>
<td>0.333</td>
</tr>
<tr>
<td>Sum</td>
<td>0.036</td>
<td>1.525</td>
<td>1.109</td>
<td>0.228</td>
<td>0.956</td>
</tr>
<tr>
<td>n</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Least Squared Solution</td>
<td>0.006</td>
<td>0.254</td>
<td>0.185</td>
<td>0.038</td>
<td>0.159</td>
</tr>
</tbody>
</table>

Table 6.19 Scaled value of factors indicating rank order

<table>
<thead>
<tr>
<th>Factor</th>
<th>Scaled Solution</th>
<th>Scaled Value</th>
<th>Standardised Value</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Relations</td>
<td>0.006</td>
<td>0.920</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Job Content</td>
<td>(0.006 + 0.006) =</td>
<td>0.012</td>
<td>1.841</td>
<td>5</td>
</tr>
<tr>
<td>Work Conditions</td>
<td>(0.012 + 0.254) =</td>
<td>0.266</td>
<td>40.679</td>
<td>4</td>
</tr>
<tr>
<td>Financial Incentives</td>
<td>(0.266 + 0.185) =</td>
<td>0.451</td>
<td>68.910</td>
<td>3</td>
</tr>
<tr>
<td>Job Security</td>
<td>(0.451 + 0.038) =</td>
<td>0.489</td>
<td>74.727</td>
<td>2</td>
</tr>
<tr>
<td>Career Development</td>
<td>(0.489 + 0.159) =</td>
<td>0.649</td>
<td>99.080</td>
<td>1</td>
</tr>
</tbody>
</table>

The law of comparative judgement (Thurstone, 1927) suggests that when a participant is presented with one of the six work-related factors, the individual’s discriminative process assigns a value to that factor along a psychological continuum. Frequency distributions of discriminative processes are therefore generated when factors are presented a number of times. The values of the discriminative process are such that the frequency distribution remains normal along the psychological continuum. Thus, theoretically each factor is associated with a normally distributed process of discrimination (Thurstone, 1927).

The computations resulted in a rank order of: Career Development (CD=1835); Job Security (JS=1641); Financial Incentives (FI=1580); Work Conditions (WC=1344); Job Content (JC=1033); and Social Relations (SR=1012).
Based on the findings, Table 5-12, three factors are given a positive intensity value: (Career Development; Job security and Financial incentives), indicating overall 59.87 per cent of respondents rated these as priorities.

A general review of tables and matrices (Tables 6.15 - 6.19) will give priority attachments and the intensity to which each factor is desired over its counterpart. For instance, 51.2 per cent of trainees viewed career development as a priority over job security, a positive intensity of 2.4 per cent. Although career development is viewed as a higher priority than job security, in cases where participants prioritised financial incentives, job security is given a higher priority than career development (63.1 percent and 62.0 per cent respectively), and while social relations are given the least priority against four of its counterparts, it is considered a higher priority than job content (50.3 per cent and 49.7 per cent respectively).

Respondents were aware that financial incentives would increase relative to experience, acquisition of skills and time served within the industry. From older respondents and respondents on Level 3 courses and above, there was an awareness of a shift in respective career goals as shown below:

“When I started I think I was more interested in the money but I think now I want to push myself a bit further...maybe into management or something.”

“As you get older, I suppose you’ll realise you can’t keep squeezing between pipe work so you have to look a bit further ahead.”

“My plans now are to learn as much as I can about other trades and then maybe set up on my own...”

“You first think of the money when you start, then you think of security. But, really all you’re interested in is getting on. When you get on, move up the ladder, you get the money don’t you. Then you get the security cause you can walk into any job can’t you”
6.8 Phase 1 Findings

The sample very much reflects the nature of the UK construction industry, characterised by a low population of women and ethnic minorities. Most of the respondents were aged 16-18, white and male, with a small percentage being female, over 25, or from a minority ethnic background. The majority are employed and attend college on a part-time (including block release) and have a grasp of the construction sector's environment and first hand knowledge of its culture and working practices.

The individual's social environment plays a major contribution in influencing new entrants to the industry; fathers in particular are the main influence. However, work experience was found to encourage enrolment onto college courses in pursuit of a career. The industry continues to attract individuals who suggest a limited interest in academic pursuits. Yet, by token of the importance respondents place on improving skills, respondents are willing to continue engaging in learning processes beyond the acquisition of operational skills.

The results of the Phase 1 study point to predominantly short-term career planning on the part of NETs particularly at young and relatively tender ages. Most respondents use a career as a starting point - although in some cases they expect quick and immediate success; promotions and salary increases - and use these high expectations to evaluate potential and future possibilities. Expectations are high in terms of career progression, with the majority of respondents believing skills will enable them to move into some form of self-employment. Aspirations follow a similar course, with the majority believing self-employment will yield greatest occupational benefits. This is at the detriment of management positions, as they are still regarded on; as unattainable, or considered at an undesired level.

Respondents believed that the potential financial benefits are the most positive aspect of working within the sector, while the working conditions are the most negative. However, under more robust scrutiny of a paired comparison instrument, respondent show more interest in career development and job security than financial incentives.
Traditional sources of careers advice such as, teachers and Connexions services were considered as having little influence on respondent’s career choices as were the sector’s advertising and marketing, internet and computer based media. As well as suggesting the limited impact that such sources have, it also suggests that career decision-making seldom resulted from extended career searches on the part of the individual. This raises questions as to the adequacy of information regarding post-16 courses and careers routes; the sectors relationship with local schools; and the sectors use of media technology.

Although many respondents commented on other possible career choices, very few presently had ambitions to move into other industries or occupations. Many students expressed to the formation of a rational career decision, however their process appears technically flawed. An implied suggestion of limited information and limits in career search is that choices are made less on the basis of matching authentic desires and personal qualities, but rather on limited alternative opportunities and little information in determining an objective choice. As a result, it would be unsurprising if a high degree of attrition were encountered in later adulthood if; other opportunities become available, and as information about alternative careers becomes more readily available.

From a vocational qualification perspective two particular problems arose; the academic content; and progression beyond NVQ 2. Concerns were expressed as to the high theoretical content of many courses. This is particularly problematic as many respondents see craft based construction as a career to compensate for limited previous academic attainment. Another problem arises with perceived discrepancies between the academic progression which the individual desires, and that which their employers are prepared to offer. Particularly amongst older/mature respondents and amongst respondents from higher qualifications there is the perception that employers are not willing to fund qualifications beyond Level 2 courses.

Despite any possible technical flaw in the choice process, many students believed their chosen course would still produce successful outputs in pursuit of a construction career. Trainees essentially regarded their future careers as linear and predictable, the majority of whom expected to embark on a route involving self-employment.
Working within the sector was considered harsh. Nevertheless, respondents believe they can develop new skills in order to promote themselves into careers beyond the abject conditions they often encounter presently. The belief that this can be achieved through self-employment is evident. Self-employment aside, many expect a relatively seamless career progression, particularly into supervisory positions. All the same, there remains a perception that traditional stratification barriers will prevent progression into management. To compound this, a persistent "them and us" scenario prevails, discouraging aspirations of progression into management and desire to remain close to friends working in the trades. In light of some of the research findings this is surprising as aspirations are generally high and social relations did not feature as a high priority amongst responses. These individual and cultural barriers in terms of office and management occupations are further compounded by a belief that low previous academic attainment would prevent any such aspirations.

6.9 Chapter Conclusions

The research used a series of approaches to examine the career perspective of trade and craft trainees, in particular:

Demographics – the kind of people the colleges are attracting to the sector;
Influences – who or what attracts individuals to the sector;
Characteristics – what characteristics of the sector individuals find important;
Expectations – expected outcomes of their career choice;
Aspirations – individual aspirations;
Positives – aspects of the sector;
Negatives – aspects of the sector; and the
Definitive Rank – relative importance of factors relating to careers.

In micro-terms, the results make for interesting discussions on who the industry is currently attracting; go some way in dispelling previously held anecdotes about trade and craft trainees; and provide indicators as to how the industry may move forward.
In a macro sense, results can provide indicators on how the construction industry may retain its workforce. Contrary to perceptions of the industry and the type of people it attracts, respondents showed a high regard for career development, this is particularly reflected in the relative importance placed on career development in the rank assessment and appreciation for the importance of developing new skills in score assessment. The learning process experienced by respondents is profoundly affected by social and cultural characteristics of the industry. Characterised by working conditions respondents increasingly look for relief through career development and progression. Respondents possessed a high need for learning and displayed a strong desire to be challenged.

There is a need for improved human resource planning and development within the industry, which may stimulate employees’ internal career drives and facilitate retention, aiding in motivating employees beyond a point where basic monetary and material needs may have been satisfied.
Chapter 7

QE Perspective – Realities of Careers in Construction

In Chapter 2, it was emphasised that the employment within the construction sector is mainly project based and cannot often be identified with stoic employee loyalty as characterised by paternalistic employment cultures. In Chapter 3, the view was articulated that careers are no longer traditional and linear in character. Two particular issues are raised in relation to continued growth and success of the industry: the issue of recruiting and retaining a pre-requisite number of new entrants to the sector; and retaining the services of experienced trade and craft operatives. However, negative aspects of retention are described in Chapter 4, whereby people may become locked into their careers due to social and psychological forces that encourage persistence.

In meeting the second objective of this study, the perspectives of New Entrant Trainees are examined in Chapter 6, to gain a representative perspective of those currently entering into the construction industry (NETs). In meeting the third objective of this study, the present chapter reports on the data from the second cross-sectional study of mature and experienced workers within the industry (QEs). The chapter presents a profile of those within the industry who bear the brunt of labour intensity. The research considered that these QEs can provide both subjective and objective evaluations of the nature of the UK construction sector. The purpose of this
The chapter is: to develop a clear picture of how trade and craft careers develop and progress in the construction industry from the initial career choice; and crystallise the theoretical and conceptual references that add clarity to the research objectives. The premise for this is that it is impossible to understand the characteristics of labour markets, without considering the careers of those who operate within them. This requires both objective and subjective data and theoretical models to focus the analytical assessment process.

As outlined in Chapter 5, the Phase 2 research mainly adopted a qualitatively biased approach. Although a rational debate may be struck to suggest that career analysis requires researchers to take account of objectively derived measures (i.e. time, salary, position), while quantitative data are uni-dimensional, qualitative data are unique in that they can be analysed and interpreted both qualitatively and quantitatively. This allows for correlations and/or grouping to be made amongst all data sets, i.e. job role or age to emotion. Through inductive phenomenological research a richer, deeper and process-based set of data are gathered (Taylor and Bogdan, 1984; Bryman, 1988, Strauss and Corbin, 1990). This is a critical advantage for qualitative data and means that analysis can be conducted into the “What?”, “How?” and “How Many?” in relation to careers. That is, an approach that integrates the interpretation of qualitative data with statistical analysis of that data.

As such, a range of qualitative and quantitative data analysis techniques were combined to develop the final research framework. The interview material was tape-recorded, transcribed verbatim and analysed. A thematic process (Creswell, 2003) was used to analyse the interview transcripts. The QSR NVivo is a “code and retrieve” system, and was used to support the analysis allowing for multi-level coding of unstructured data. This assists in maintaining large data sets and contributes to the maintenance of precision and rigour in data analysis. Passages were chosen to reflect the importance and intensity of the respondents’ experience; and as such, any linked passages were used as the unit of analysis. During this process, interviews also yielded complex demographic data. Being essentially quantitative in nature, it was essential to input some of this data into more suitable formats. Thus, the statistical package SPSS was also used. Table 7.1 gives an overview of the chapter by section.
### Table 7.1 Section by section breakdown of Chapter 7

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1 Qualified and Experienced Workers</td>
<td>Outlines the sampling parameters</td>
</tr>
<tr>
<td>7.2 The Research Process</td>
<td>Gives a brief synopsis of all respondents.</td>
</tr>
<tr>
<td>7.3 Descriptive Statistics – Sample Profile</td>
<td>Section reports on the demographic data collected during the intake session: geographic; gender &amp; ethnicity; age; work &amp; employment; occupational scale.</td>
</tr>
<tr>
<td>7.4 Life Course – Interplay Between Situation and Biography</td>
<td>On the biographical data collected during the course of each interview.</td>
</tr>
<tr>
<td>7.5 Careers</td>
<td>Respondent’s response to the proposition of a trade and craft career.</td>
</tr>
<tr>
<td>7.6 Forming Vocational Identity: Career antecedents, exploration, career decision and career choice.</td>
<td>Section looks at career antecedents; to identify respondents ‘vocational identity’ this refers to the respondents’ career search, exploration, decision and choice.</td>
</tr>
<tr>
<td>7.7 The Role of People</td>
<td>Section looks at people as variables; family, friends, peers, educators and teachers; on career action, recruitment, choice and decisional analysis.</td>
</tr>
<tr>
<td>7.8 Career Analysis</td>
<td>In this section respondents reflected on the course of their career and stated their employment pattern since leaving compulsory education.</td>
</tr>
<tr>
<td>7.9 Job Change Index</td>
<td>Index of job change – any move or alteration in the context of the individuals work, duties or activities.</td>
</tr>
<tr>
<td>7.10 Longevity – Time Factors and Employment Tenure</td>
<td>Section reports on respondents’ length of time within the industry; their current work role and current organisation.</td>
</tr>
<tr>
<td>7.11 Types of Job Change and Causal Explanations</td>
<td>Section presents an analysis of the career history chart of respondents, to show the change types identified as causing or explaining mobility.</td>
</tr>
<tr>
<td>7.13 Do You Think You Have Fulfilled Your Career Ambitions?</td>
<td>Section looks qualitatively at the respondents’ emotional responses.</td>
</tr>
<tr>
<td>7.14 What Career Development Have You Been Encouraged To Do?</td>
<td>Section examines how organisations encourage respondents in their career development</td>
</tr>
<tr>
<td>7.15 Why Do They Stay?</td>
<td>Section looks into emotional attachments to careers</td>
</tr>
<tr>
<td>7.16 How Could This Have Been Improved?</td>
<td>Section examines responses made including; career enhancement, career development, social reproduction, generational shift and mentoring</td>
</tr>
</tbody>
</table>
7.1 Qualified and Experienced Workers

The results of semi-structured interviews are presented in this chapter. The term experienced and mature has been used to denote length of service within the industry previous to gaining an NVQ Level 2 or equivalent qualification. The minimum requirement for participants within this sample was five years experience, of which a minimum of two years were expected to be post NVQ Level 2. This is considered the entry level where by individuals are considered qualified and competent enough to perform a range of construction duties unsupervised (CITB, 2004), it is also reasonable to assume that this range of participants are generally conversant with the realities of their particular trade or indeed the industry in generic terms (Zakeri et al., 1996; Chan, 2005).

7.2 The Research Sample

This section gives a brief synopsis of all respondents. It provides a demographic overview of the employees who participated in the study. Henceforth referred to as the “sample”, basic descriptive statistics are presented in the form of data tables, frequency distribution tables and charts. Further results are contextualised with regards to the further objectives of the research. Reference to Appendix G will provide the reader with further information.

The sample was identified by using existing contacts within the research institution, personal contact links and networking opportunities (see section 5.8.3). Further to this, a brief project overview and request was placed in a popular online construction newsletter as can be accessed via the following link (see also Appendix H; Constructing Excellence - Items of Interest):


As detailed in Chapter 5 (section 5.8), three potential forms of interviews may be employed: structured; semi structured; and unstructured (Saunders et al., 2000;
Fellows and Liu, 2003). Past research on professional life cycles has generally followed either of two approaches: a representative study of a large population, using structured questionnaires and reaching up to several thousand people; or an in-depth study of a smaller sample (perhaps a dozen to 30 people), through personal interviews or even oral histories yielding exhaustive first-person accounts. The current study chose the latter approach, focusing on in-depth interviews using a combination of open-ended and focused questions to yield both qualitatively and quantitatively based results. This allowed additional questions to be posed, as and when appropriate, to probe meanings and provide clarification to structured questions, in order to fully understand the response. As such, respondents were permitted to elaborate their responses fully and provide examples.

The interviews were conducted in 2004 – 2005. All but ten interviews were conducted on working sites (i.e., in their working area, an arranged office, or a conference room). The ten exceptions were interviews conducted in the respondents’ homes for reason of their scheduling convenience. In general, the respondents interviewed appeared relaxed, and all answered all questions posed. The interviews generally ranged from 10 to 45 minutes and were recorded onto mini disc, transcribed verbatim and analysed using NVivo qualitative data analysis software.

7.3 Descriptive Statistics – Sample Profile (Respondents Biographical Data)

The sample was subjected to a set of simple demographical checks, in order to establish the level of representation offered by the respondents. This was important as essentially the sampling process was characteristic of a convenience sample (Saunders et al., 2000). Participants were identified based on the general criteria outlined in Section 7.1; however, no other stringent sampling criteria were imposed. Although this may have been considered less robust than structured and purposive sampling methods (such as “Quota” or “Judgemental” techniques), this method was less prone to researchers bias. However, the subsequent geographic spread of the sample provided an interesting and varied range of participants across the
biographical spectrum and was not restricted to one unique set of homogeneous participants. A brief overview is presented below.

For the Phase 2 research a total number of 66 participants were interviewed, of which 62 (n=62) were deemed suitable to represent the effective sample to be assessed during analysis. These provided 62 individual careers Vignette's (descriptive career sketches) which form the basis of the Phase 2 sample. The four rejected interviews were utilised as a post hoc sample and used to cross reference themes from the Phase 1 data.

7.3.1 Geographical Location

Figure 7.1 indicates the general geographic location of participants. Geographically, participants located from: the Glasgow area of Scotland (3); Liverpool in the North West (2); Newcastle in the North East (2); Huddersfield and Sheffield region of Yorkshire (19)
both East and West Midlands (13) (including areas of Derbyshire, Leicestershire and Staffordshire); Cardiff and Pontypool in Wales (18); and various localities in London (5).

Although approximately 24 per cent (n=15) participants indicated that their current occupation entailed work across several regions and approximately 63 per cent (n=39) suggested that they had worked across regions in previous construction related capacities.

The mobility of the workforce is not only restricted to within UK borders. Approximately nine per cent of the sample (n=6) suggested work is regularly carried out across Europe (EU), this is increased to approximately 34 per cent (n=21) where participants indicated they have previously worked abroad in a construction related capacity, of which Nigeria and Hong Kong represented the most extreme cases.

7.3.2 Gender and Ethnicity

As indicated by the Table 7.1, 57 of the effective samples were male and five were female (91.8 % and 8.1 %). As with the Phase 1 research, this represents an imbalance in the gender ratio of participants, although this is by no means uncharacteristic of the UK construction population. In actual terms, as the female representation in this example is 8.1 per cent it is in fact a greater than expected proportion of females. Forty seven of the sample were white-European; eight were of Afro-Caribbean descendants and two originally from the Asian sub-continent. All females were White European with non from any of the ethnic minority groupings.

<table>
<thead>
<tr>
<th>Sex and Ethnicity Cross tabulation</th>
<th>Total</th>
<th>White European</th>
<th>Afro-Caribbean</th>
<th>Asian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex of Participant</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>57</td>
<td>47</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Female</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>62</td>
<td>52</td>
<td>8</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 7.2 Cross tabulation of sex and ethnicity
7.3.3 Age Range

The age of the sample ranged between 20 and 62 years. The mean age is between the age range 35 – 40 (M= 37.9; Std. Dev= 9.71). An examination of the histogram in Figure 7.3, displays the characteristics of the age distribution as a continuous variable. Inspection of the shape of the histogram suggests that it is reasonable to assume that the sample is normally distributed amongst age categories, with the majority of respondents represented in the middle of histogram and fewer respondents tapering out towards extremes, although there is an element of skewness to the left (0.203) indicating a clustering of representation towards the younger age categories.

Figure 7.2 Histogram representing age distribution with normal curve
The age category 25-50 years is evenly distributed between five margins: 25 – 29; 30 – 34; 35 – 39; 40 – 44; and 45 – 49.

A test for normality was conducted using the Kolmogorov-Smirnov statistic. This gave a non-significant result of 0.200 for each group suggesting that the assumption of normality has not been violated (Pallant, 2001). Table 7.3 gives the frequency and percentage values for each age category and presents a cross tabulation of age against marital status. From the data it can be seen that a higher percentage of the sample are married (53.2 %) with a lower percentage single or divorced (37.1 % and 9.7 % respectively). The majority of married respondents are clustered between the ages of 35 and 50 (across three categories). Those divorced were between the ages of 35 and 45 (across two categories). The highest proportions of those indicating they were single were between the ages of 25 and 40 (across three categories). While these statistics give a degree of representation as to the marital status of the sample, they can by no means be considered wholly reliable. For instance, they do not indicate the number of times a person may have been married and/or divorced, nor do they indicate splits between non-married couples. Furthermore, they do not indicate significant relationships between single sex partnerships or any break-ups amongst these groups. However, issues involving relationships and a person’s career are discussed further within this chapter.

Table 7.3 Age categories and cross tabulation of age against marital status

<table>
<thead>
<tr>
<th>Age Categories</th>
<th>Freq</th>
<th>%</th>
<th>Cross Tabulation of age Categories and Marital status</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Married/Partner</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Divorced</td>
<td></td>
</tr>
<tr>
<td>20 – 24</td>
<td>5</td>
<td>8.1</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>3.5</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>3.5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>25 – 29</td>
<td>10</td>
<td>16.1</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>12.3</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>3.5</td>
<td>1</td>
<td>1.8</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>4.7</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>30 – 34</td>
<td>6</td>
<td>9.7</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>3.5</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>4.7</td>
<td>4</td>
<td>7.1</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>3.5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>35 – 39</td>
<td>14</td>
<td>22.6</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>7.1</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>12.3</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>3.5</td>
<td>2</td>
<td>3.5</td>
</tr>
<tr>
<td>40 – 44</td>
<td>13</td>
<td>21.0</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>3.5</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>4.7</td>
<td>6</td>
<td>10.5</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>6.7</td>
<td>7</td>
<td>7.1</td>
</tr>
<tr>
<td>45 – 49</td>
<td>8</td>
<td>12.9</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1.8</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1.8</td>
<td>1</td>
<td>1.8</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>3.5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>50 – 54</td>
<td>1</td>
<td>1.6</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1.8</td>
<td>1</td>
<td>1.8</td>
</tr>
<tr>
<td>55 +</td>
<td>5</td>
<td>8.1</td>
<td>4</td>
<td>7.1</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1.8</td>
<td>4</td>
<td>7.1</td>
</tr>
<tr>
<td>Total</td>
<td>62</td>
<td>100</td>
<td>23</td>
<td>37.1</td>
</tr>
<tr>
<td></td>
<td>33</td>
<td>53.2</td>
<td>6</td>
<td>9.7</td>
</tr>
</tbody>
</table>

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7.3.4 Work and Employment

Tables 7.4 displays the categorical data related to work and employment. They identify the work and employment characteristics generated from the ICC interview sheets. The sample was fairly representative of trades with regard to origins. The highest two trade origins were of Carpenters and Joiners and Plumbing and Heating and ventilation, both groups having 18 respondents. There were 12 currently or previously with Brickwork experience, eight from finishing trades and six from electrical trades. Of the sample, 52 respondents classed themselves as employed by an organisation, nine were self employed (including two business owners) and one was currently unemployed. There were a varied range of organisations represented with the highest number employed within a DLO. Five were employed within a multi-national organisation (MNO), eleven worked within an SME environment with eight sole traders. One respondent worked in construction education and one worked outside of the industry. Excluding the one respondent working outside the construction industry there was representation in the various construction sectors: 16 new build or site based; the 36 from DLOs all worked in maintenance of local government buildings and property; seven worked on domestic market with one from the commercial market which included shop fitting.

Table 7.4 Trade origin; Employment status; Organisation type; and Construction sector

<table>
<thead>
<tr>
<th>Trade Origin</th>
<th>Freq</th>
<th>%</th>
<th>Employment status</th>
<th>Freq</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plumbing/Heat &amp; Vent</td>
<td>18</td>
<td>29.0</td>
<td>Employed</td>
<td>52</td>
<td>83.9</td>
</tr>
<tr>
<td>Finishing Trade</td>
<td>8</td>
<td>12.9</td>
<td>Self Emp'd/Contractor</td>
<td>7</td>
<td>11.3</td>
</tr>
<tr>
<td>Bricklaying</td>
<td>12</td>
<td>19.4</td>
<td>Business Owner</td>
<td>2</td>
<td>3.2</td>
</tr>
<tr>
<td>Carpentry and Joinery</td>
<td>18</td>
<td>29.0</td>
<td>Unemployed</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td>Electrical</td>
<td>6</td>
<td>9.7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Organisation Type</th>
<th>Freq</th>
<th>%</th>
<th>Sector</th>
<th>Freq</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sole Trader</td>
<td>8</td>
<td>12.9</td>
<td>New Build/ Site</td>
<td>16</td>
<td>25.8</td>
</tr>
<tr>
<td>SME</td>
<td>11</td>
<td>17.7</td>
<td>Maintenance</td>
<td>36</td>
<td>58.1</td>
</tr>
<tr>
<td>MNO</td>
<td>5</td>
<td>8.1</td>
<td>Domestic</td>
<td>7</td>
<td>11.3</td>
</tr>
<tr>
<td>DLO</td>
<td>36</td>
<td>58.1</td>
<td>Commercial</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td>Education &amp; Training</td>
<td>1</td>
<td>1.6</td>
<td>Training &amp; Education</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td>Non Construction</td>
<td>1</td>
<td>1.6</td>
<td>Non Construction</td>
<td>1</td>
<td>1.6</td>
</tr>
</tbody>
</table>
Table 7.5 identifies the individual job titles within the sample. A frequency count identified 38 individual job titles although -as previously stated- one person was currently working outside of the construction industry and one unemployed.

### Table 7.5 Occupational frequency amongst sample

<table>
<thead>
<tr>
<th>List of Occupations</th>
<th>Freq</th>
<th>List of Occupations</th>
<th>Freq</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asbestos Technician</td>
<td>1</td>
<td>Lecturer</td>
<td>1</td>
</tr>
<tr>
<td>Bricklayer</td>
<td>5</td>
<td>Mason</td>
<td>1</td>
</tr>
<tr>
<td>Business Owner</td>
<td>2</td>
<td>Mechanical Engineering Mgr</td>
<td>1</td>
</tr>
<tr>
<td>Carpenter</td>
<td>1</td>
<td>Painter &amp; Decorator</td>
<td>2</td>
</tr>
<tr>
<td>Carpenter &amp; Joiner</td>
<td>1</td>
<td>Personnel &amp; Training Officer</td>
<td>1</td>
</tr>
<tr>
<td>Carpentry Supervisor</td>
<td>1</td>
<td>Pipe Fitter</td>
<td>2</td>
</tr>
<tr>
<td>Charge hand/Acting Survey</td>
<td>1</td>
<td>Planning Maintenance Mgr</td>
<td>1</td>
</tr>
<tr>
<td>Computer Programmer</td>
<td>1</td>
<td>Plasterer</td>
<td>3</td>
</tr>
<tr>
<td>Contract Foreman</td>
<td>1</td>
<td>Plumber</td>
<td>9</td>
</tr>
<tr>
<td>Contract Manager</td>
<td>1</td>
<td>Project Manager</td>
<td>2</td>
</tr>
<tr>
<td>Depot Supervisor</td>
<td>1</td>
<td>Responsive Repair Manager</td>
<td>1</td>
</tr>
<tr>
<td>Design Planner</td>
<td>1</td>
<td>Senior Mechanical Engineer</td>
<td>1</td>
</tr>
<tr>
<td>Driver/Labourer</td>
<td>1</td>
<td>Senior Project Manager</td>
<td>1</td>
</tr>
<tr>
<td>Electrical Design Manager</td>
<td>1</td>
<td>Senior Storeman</td>
<td>1</td>
</tr>
<tr>
<td>Electrical Project Manager</td>
<td>1</td>
<td>Supervisor</td>
<td>1</td>
</tr>
<tr>
<td>Electrician</td>
<td>3</td>
<td>Surveyor</td>
<td>1</td>
</tr>
<tr>
<td>Gas Engineer</td>
<td>2</td>
<td>Tiler</td>
<td>1</td>
</tr>
<tr>
<td>Heating &amp; Vent Foreman</td>
<td>1</td>
<td>Unemployed</td>
<td>1</td>
</tr>
<tr>
<td>Joiner</td>
<td>4</td>
<td>Window Fitter</td>
<td>1</td>
</tr>
</tbody>
</table>

### 7.3.5 Occupational Scale

While it may be considered negligible to consider the nuances of individual job title, nomenclature often considers deeper and more insightful meaning, particularly when considering the dimensions of occupational class distinctions (Glick et al., 1995; Pinel and Paulin, 2005). Occupation is a strong source of cultural differentiation in the construction industry (Higgin and Jessop, 1965; Bowley, 1966; Faulkner and Day, 1986), and has the potential for bias to arise from people’s association with particular groups (Loosemore and Tan, 2000). Given too that most theories of careers place emphasis on position and status (Arthur et al., 1989; Nicholson and West, 1997; Arnold, 1997), a system of occupational evaluation would seem to be a necessary precondition of the research. Occupational scales are used to measure the prestige,
status, social standing and or social class position of different occupations. Mainly used in the study of Social Stratification and Social Mobility, occupational scales are constructed in one of four ways – the intuitive, relational, constructed and reputational – all of which are based upon the premise that it is possible to arrange occupations hierarchically through similarities of market and status situation. In intuitive approaches, the researcher simply ranks occupations on the basis of his or her subjective assessment of their social standing in the community. In relational approaches, occupations are ranked on the assumption that people mix with others of broadly similar social standing to themselves. In constructed approaches, a number of different factors, such as income and levels of education, are used to rank occupations. In a reputational approach a group of people, chosen at random, are asked to rank occupations according to their perceived standing in the community and the social ranking of each occupation is calculated on the basis of the replies.

As the occupational scale most widely used in the UK is the Social Class based on Occupation (SC; formerly Registrar General's Social Classification; (Office for National Statistics, 2004), which uses an intuitive approach to group occupations, this was the method broadly used within the research. The 38 observed job titles were grouped into five distinct categories. Table 7.6 presents the categorisation of groups offering a description of occupation included in each category and the frequency to which each category was represented within the sample. The corresponding categorical data is presented as a histogram in Figure 7.3. Category 1 respondents included manual workers: skilled; semi-skilled; unskilled; and Tier 3 self-employed, which includes journeymen or bogus self-employed (Harvey, 2001). Category 2, included Supervisors of manual trades and Tier 2 self-employed, who are categorised as skilled manual workers registered with full CITB credentials. Category 3 included Technicians, Engineers and Tier 1 self-employed who are registered workers who are active in negotiating their own contracts with occasional responsibilities for other manual trades. Category 4 included Managers, Senior Engineers and Business owners of SME's. Category 5 included Senior Managers, Professionals and Proprietors of large contracting firms.
Table 7.6 Occupational evaluation

<table>
<thead>
<tr>
<th>Occupational Evaluation</th>
<th>Freq</th>
<th>%</th>
<th>Inclusions</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 1</td>
<td>31</td>
<td>50</td>
<td>Operational Level</td>
<td>Comprising manual occupations (unskilled and semi-skilled and skilled occupations). Also Tier 3 self-employed</td>
</tr>
<tr>
<td>Category 2</td>
<td>8</td>
<td>12.9</td>
<td>Lower Intermediate</td>
<td>Comprising supervisory level occupations and lower technical occupations. Also Tier 2 self-employed</td>
</tr>
<tr>
<td>Category 3</td>
<td>8</td>
<td>12.9</td>
<td>Intermediate</td>
<td>Comprising Technicians and lower level engineers. Also Tier 1 self-employed.</td>
</tr>
<tr>
<td>Category 4</td>
<td>9</td>
<td>14.5</td>
<td>Higher Intermediate</td>
<td>Comprising managers, senior engineers and SME business owners</td>
</tr>
<tr>
<td>Category 5</td>
<td>6</td>
<td>9.7</td>
<td>Strategic Level</td>
<td>Comprising Senior managers and professionals. Also large proprietors.</td>
</tr>
</tbody>
</table>

Key
- Op = Operational Level
- Low Int. = Lower Intermediate
- Int. = Intermediate
- High Int. = Higher Intermediate
- Senior man/prof = Senior management and Professional

Figure 7.3 Histogram showing frequency by occupational scale
These remain largely objective assessment of the samples occupational position. Reflection on the data contained in both Table 7.5 and Figure 7.3 show that while respondents from the first category (Operational Level) form the majority within the sample (50 %), the remaining four groups have a fairly even representation of 12.9 per cent (Category 2 – Lower Intermediate), 12.9 per cent (Category 3 – Intermediate), 14.5 per cent (Category 4 – Higher Intermediate), and 9.7 per cent (Category 5 – Strategic Level). However, it can be said that the sample is evenly distributed amongst operational and non-operational levels with 50 per cent of the sample having worked up to a supervisory level occupation or above.

7.3.6 Overview of Descriptive Statistics

It is suspected that the distribution of the sample would correspond typically with the population found in most manufacturing, construction organisation, site or project in terms of age marital status and levels of occupational representation. In highly technical organisations employers tend to recruit qualified highly energetic and dynamic employees with a good degree of experience although stable within relationships. The sample was taken from regions all over the UK mainland and were considered to have a vast amount of experience of construction practice both nationally and internationally. The sample were mainly male of white European origin although the sample had a larger than average representation of females and those from ethnic minority groups. The age range was considered normally distributed, with the majority of respondents being married. The sample was populated by all major occupations of the construction industry with a variety of occupational hierarchical groups although the majority of the sample was still working at operative level.
7.4 Life Course – Interplay Between Situation and Biography

While the previous section reports on the demographic data collected during the intake session to each interview the following section reports on the data collected during the course of each interview.

7.4.1 Analysis of Interview Responses

Responses to the interview questions were subjected to both qualitative and quantitative analysis. Qualitative percentages of the group were collated for those lend themselves to such analysis. In addition, all questions were analysed qualitatively. Notes and tapes of all the interviews were transcribed in their entirety and identically formatted for each respondent to permit comparison of responses. The formatting and subsequent analysis used a methodology common to techniques of qualitative data analysis (see Chapter 5). Using NVivo a descriptive matrix displaying all of the responses to each question was developed from the transcriptions. Matrices displayed direct-quote raw data and key phrases from the transcribed interviews. In the content-analytic tradition, these data were aggregated across respondents, collapsed, and identified as "themes". As some themes were initially identified through the literature during the research design, patterns among them were explored. These patterns became increasingly explicit and grounded and eventually led to explanations in response to the questions the study posed (see Glaser and Strauss, 1967).

A principal Question 1 (section 5.8.4; see also Appendix D) initiated narrative discourse and formed a large portion of the interview. In many instances this was enough to elicit the sum total of narrative responses throughout the interview. Further discourse was encouraged using the laddering technique (Chapter 5). It engaged the sample on two conceptual levels: career antecedents (career decision; career exploration; career choice); and chronological career history. The following
discussion of results portrays general themes along with quotations or accounts of particular individuals who illustrate the themes clearly. Where relevant, comparisons are offered by gender and/or years of experience as trade operative. As such, verbatim quotes are given during the discourse along with objectively based data. These quotes are intended to be representative and descriptive rather than comprehensive or exhaustive, but add clarity and depth to static quantitative information.

7.5 Careers

Differing respondent cohorts responded differently to their identification with careers. Most notably, those who had progressed considerably and those who were of a younger age cohort, were of the opinion that they had developed and managed their own progression through the industry, or were willing to do so.

Of course you have a career. It’s not as though you just turn up and don’t think about it. You have to be trained up and there are ways you can get further. That what I would call a career. You can move up if you want to. You can go back to school if you want to. It’s more about what you want to sacrifice. ICC - 20

For the older cohorts, it was more of a hesitant relationship to the term career:

I suppose I must have a career. I’ve been in the game long enough. ICC-51

Well there’s all this talk of careers these days... But when we started on the tools it was just a job. Things change but I suppose we must have some type of career. I don’t know how you would describe it now in those theories, but all the kids talk about careers as though it was something different. To me I get on and do a job. If that means I have a career I suppose I’ve got one. ICC-31
Chapter 7

7.6 Forming Vocational Identity: Career Antecedents – Career search, exploration Career decision and Career Choice

The entire sample initially entered the industry at trade level, 60 per cent with a construction organisation as their first employer. Approximately 89 per cent suggested they started on the first rung of the career ladder as a trainee or apprentice, with the remainder starting as labourers.

7.6.1 Conflict of Decision and Choice

The notion of conflict was evident throughout the results surrounding the samples career formation and identity. The idea that the forming of identity is an iterative process pervaded the samples responses. The data revealed different intensities of thought and information seeking prior to joining the industry, often interlaced with contradiction and the imposing influence of others within the social environment. The exploration, decision and choice process were identified as highly dynamic, involving the influence, interaction and conflict of several factors. These included the thoughts of the individual, social environment, other people, situational variables, circumstance, and happenstance (which represented inclusive: thoughts; activities; and interactions), rather than any one activity in itself. The recollection of the processes often seemed contradictory although several themes emerged which systematically explained the processes that underscored the samples identification of vocational identity.

7.6.2 Traditional and Ambiguous Pathways

The transition from school to work was encountered in a number of different ways. Noticeably unstructured systems were described by a number of informants in the higher age range (45+). In contrast, more formal transition protocols were encountered at the lower age range (20 – 30). Although these transition routes were
not uniquely exclusive of either age range, there was less variability in the middle age (30 – 45) ranges where transition was seen as more a combination of both informal and formal:

Well, then you didn’t have the labour exchange ... well you did, but I’ve never been down there not like the kids now... then you would go down to the local pub and all the gaffers would be there on a Friday night and if they needed a bloke for Monday morning you would introduce yourself. Whenever you needed work then you would just turn up to the pub. You grew up knowing that that’s how you got a job when you left school. ICC - 32

When I left school... I’d done a bit of work, on a work placement before, but I wasn’t sure what I was going to do really. I went to connexion... no I saw a poster in the school before going to connexion and that’s when I thought I’d try it. I think everybody goes to connexion or the job centre plus or something. That’s how you get jobs. ICC - 37

Not really sure how I ended up in the trade... I did a bit of woodwork at school and the teachers said I was pretty good, my dad used to go drinking with this guy who worked for a local builders. I wasn’t sure what I was gonna do when I left school but when I went to the job centre there seemed to be a lot of building work about so I went work with my dad's mate in the end. ICC - 62

For a better understanding of the link between social structure and individual development, it is not enough to acknowledge that the various features of the context impact on individual development, however, it is also necessary to recognise that the context consists of multiple levels changing interdependently across time (Vondraceck et al., 1986). It has been argued that social class operates as a distal system that relates to children’s development indirectly through the proximal context of the family environment (Schoon and Parsons, 2002).

7.6.3 Career Explorations

Early employment experiences were found to be an important setting for career explorations; this included those who worked outside of the construction sector itself. This was seen as an inverse relationship, as respondents reported that the more experience of the job market they developed, the more they narrowed down or ticked off alternative options.
Although 37 of the sample identified the construction industry as their first encounter with employment, 25 had worked in other industries or occupations prior to construction. The time range for this was between one and 27 years, a mean of 4.48 years. As this is distinctly skewed (two respondents with 17 and 27 years respectively) the suitable adjustment (allowing for these values – dismissing the outliers) is 2.27 years.

Many of these changes involved a move into a trainee apprenticeship although four involved move straight into employment, following periods of self studies or evening class. The majority reported the moves being as a result of an initial failure of the career process and poor choice factors:

I worked for this manufacturing firm but didn’t like that. I then thought I’d take a cut in pay and do the apprenticeship. ICC - 25

I did it all arse about face really. I just jumped into any old job on leaving school. Just didn’t think about it. A few years down the line when I got myself straight I looked about a bit. This type of work seemed fairly secure at the time so I thought I’d have a go. ICC - 48

I worked as a hairdresser first and then I started this a couple years ago. That’s it.... Well I can’t say I gave it much thought and just took what job came about. They always ask you what you want to do but how can you know when you leave school. You’re treated like a child one minute then given the choice to go to hell and bugger it after that. ICC - 25

In general, these respondents showed more of an independent and deterministic approach to entering into the industry:

Well I didn’t come into the trade first off. I worked in this factory for a bit straight after school, that were no good. So I left there and got another job; were there for two year mind then left. Pretty much the same, little bit more money, little less hassle, but it were nought special. Had a look about a bit, put the feelers out, got a bit a info after that and thought I might try my hand at carpentry, I mean it seemed that there was always work on. Heard they were taking on with this company a lad a mine worked at. Went down to the yard on the Monday and started Wednesday. ICC - 58

This process typified many of the sample’s experiences and highlighted the fact that there were several facets of the process, including an information search. The
processes appeared more purposive; the result of a conscious and rational process although chance played its part.

7.6.4 Preferred, Alternate and Fantasy Careers

All of the sample were asked whether they had ever thought of other occupations with or without regard for feasibility - When questioned about career exploration, the sample highlighted a range of alternative careers that had been considered. Table 7.7 and Figure 7.4 display the preferred, alternate and fantasy careers outlined by the sample. These were careers they had either: dreamt about; explored; or would have ideally chosen to pursue prior to entering their current occupation. Approximately 90 per cent of the sample responded with either or both a preferred career or fantasy career.

With some overlap (some mentioned both) 55 mentioned a considered/preferred alternate career; and considered/preferred twenty nine mentioned a fantasy career:

I considered becoming a rugby player at one point in time, but I suppose this is a bit more practical. I did have local trials mind you, but I developed a few problems with my knees. ICC - 24;

I wanted to join the Army when I left school. Well that’s what I would have preferred I suppose. Yeah I did think pretty much strongly about that at one stage. I think I still would have. In fact I was thinking about it when I first started here. After a bit of time went by I didn’t think about it again. Just now and again. ICC - 37

Well every one of us wanted to play for Charlton really but dream on. Construction was the next best thing. Who am I kidding? Yes ah, I did think about it. ICC - 03

I had an uncle was an architect. Actually when I first started studying I was working towards that really. Well I thought I was anyway. Things change I suppose. ICC- 04
Table 7.7 Preferred, alternate or fantasy career choices

<table>
<thead>
<tr>
<th>Field</th>
<th>Occupations</th>
<th>ICC-refs</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Item</td>
<td>Group</td>
</tr>
<tr>
<td>Service &amp; Military</td>
<td>Army</td>
<td>2,8,10,11,20,32,37,50</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Royal Navy</td>
<td>26</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Merchant Navy</td>
<td>26,58</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Air force</td>
<td>20,53</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Police</td>
<td>20,32,54</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Fire Service</td>
<td>11,31,42,54</td>
<td>4</td>
</tr>
<tr>
<td>Sports</td>
<td>Football</td>
<td>3,5,7,8,10,11,19,40,4,456</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Rugby</td>
<td>16,18,19,2,4,44</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Cricket</td>
<td>11,17,35,4</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Boxing</td>
<td>22,36,4</td>
<td>2</td>
</tr>
<tr>
<td>Media, Art &amp; Leisure</td>
<td>Photographer</td>
<td>1,3,5,27,4,4,55</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Artist</td>
<td>1,21,55</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Acting</td>
<td>27,1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Film maker</td>
<td>27,55,4</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Graphic Designer</td>
<td>1,21,57,4</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Playboy</td>
<td>1,10,4</td>
<td>2</td>
</tr>
<tr>
<td>Social &amp; Health Care</td>
<td>Doctor</td>
<td>35,52,59,6,0,62</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Nurse</td>
<td>25,48,2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Social Worker</td>
<td>25,45,62</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Teaching/Education</td>
<td>9,46,2</td>
<td>2</td>
</tr>
<tr>
<td>Engineering</td>
<td>Architect</td>
<td>1,3,4,9,12,21,24,28,2,9,49,51</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Design Engineer</td>
<td>9,22,23,25,33,42</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Civil Engineer</td>
<td>35,37,37,4,0,61</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Surveyor</td>
<td>2,15,61,7,17,24,25</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Other Cons Trade</td>
<td>31,37,38,3,9,40,47,56,61</td>
<td>12</td>
</tr>
<tr>
<td>Enterprise</td>
<td>Business Owner</td>
<td>3,43,60,62</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Entrepreneur</td>
<td>12,43,60,62</td>
<td>4</td>
</tr>
<tr>
<td>Computing</td>
<td>Programmer</td>
<td>7,14,4</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Games Designer</td>
<td>7,61,2</td>
<td>4</td>
</tr>
</tbody>
</table>
Chapter 7

7.6.5 Why Did You Finally Choose To Enter into the Construction Industry?

Nobody really wants to come into this industry it just happens. ICC - 10

Of the sample that suggested an alternate or fantasy career, five types of responses were observed when asked why these careers were not pursued. These were: unsure; lack of academic attainment; fear of failure; lack of confidence; lack of assertiveness; and limited opportunity. Table 7.8 describes the reasons for not pursuing their ideal/alternate or fantasy career. The most frequently cited reasons were lack of academic attainment and limited opportunities, with lack of assertiveness the next in frequency. The remaining reasons were similar in frequency with six respondents citing lack of confidence; five citing fear of failure and unrealistic; and four suggesting they were unsure.
Table 7.8 Reasons for not choosing an alternate career

<table>
<thead>
<tr>
<th>Response Type</th>
<th>Typical Statement</th>
<th>Freq</th>
<th>% of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>a unsure</td>
<td>don’t know really</td>
<td>4</td>
<td>7.14</td>
</tr>
<tr>
<td>b lack of academic attainment</td>
<td>my grades at school weren’t good enough</td>
<td>13</td>
<td>23.21</td>
</tr>
<tr>
<td>c fear of failure</td>
<td>couldn’t have handled it if I were no good</td>
<td>5</td>
<td>8.92</td>
</tr>
<tr>
<td>d lack of confidence</td>
<td>didn’t think I’d be good enough</td>
<td>6</td>
<td>10.71</td>
</tr>
<tr>
<td>e lack of assertiveness</td>
<td>I really wanted to but I didn’t in the end</td>
<td>10</td>
<td>17.86</td>
</tr>
<tr>
<td>f limited opportunity</td>
<td>there wasn’t much chance of it were I lived</td>
<td>13</td>
<td>23.21</td>
</tr>
<tr>
<td>g unrealistic</td>
<td>you never get those jobs</td>
<td>5</td>
<td>8.92</td>
</tr>
</tbody>
</table>

All but the youngest six respondents (ICC’s 7, 8, 19, 21, 27 and 37) suggested that careers advice and guidance was limited or “useless” prior to leaving school. Overall, the sample reported to lacking a basic understanding of how to make effective career choices at 16. Although the choice to enter into the construction industry was found to be more decisive amongst those entering into the industry following spells in other occupations; the majority of the sample chose construction trades due either to: perceived lack of feasible alternatives; or as the “course of least resistance”. Notwithstanding specific nuances, the two most commonly noted responses were: “I wasn’t really sure what I wanted to do”; and “I was pretty much certain I would end up in construction”. The latter statement reflected a more fatalistic response than a deterministic expression of preferences. Approximately 15 percent of the sample populated each grouping; although statements from the other 70 per cent reflected both, or considerable contradiction in parts of their discourse:

Well you either went to college or you got onto the council. There wasn’t really much choice. Most of us got a job here. ICC - 38

As I told you earlier about the Army, I probably would have joined that. But people have different ideas...I mean your parents and that; and your mates. In the end it was easier joining on a trade than anything else. ICC - 05

Can’t say I gave it much thought before leaving school really [paragraph 10]...wasn’t sure what I was good at but I was good with my hands .... I had fancied being a bricklayer. I had the idea when I was younger of having a business and working a yard like my uncle [paragraph 30].... Suppose I took the first thing available in the end [paragraph 35] ICC - 37

As exemplified in the latter statement, the salience of the two groups of responses (and overlap of the two) is understood by assessing the role “others” had within the
process. As also found in Chapter 6, the sample found other people significant during their decision and choice process and provided the link between personal preference, uncertainty and the final construction career choice.

### 7.7 The Role of People

Similar to the process outlined in Chapter 6, the transcripts were interpreted and coded according to the themes found in Philip et al., (2001) and Schultheiss (2001). Table 7.9 gives a diagnostic account of the resultant data. It presents a matrix disclosing variables against themes, a descriptive for each theme, and presents verbatim accounts indicative of each theme category. The influence variables are arranged into two categories: relational (parents, family, peers) and professional (teachers, educators, careers advisors); and themes, consider either the action (involuntary participation of others) or recruitment (voluntary engagement of others). Notably, the data compares different to the Phase 1 research on influences (section 6.3) as the three conceptual themes of "Actions", Recruitment" and "Independent" are collapsed into just "Actions and Recruitment". In most cases (exceptions are discussed later), respondents were passive and less determined than in the previous sample. A second differential is that the sample only considered significant people to the antecedent processes rather than any resources (i.e. internet or literature). The exceptions were younger respondents and again those who entered the industry following long periods of employment in other sectors.
Table 7.9 Diagnostic matrix assessing the role of people influencing career choice

<table>
<thead>
<tr>
<th>Influence Variables</th>
<th>Categories</th>
<th>Actions (A)</th>
<th>Recruitment (R)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1 2 3 4 5 6 7 8 9</td>
<td>1 2 3 4 5 6 7 8 9</td>
</tr>
<tr>
<td>Teachers</td>
<td></td>
<td>x x x</td>
<td>x x x x x x x x x x</td>
</tr>
<tr>
<td>Educators</td>
<td></td>
<td>x</td>
<td>x x x x x x x x x x</td>
</tr>
<tr>
<td>Careers Advisors</td>
<td></td>
<td>x</td>
<td>x x x x x x x x x x</td>
</tr>
<tr>
<td>Employers</td>
<td></td>
<td></td>
<td>x x</td>
</tr>
<tr>
<td>Industry</td>
<td></td>
<td></td>
<td>x x x x</td>
</tr>
<tr>
<td>Mothers</td>
<td></td>
<td>x x x</td>
<td>x x x x x x x x x x</td>
</tr>
<tr>
<td>Fathers</td>
<td></td>
<td>x x x x x x x</td>
<td>x x x x x x x x x x</td>
</tr>
<tr>
<td>Family</td>
<td></td>
<td>x x x x x x x</td>
<td>x x x x x x x x x x</td>
</tr>
<tr>
<td>Friends</td>
<td></td>
<td>x x x x x x x</td>
<td>x x x x x x x x x x</td>
</tr>
<tr>
<td>Significants</td>
<td></td>
<td>x x x x x x x</td>
<td>x x x x x x x x x x</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Thematic Index</th>
<th>Actions (A)</th>
<th>Recruitment (R)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional support</td>
<td>1</td>
<td>Lack of self efficacy</td>
</tr>
<tr>
<td>Passive support</td>
<td>2</td>
<td>Pathological dependency</td>
</tr>
<tr>
<td>Provision of information</td>
<td>3</td>
<td>Collaboration</td>
</tr>
<tr>
<td>Alternative options</td>
<td>4</td>
<td>Cautious exploration</td>
</tr>
<tr>
<td>Asserted direction</td>
<td>5</td>
<td>Confirmation</td>
</tr>
<tr>
<td>Forced guidance</td>
<td>6</td>
<td>Tangible assistance</td>
</tr>
<tr>
<td>Critical appraisal</td>
<td>7</td>
<td>Seeking information</td>
</tr>
<tr>
<td>Instrumental action - social integration</td>
<td>8</td>
<td>Sounding board</td>
</tr>
<tr>
<td>Passive action role model</td>
<td>9</td>
<td>Unsuccessful recruitment</td>
</tr>
</tbody>
</table>

(A) Quotation | ICC-ref
1 Mum didn’t really give me any advice but always said she’d support me | 027
2 She told me “nothing ventured nothing gained” she said | 025
3 ... my uncle brought a leaflet from the council before I left school | 034
4 They always said what about this and what about that | 007
5 Grandfather told me to “Get on w’it council lad”. Well that was the thing to do in those days | 029
6 Dad always said from when I was a lad that I was gonna follow him | 010
7 You’ll never be good at that, why don’t you try this or that – stuff em I said | 043
8 There were two guy’s who were at the bottom of our road who worked there | 040
9 I always saw my uncle at weekends he was a plasterer | 050

(R) Quotation | ICC-ref
1 I didn’t think I’d be good at that kinda work so I always asked about a bit | 011
2 Well she always sorts that kind of thing for me so I was gonna leave it to her | 020
3 We would sit down when the time came and have a think about the options | 021
4 I started asking about things when I was in the 3rd year. You can’t be too careful | 042
5 I had made up my mind but I went to the job centre just to get more advice | 028
6 I asked my uncle if there was any work going around at his place | 012
7 I went along cause I hadn’t got a clue about it and they put me straight | 015
8 I asked my mate who was a joiner what he thought about it and he said yeah it’s ok | 024
9 I asked them ...went there as well...they all seemed useless really so I ignored them | 036

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7.7.1 Some Limitations

A further note on Table 7.9 is that choice and decision are not given separate appraisal. As the literature exemplifies in Chapter 2, it is often conceptually problematic to differentiate between career decision and choice. Also, as a result of not specifying questions relating to these concepts at the design phase, it was often hard to discern whether the role of “Others” were during career choice or career decision. In cases where the laddering process succeeded in eliciting specific decision or choice questions, several respondents noted that it was difficult to know how much others influenced either their decision or choice. Others did not naturally separate their reflections, although where they did, there was often considerable overlap. The analysis in Table 7.9, therefore, interweaves the reflections on these two processes. The synthesis offers a more realistic view than would result from trying to force an artificial dichotomy and also prevents the overbearing of bias.

7.7.2 Actions

“Actions” contain nine categories (A1 – A9) reflecting others who, from the sample’s point of view, involved themselves in the antecedent process. These were people who actively encouraged a construction occupation. As exemplified in Philips et al., 2001, these influences formed a continuum as respondents proceed virtually anonymously through the career antecedent process. A1 (emotional support) reflects individuals who provided an affective influence during the career process rather than guidance. A2 (passive support) involved those that took a more active role than those in A1 although information was not career specific. A3 (provision of information) and A4 (alternative options), involved passing information to respondents although A4 involved wider sources of information. A5 (asserted direction) and A6 (forced guidance), reflected influence that was more imposing in nature. They represent an increase in the level of involvement than the previous categories, with A6 becoming the more extreme case as the respondents own preferences are not considered. A7 (critical appraisal) involved negatively constructed influences. These were attempts to sway respondent’s ideas by criticising their abilities. A8 (instrumental action)
involved actions taken by influencers that had a strong impact on the individuals. A9 (passive action/role model) reflected individuals who had no active influence but whose own career served as an influence.

7.7.3 Recruitment

These categories involved how active the informants were at drawing in others to aid in the antecedent process. This category of influence is conceptualised as individuals who are uniquely selected based on their characteristics, expertise or abilities. The observed responses reflected not only: why (R1 and R2); what (R3, R4, and R5); and how influences affected respondents (R6, R7 and R8); but also pointed to the impact of the influence (R9). These categories reflected the extent to which the respondent’s would proceed more visibly through the antecedent process (Philips et al., 2001). R1 (lack of self efficacy) and R2 (pathological dependency) are what the research considered conditions for recruitment. R1 reflects the individual’s low estimate in their ability to enact their career process. This ultimately leads to them recruiting others. In R2, the sample recruited others due to lack of independence or self sufficiency. R3 (collaboration), R4 (cautious exploration) and R5 (confirmation) involved the forming of partnerships during the career process. In R3, examples entailed informants working jointly with others in guiding their own decision. R4 examples illustrated influences that were used to avoid mistakes. Many reported feeling nervous or concerned about the career process especially in light of any previously perceived mistakes. Although similar to R4, R5 identified influences that were more deterministic but where a third party was sought to confirm previously held perceptions. R6 (tangible assistance) reflects the samples use of others directly. This involved strategic or formal introductions to third parties. Similar to A3, R7 – described the samples use of others in accessing information. R8 – sounding board, were people involved in the process to bounce ideas off. These involved situations where participants talked to other, but did neither relied on their opinions (objective or subjective) nor seek further assistance. This category describes instances where the sample sought assistance from others but was unable to obtain it.
7.7.4 Choice and Decision Analysis

It was found that the sample was ultimately guided by their parents, particularly in relation to the career aspirations that parents have for them. As also reflective in the Phase 1, the significance fathers played in outlining career preferences was clear. A high proportion of the sample were influenced by fathers although older siblings and family ties to the industry dominated discussion. Eighty per cent commented on having a close relation or family friend tied to the industry prior to their own entry. Generally, amongst the sample, respondents reported to speaking to mothers and peers about the range of options and career plans, whereas fathers and close family ties where more influential in establishing actual career entry.

The actions of those from professional networks such as career advisors did not particularly feature as discrete influences. Once again (See section 6.3.2.3), with the exception of those entering late into the industry and those with relatively limited experiences in the sector, professional networks were only seen in connection with a self determined component of career choice. Those of the sample who felt better informed about their own interests, preferences and opportunities were found to actively explore and even intensify the exploration process.

In the middle age range closer ties with teachers served as an influence. This differs remarkably from the sample in phase 1 where teachers were reported to being more of a negative influence. Typical responses were:

The teachers suggested that I was good at woodwork so when I asked them what to do they helped me get on a placement. ICC - 62

I had a pretty good metalwork teacher. He taught me all through school. He said he'd been a plumber before and I fancied trying it for a bit but here I am now. ICC - 14

However, the description of careers advice and guidance in school and beyond were interpreted as giving little allowance for individual difference or preference. The educational system and other institutions were found to perpetuate a social and occupational link to the trades. As such, the attributes and resources of the social
environment impacted considerably upon career identity. Where a large construction employer existed in a locality, employment within the trades was seen as a certainty. The sample consistently described educators as a part of labour market process, to the extent that they would systematically filter individuals into these organisations. The assumptions were based on any anticipation of low academic results or the career paths of parents, siblings and peers.

We knew we were gonna do something like this cause we weren’t very good in school. We knew it and teachers knew it. I wasn’t really interested in anything else. When I left school I just went into it. ICC - 40

My dad and my brother were both joiners and I suppose I just expected it. You could always get that kind of work... The teachers taught my brother and they pushed him into the trade. ICC - 43

7.7.5 Social Expectation and Social Structures

The majority of the sample reported ‘feeling in a rush’ to gain employment due to parental, familial, peer and social pressure. Other themes emerged that described social, psychological and situational factors involved, in most notably, the final career entry choice process.

7.7.6 Social Dominance – Social Class; Race; and Gender

The centrality of parental, familial and peer relationships can lead to assumptions made about the predominance of socially constructed factors within the antecedent process. From the analysis, it was possible to interpret how socially dominating themes lead to both limiting and supporting career choice factors. This was particularly true in terms of Social Class; Race; and Gender.

The sample appeared highly aware of social class and most of the sample appeared to orient themselves towards social reference groups. Many informants suggested that there was a prevailing social norm regarding career preferences. These also reflected a desire to want to remain within peer groups as much to do with social identity as
security. To this extent there were shared assumptions about construction trades being more suited to “boys” living in particular areas.

All the lads from round here went into building work. It was alright cause you knew the people you were gonna work with. You knew you were safe really and that you had a chance of getting on because you were all the same. ICC - 11

This was found to be inversely proportionate amongst the female respondents, who were discouraged from entering typically male work environments, although this only served to reinforce their choice.

 Mostly they would push you away from the trades but the more they pushed me away the easier it was for me to decide on the type of work I was going to do. My mother was very supportive though and said I should go for it. ICC - 27

This extract was from a female operative whose father and brother both worked in the industry. In this example, both had served as role models, also providing tangible assistance. Exemplifying the relational factors, the respondents’ mothers also served in providing emotional support within the process. On the whole, female respondents were found to be more deterministic in their approach to construction career selection. The same influences appeared prominent, with mothers given a more supporting role.

Race was an issue not so much for those from Afro-Caribbean communities but was for Asian informants. The two Asian informants both reported prejudices to construction occupations:

My family didn’t want me to go into this trade, but my qualifications weren’t good enough for anything else. I told them I would do this just to get me a bit of money for a while and I would go to night classes to get me through to Uni. When I started earning a little bit they were alright so I just carried on. ICC-62

I never really thought about it at first. Certainly when I was younger I would never have thought I would have come into the trade. It was only after trying all the other bits and when I was made redundant that the opportunity arose.... My Mum would’ve turned in her grave. When I told my wife I was coming in the trade she said “Brickie, Brickie...what am I gonna do with a Brickie” she said. ICC-60
7.8 Career Analysis – Objective and Subjective Dimensions of Careers

As outlined in section 7.4, the sample were asked to reflect on the course of their career. Respondents were asked to give their employment pattern since leaving compulsory education. Using the laddering process the respondents were guided in a manner that helped them to discern key stages, themes and motifs; plot them sequentially into a series of steps (stages or phases) that captured the chronological flow of their career experience. Responses reflected one of four sample preferences: responses that explained changes in their work environment (employer); responses that explained changes in their field (the industry); and changes in their emotional attachment (themselves); changes that characterised their belief system (convergence of all factors).

7.8.1 Career Histories - Nature and Dimensions of Job Change and Career Mobility

Within the construction sector, the nature of project based employment – which proliferate the industry - implicates mobility and job change as a primary component of the individual's career. This was explored by eliciting precise narrative accounts which sketched in detail the samples' career history. In this section the mobility patterns, job change and progression characteristics are detailed in the 62 individual career vignettes that constitute the sample.

The data were analysed and each respondent's career history was charted by assessing: whether the move involved a change in employer (yes/no); whether the change involved a change in function (yes/no); and the relative status and reward vector of the job change (no change, development, diagonal right, up, diagonal left, down). Each type of move descriptor is represented by an alpha numeric character and/or represented by a hieroglyph (graphic representation). By combining the various characters and hieroglyph, it is possible to interpret and describe the nature and dimension of each of the respondents job change.
Table 7.10 Basic description of job changes

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Change Orientation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Context</td>
<td>Industry Change</td>
<td>Inside Construction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Outside Construction</td>
</tr>
<tr>
<td>Employer Change</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Content</td>
<td>Function Change</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Intra-spective</td>
<td>No</td>
</tr>
<tr>
<td>Content/Context</td>
<td>Regressive</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Progressive</td>
<td></td>
</tr>
<tr>
<td>Ordinal Metric</td>
<td>Change in Status</td>
<td>Up</td>
</tr>
<tr>
<td></td>
<td>No Change</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Down</td>
<td></td>
</tr>
</tbody>
</table>

By developing Nicholson and West's (1998) basic descriptors, a Job Change Index was created which identifies and interprets the nature and dimensions of each move, (see Table 7.11) and a Career History Chart was developed (see Figure 7.5).

Within the vignettes, three added descriptors were uniquely identified: progression; regression; and development. Progression related to moves which involved an increase in relative status although a drop in relative reward was experienced. Regression involved moves where respondents suggested the take up of positions of lower status although higher potential earnings could be achieved. Development entailed moves (for instance of a trainee) moving along a structured and progressive route (in this instance it may be useful to consider the relative orientation shift between a first year trainee entering into his/her second year).

The index also includes involuntary termination points (-) and periods of unemployment (0). "M", with a corresponding numerical value, indicates multiple moves within one organisation, not specified (or unexplained) by the respondent. An analysis of each of the observed moves is described within this chapter. Within the chart, a colour coding system is also used to evaluate the characteristics of each work role involved in the job change. These describe whether the change involved a move to a: non-construction occupation; trainee; Operative; Supervisor; Technical; Management; Self-employed; or Owner. Through this data it was possible to trace the patterns of employment leading to the present.
### Table 7.11 Job change index

<table>
<thead>
<tr>
<th>Code</th>
<th>Change Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>→</td>
<td>development</td>
<td>Transitions between periods of structured development</td>
</tr>
<tr>
<td>↑F</td>
<td>in-spiralling</td>
<td>Within organisation – vertical moves with simultaneous change in function</td>
</tr>
<tr>
<td>E↑F</td>
<td>out-spiralling</td>
<td>New employer – vertical moves with simultaneous change in function</td>
</tr>
<tr>
<td>↑</td>
<td>promotion</td>
<td>Employer driven progression – Higher status higher reward</td>
</tr>
<tr>
<td>E↑</td>
<td>proactive</td>
<td>External Promotion - New organisation higher status &amp; reward</td>
</tr>
<tr>
<td>➜F</td>
<td>progressive</td>
<td>Within organisation – higher relative status, lower immediate reward</td>
</tr>
<tr>
<td>EℊF</td>
<td>out-progressive</td>
<td>New organisation - higher relative status, lower immediate reward</td>
</tr>
<tr>
<td>ℌF</td>
<td>regressive</td>
<td>Within organisation – lower relative status, higher immediate rewards</td>
</tr>
<tr>
<td>E↓F</td>
<td>out-regressive</td>
<td>New employer - lower relative status, higher immediate rewards</td>
</tr>
<tr>
<td>E↓</td>
<td>demotion</td>
<td>In house - involuntary shift in relative status</td>
</tr>
<tr>
<td>➜F</td>
<td>out-demotion</td>
<td>New organisation - shift in relative status and reward</td>
</tr>
<tr>
<td>➜F</td>
<td>lateral</td>
<td>Change to function of equal status or Brevet (temporary change to function of higher status without reward)</td>
</tr>
<tr>
<td>E=E</td>
<td>out-lateral</td>
<td>New organisation – change to role of same status</td>
</tr>
<tr>
<td>E↓F</td>
<td>drop out shift</td>
<td>New organisation – voluntary termination. Change of function, lower status &amp; reward</td>
</tr>
<tr>
<td>E=</td>
<td>reactive</td>
<td>New organisation – same function equitable reward</td>
</tr>
<tr>
<td>=</td>
<td>reorganisation</td>
<td>Job redesign or organisational restructure – equitable status &amp; reward</td>
</tr>
<tr>
<td>↓F</td>
<td>drop shift</td>
<td>In House - Voluntary termination to new function – lower status &amp; reward</td>
</tr>
<tr>
<td>-</td>
<td>termination</td>
<td>Involuntary termination in employment</td>
</tr>
<tr>
<td>0</td>
<td>unemployment</td>
<td>Periods of unemployment</td>
</tr>
</tbody>
</table>

### Key

<table>
<thead>
<tr>
<th>Change Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>▶ E Employer Change</td>
</tr>
<tr>
<td>▶ F Function Change</td>
</tr>
<tr>
<td>Statements</td>
</tr>
<tr>
<td>0 Unemployment</td>
</tr>
<tr>
<td>- Termination</td>
</tr>
<tr>
<td>M Multiple moves inc. numerical indicator</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Change Vectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>▶ Upward status &amp; reward change</td>
</tr>
<tr>
<td>➜ Development</td>
</tr>
<tr>
<td>↓ Lower status &amp; reward change</td>
</tr>
<tr>
<td>➜ Higher status; lower reward</td>
</tr>
<tr>
<td>ℌ Lower status; higher reward</td>
</tr>
<tr>
<td>= No relative change</td>
</tr>
</tbody>
</table>

### Occupational Evaluation

- Trainee/Apprentice
- Operative
- Supervisory
- Technical
- Managerial
- Self Employed (Sole Trader/Contractor)
- Owner (SME/MSE)
- Non-Construction
7.8.2 Case Study – MKF – ICC-29

The extract below shows the narrative account of ICC - 29 (MKF) which can be used to add clarity and familiarise the reader with the career history chart. The account plots the first ten sequential moves and outlines the final four to date. The number of each move is given in parenthesis following the corresponding narrative statement:

Managed to get a job with a small firm (1) getting paid 50 quid a week but there wasn’t any training involved I was just a labourer. At that point my grandfather told me to “Get on w’it council”. Well that was the thing to do in those days!! So I started on a YTS (2) ... £25 a week. It was a pay cut but I knew it would get me further. It was suggested that it would be a YTS for two years (3). That would be reviewed after another two years. I was taken on and did a four year indentured apprenticeship in the end changing from YTS to apprentice after two years (4).... Worked as a junior operative for two years (5) then got my own van on senior rates (6) . I worked for a couple more years as a senior operative (7) then was made up again and controlled duties on the yard (8) ... did that for a year then applied with the architects and engineers in the Design office (9). I was successful getting that. Although the authority were quite supportive in allowing me to move from trade to office based work, I had to take a cut in wages. All be it that I took a significant cut in pay as I went back to being a trainee, I then went back to college right through to University doing an ONC/HNC in building services engineering .... I then came back to building services as a technical assistant (10) to my old boss, got involved in design estimating and surveying ... My present role is a result of people retiring and the merging of departments...(11 – 14)

The extract above forms the basis of the coded account found at vignette 29 (ICC-29) of the career history chart. By using the job change index the nature of each of MKF’s moves are observed. By using these codes each of the respondent’s career and job change dimensions may be assessed and used to familiarise the reader with the job change index.
7.8.3 Reliability

Reliability of the coding for this stage of the research was established using the Analyst (A#1) and three independent reviewers (R#1, R#2, and R#3) who were initially familiarised with the general coding pattern. Reliability was calculated based on a random representative sample of interview transcripts (n=5; ICCs = 1, 5, 29, 33 and 62). The proportions of agreement were between: A#1 and R#1 was 0.55; A#1 and R#2 was 0.73; and A#1 and R#3 was 0.86. This gave an acceptable level of reliability overall (0.71) although the degree of difference between raters was considerably large (i.e R#1 (0.55) and R#3 (0.86)).

7.9 Job Change Index and Career History Chart

From the Career History Chart (Figure 7.5), it can be seen that 46.77 per cent (n=29) were working as operatives; 6.45 per cent (n=4) were working as supervisors; 11.29 per cent (n=7) were in technical occupations; and 17.74 per cent (n=11) were in managerial occupations. In various capacities, 12.90 per cent (n=8) considered themselves as self-employed although the majority of these were operatives. Conversely, 3.22 per cent (n=2) were considered business owners as they were adjudged to be large proprietors (consistently employing more than five workers). One person was presently unemployed and one person was currently working outside the industry as a computer programmer (1.61 % respectively). As these data were extracted from narrative accounts, they are subjectively derived and may conflict with other categorisations based on objective data (see Appendix G), the reader is also directed to consider other statements and categories made of the sample, for instance in section 7.3.5.

7.9.1 Preliminary Analysis

The research considered job changes as any move or alteration to the content or context of the individuals work, duties or activities (Arthur et al., 1989; Arnold, 1997;
Nicholson and West, 1998). In some instances (consider symbol M in the job change index) this included occasions of change in the context of work whilst still employed in the same post. By analysing the 62 individual vignettes contained in the career chart a total of 420 moves may be observed. This involves approximately seven career moves per individual (m=6.77); a move ratio of one every three years (m=2.87). Approximately 52 per cent of all job changes involved a change in employer and around 61 per cent of moves involved a categorical change in function. These percentages (52% and 61%) logically confirm that most moves have involved changes across simultaneous dimensions of function and employer, the same being true of status and reward. Approximately 40 per cent of changes involved moves of relative upward value, while approximately 60 per cent involved moves of downward or equal value. These data imply that job changes involving strict vertical progression is inadequate as a measure of career mobility since it captures less than half of all job change. The combinations of change dimensions, the frequency to which they occur and their interpretations are explored in the subsequent sections.

7.10 Longevity - Time factors and Employment Tenure

The longevity refers to the amount of time a person spends within a particular frame of employment. During the interviews amongst the initial biographical data questions respondents were asked to evaluate the length of time they spent within the industry; within their current work role and within their current organisation. Further analysis of transcripts enabled data to be collected on how much time the sample had spent outside the construction industry. In Figures 7.6, 7.7, 7.8 and 7.9, a breakdown is given of the samples effective time in all construction occupations, length of time in current organisation, length of time in current work role and length of time spent outside of the construction industry. A breakdown of the accompanying statistics is given in Table 7.12. This presents a cumulative account of both objectively and subjectively derived data.
7.10.1.1 Length of Time in Construction Occupations

The overall length of time spent in the construction industry ranged from four years to 47 years with a Mean value of 19.21 years (Std. Dev= 9.53), with the highest frequency being between 16 and 20 years. This is the middle value and contributes to a deceptive appearance of a normally distributed of curve. However, the Kolmogorov-Smirnov statistic indicates a lower significance value than 0.05 suggesting a violation of the assumption of normality (0.009 sig). As observed in Figure 7.6, there is an element of skewness to the right suggesting a slightly higher distribution of respondents at the highest extremes.

7.10.1.2 Length of Time in Current Work Role

The length of time in current work role ranged from one year to 47 years with a mean value of 12.79 years (Std. Dev = 10.75), with the highest frequency less than five years. There is a violation of the assumption of normality (Kolmogorov-Smirnov statistic = 0.000 sig), as can be seen in Figure 7.7 extreme skewness to the left (1.13) confirming a higher concentration of respondents at the lower extreme.

7.10.1.3 Length of Time in Organisation

Length of service in respondent’s current organisation ranged from less than one year to thirty one years, giving a mean value at the 11.13 years (Std. Dev= 9.10). There was a violation of normality assumptions (Kolmogorov-Smirnov statistic= 0.000 sig) with a high degree of skewness to the left (0.63) indicating a higher concentration of respondents at the lower extreme (Figure 7.8).

7.10.1.4 Length of Discontinuous Service

An evaluation was made from the interview transcripts as to the amount of time respondents spent outside of the construction industry. This length of time ranged
from zero to 31 years with the most frequent reported time being zero (n=26). As seen in Table 7.12 a further 12 respondents had one year outside the industry; eight reported two years; nine reported three to six years; and seven suggested more than seven years (m= 2.87; Std. Dev= 5.73). According to the Kolmogorov-Smirnov statistic (0.000 sig.) this does violate assumptions of normality. As can be seen by referring to Figure 7.9 there is an amount of skewness at the lower extremes (3.54).
Chapter 7

Length of Continuous Service in Construction Industry

Figure 7.6 length of continuous service in the construction industry
Figure 7.7 Length of time in current organisation

Std. Dev = 9.10
Mean = 11.12
N = 62
Skew = 0.63
Chapter 7

Figure 7.8 Length of time in current work role
Figure 7.9 Length of discontinuous service (yrs)
From the longevity statistics (Table 7.12) and accompanying histograms (Figures 7.6 to 7.9), it can be suggested that: respondents have a significant amount of continuous service within construction trades. This is indicated by both the concentration of respondents at the higher extremes in Figure 7.6 (length of service) and lower extremes in Figure 7.9 (discontinuous service). However, many of the years spent outside of the industry were before embarking on a construction career. As suggested in section 7.6.3 (Career Exploration). Twenty five respondents had spent some time in other industries prior to entry into the construction sector. Assessing these 25 respondents from the career history chart (section 7.8): four respondents entered the industry directly following a termination in previous employment (-); two entered
following periods of unemployment (0; one and two years respectively); seven were considered out- progressive (E↑F); three progressive (↑F); three out-lateral (E=F); five drop-out shift (E↓F); and 1 drop-shift (↓F). Further analysis suggests that although a total of 178 years was spent outside the industry (m=2.87) only 64 years were spent outside the industry following initial entry into a construction occupation, 10 years of which were due to unemployment. In real terms this presents a mean value of 0.88, which corresponds to less than 10.5 months spent working outside the industry. This value is considerably skewed due to the fact that four respondents had spent 86 years outside of construction (11, 17, 27 and 31 years respectively: m= 21.5; N= 4).

The level of skew observed in both the amount of time spent in work role (Figure 7.6 and Table 7.12) and the amount of relative time spent in current organisations (Figure 7.7) suggests that consistent time spent within the industry does not correspond to complete stability. The impression is given that many of the respondents do not put roots down within an organisation, but move from employer to employer and work role to work role. This will be further explored within the subsequent section.

7.11 Types of Job Change and Causal Explanations

Combining the basic descriptors, 19 change types are identified as causing or explaining mobility. Table 7.13 shows the change types in order of frequency and rank. The table also identifies the period of unemployment experienced among the sample following change due to involuntary termination of employment.

The following section presents the analysis of the career history chart (Figure 7.5). The data are presented with descriptive statistics along with representative quotations, used to convey rich insights into the respondent's experiences. In each case the corresponding ICC number is included for identification purposes and to allow comparisons to be made between different informants. In the proceeding section each change type will also be referred to by name and the order of frequency it appears.
Table 7.13 Frequency and rank order of job change

<table>
<thead>
<tr>
<th>Code</th>
<th>Change Type</th>
<th>Freq</th>
<th>%</th>
<th>Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>\rightarrow development</td>
<td>85</td>
<td>20.25</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>\uparrow F</td>
<td>In-spiralling</td>
<td>72</td>
<td>17.14</td>
<td>2</td>
</tr>
<tr>
<td>E\uparrow F</td>
<td>out-spiralling</td>
<td>47</td>
<td>11.19</td>
<td>3</td>
</tr>
<tr>
<td>E=F</td>
<td>out-lateral</td>
<td>47</td>
<td>11.19</td>
<td>4</td>
</tr>
<tr>
<td>\uparrow F</td>
<td>promotion</td>
<td>23</td>
<td>5.48</td>
<td>5</td>
</tr>
<tr>
<td>\wedge F</td>
<td>progressive</td>
<td>22</td>
<td>5.24</td>
<td>6</td>
</tr>
<tr>
<td>M</td>
<td>multiple moves</td>
<td>22</td>
<td>5.24</td>
<td>7</td>
</tr>
<tr>
<td>E\wedge F</td>
<td>out-progressive</td>
<td>20</td>
<td>4.76</td>
<td>8</td>
</tr>
<tr>
<td>E\downarrow F</td>
<td>drop out shift</td>
<td>16</td>
<td>3.81</td>
<td>9</td>
</tr>
<tr>
<td>-</td>
<td>termination</td>
<td>15</td>
<td>3.57</td>
<td>10</td>
</tr>
<tr>
<td>E=F</td>
<td>lateral</td>
<td>14</td>
<td>3.33</td>
<td>11</td>
</tr>
<tr>
<td>=</td>
<td>reorganisation</td>
<td>8</td>
<td>1.90</td>
<td>12</td>
</tr>
<tr>
<td>E\wedge F</td>
<td>regressive</td>
<td>8</td>
<td>1.90</td>
<td>13</td>
</tr>
<tr>
<td>E\wedge F</td>
<td>out-regressive</td>
<td>7</td>
<td>1.67</td>
<td>14</td>
</tr>
<tr>
<td>\downarrow F</td>
<td>drop shift</td>
<td>7</td>
<td>1.67</td>
<td>15</td>
</tr>
<tr>
<td>E=</td>
<td>reactive</td>
<td>5</td>
<td>1.19</td>
<td>16</td>
</tr>
<tr>
<td>E\uparrow</td>
<td>proactive</td>
<td>2</td>
<td>0.48</td>
<td>17</td>
</tr>
<tr>
<td>E\downarrow</td>
<td>out-demotion</td>
<td>0</td>
<td>0</td>
<td>18</td>
</tr>
<tr>
<td>\downarrow</td>
<td>demotion</td>
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7.11.1 Development

Explained changes brought about by structured or organised training and development systems. For instance, the change brought about through various stages of an apprenticeship with incremental pay scales. A 'progression bar' is normally reached after two, three or four years:

I started off on a four year indentured apprenticeship. I started on forty quid a week (£40) and every year it went up by about ten quid until I was made up and went onto regular pay. ICC - 26

I did three years at college once a week. After three years I worked only on the job for a year and after that you start on the first run of the ladder so to speak. At that point you go onto hourly rate... you get paid the same as the rest of the operatives until you get to supervisor or something like that. Every year your money goes up a bit and you're treated a bit better by the other lads and I suppose the new apprentices look up to you. ICC - 55

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Development explained approximately 20 per cent of all changes, although less than 35 per cent of these involved structured development beyond an apprenticeship (approximately 8 per cent of all changes).

7.11.2 Spiralling

The term spiralling is originally proposed in Watts (1981). In-spiralling and out-spiralling accounted for approximately 28 per cent of all changes. These are moves that involve a relative increase in reward, status and simultaneously lead to a change in function. Two types of spiralling were observed, those that take place within the current employment relations (in-spiralling), and those that involve a change in employer (out-spiralling). Characteristic of these moves is that they are employee centred, namely they involve openly applying for a new position:

after two years I applied for one of the more senior posts... you have to constantly seek out these positions and put yourself forward. If there is an opportunity within your company you go for it. If nothing happens within your company you have to go elsewhere, it’s typical of this industry, but I suspect most are the same. ICC - 04

from there I moved firm from the technical side of things to more the management side.... You have to keep moving really...it is more or less dog eat dog. Sometimes you get a good boss but if the opportunity isn’t there you have to move on. ICC - 03

In-spiralling occurred more frequently than out-spiralling with 17.14 per cent and 11.19 per cent respectively. These may be considered the most desirable of moves although uncharacteristically do not always involve a change in corresponding classification. Suggestions point to relative changes due to political forces.

well they wanted to bring in some new project managers in... they couldn’t find any body suitable so they up’ed the salary package. Obviously they would have had to up ours as well so they changed the title of the new post to package manager. Essentially it’s the same job. It pays about a grand or so more (£1000)... but it gives us something to work towards. So we don’t feel are careers are stagnating. ICC - 03
The majority of in-spiralling moves occurred within DLO’s, with out-spiralling occurring as opportunistic.

7.11.3 Lateral Moves

These were moves to job of comparable worth. Lateral moves occurred in five particular forms (lateral, out-lateral, reorganisation, reactive, multiple moves). These accounted for approximately 23 per cent of moves, half of which were out-lateral.

7.11.3.1 Out-Lateral

These were assessed as lateral transfers to new organisations. These involved low relative change in status or reward although there is a change in function. These were often characterised by a change in circumstances external to the work environment.

when I got divorced I decided to change job... just fancied a new start and was sick of doing the same thing. ICC - 023

Another characteristic was that they were often opportunistic and/or experimental.

well I just saw this job in the paper and thought I’d give it a go. ICC - 06

you got to try something different now and again. ICC - 026

wasn’t sure why I moved really...just fancied trying something new. ICC - 42

7.11.3.2 Lateral, Reorganisation and Multiple Moves

These moves were very similar and involved transfers within organisations where often employer focussed where individuals were compelled by their employer to take up new positions. Lateral and reorganisation moves occurred approximately three per
cent and two per cent respectively. Occurring 11\textsuperscript{th} and 12\textsuperscript{th} in frequency, their similarities were confirmed although the differentiation was that lateral moves involved individuals, where as reorganisations involved a shake up of positions and working practices across the organisation. These were characterised as turbulent occurrences external to the organisation or in the case of lateral where vacancies appear as a result of turnover. The level of change often involves changes in operational methods or is due to changes in technology.

they changed the practice so we had to learn how to use the computers. I had to take on more responsibility...didn’t get paid more but it was experience I suppose. ICC - 22

we lost a lot of blokes at the time so I had to take on more responsibility. ICC - 28

I moved across when one of the blokes left... it was the same job really just a different set of blokes. ICC - 16

Multiple moves were very similar but where characteristic of the versatility of the individual involved.

I was at ----- and seemed to be thrown anywhere where they needed a bloke at short notice... it happened about four times. ICC - 09

although I’m not a qualified carpenter or plumber, I’ve got years on the tools and the gaffer knew I could do the job. I moved about a bit from section to section and the gaffer would give me a little in my pocket to cover me. It was valuable experience. ICC - 01

It is noticeable that the gaining of experience in these situations was considered primary and the novelty value. They also offer a sense of achievement but there was also a suggestion of consistency, i.e. these employees were always asked.

It’s good to know that your bosses consider you good enough to do the job really... I’ve been asked to do it several times and I don’t mind really. ICC - 01

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7.11.3.3 Reactive

Reactive moves involved voluntary turnover usually characterised by a turbulent departure from the place of employment:

I had enough of the job, so one day I walked in at six o’clock... said to the gaffer “Sod you’re #### job” and was eating a bacon sarnie at half past. ICC - 31

However, there were occurrences of moves taking place due to the relative perceptions of a wage ceiling and or geographic locality:

I got to the point where I won’t gonna get any more money so I just left that ‘un, ‘cause I fancied the change. ICC - 23

I was gonna get the same money so I thought I’d save a bit on the travel. ICC - 56

7.11.4 Regressive and Progressive Moves

The relative pay and salary differentiation amongst white and blue-collar workers means that there are significant different types of pay systems. Piecework and overtime payments are forms of variable pay which impact on moves within the industry. Payments are often part of collectively agreed salaries, that are granted to attract qualified personnel. Such payments are widely fixed in individual labour contracts and are related to the quantity or quality of work performed. They encompass traditional incentive payment systems, piecework and ad hoc pay awards for completed projects. The informants suggested that these payments often meant their salaries were above those of management.
7.11.5 Progressive and Out-Progressive

Progressive and out-progressive moves accounted for 10 per cent of all moves. These were often the most career focused of moves as they involved financial sacrifice. This often involved the transition from blue- to white-collar status with a simultaneous change in potential earning. These components of the Job Change Index are considered the most calculated of moves identified. As well as status they involve a drop in pay systems.

7.11.5.1 Progressive

Progressive moves are internal moves (same employer) and involve a change in function usually to one with a higher ordinal position (manual to office based), usually involving a change in status. However, along with such moves comes a loss of the flexible wage component such as is involved with piece work or hourly rate, to a structured salary.

I had to take a pay cut when I went into that job... Before I was on an hourly rate, so my money used to get made up when I worked a weekend. Now, although my standard rate is a whole lot of money, it's the same whether I work 10 hours or a 100. A lot of the blokes get their pay made up by working a few hours at the weekend... you're on time and a half or double time then. It was a sacrifice really. ICC - 57

The internal change often brought on resentment by former peers

the move from trade to salaried status, it was a funny one for me. You kind of become alienated from the blokes you used to work with or would give you lifts to work or in my case the guy who got me the job. The very people who raised you. But you also find you don't fit in with the office class either. It's an odd existence really. ICC - 34
7.11.5.2 Out-Progressive

While of similar nature out-regressive this involved a change of employer and seemed to be a preferred approach than working in a similar environment with your former peers.

I couldn't have moved on in the old place really... too much resentment by the blokes on the floor so I waited till a job came up and moved... in time you'll earn more this way... in the long term. ICC - 04

7.11.6 Regressive

As the diametric opposite of progressive moves, these occurred when individuals change from positions of relatively higher status to that of a lower, based on the desire for higher attainable rewards:

I moved back onto the tools because you can make a bit more money that way. ICC - 04

Me and the misses worked out that I was actually losing a grand a month when I moved. I thought stuff it and went back onto the tools. ICC - 31

I had to take quite a drop in salary really when I moved into the office. I couldn't really afford the move. It was a bit top heavy in the organisation and I knew I wouldn't get anymore promotions for a while. ICC - 11

7.11.6.1 Out-Regressive

Similar to regressive moves these involved moves outside the current organisation. However, there was another dimension to these moves that warranted further analysis. This is attended to further within this chapter.

I took a step down a peg or to when we were expecting our second child. We needed a bigger house really and I knew I could earn more money back on the tools. I didn't really want to go back to working with the rest of the lads again as they would've given me jip (teasing). I would have had to if nothing had come up, but in the end one of my mates was taking on so I went there. ICC - 54
7.11.6.2 Progression Indicators

Two types of change reflected more traditional progression indicators: Promotion and Proactive moves. Promotions were considered moves that involved a straightforward raised rank within an organisation; while proactive moves were raised ranked moves external to the organisation.

7.11.7 Promotion

Promotions were advancement in rank or position within the organisational hierarchy system. Although considered a more traditional indicator of career progression, simple promotions only accounted for approximately five per cent of all moves. Due to the nature of progression, these moves sometimes involved a change in the work role classification i.e. from technical to managerial. A prime characteristic of these were that they were employer-initiated involving advances in status and reward. Although they did not involve any significant change in function they implied a relative change in authority:

If you work hard at your job you get noticed after a while and you get made up (promoted). ICC - 49

I did quite a good job when I was there so I was moved on to a more senior role. That meant I had a few more lads working under me ... a bit more authority. ICC - 54

The then manager left after a couple years and I stepped into his job... only temporary at first like, but after a while I was made permanent. ICC -06
7.11.8 Proactive

These were promotional moves to a new company to perform the same function. Within these the subject experienced a change in employer, status and reward:

There weren’t any real opportunities for me in that company so I moved to a new place after a while. Same job, a bit more pay... a bit more responsibility really so it was kind of a promotion I suppose ICC -02

These moves were both employer and employee directed and were characteristic of what is termed “poaching”:

We worked on a contract with this other firm and after the job one of the engineers just asked ‘how’dya fancy coming over and working for us’. They offered more money, a car, well a work van, and a bit more responsibility so I took it. ICC - 52

7.11.9 Negative Shifts in Employment Relations

Although some moves were regarded broadly as negative shifts, they also included circumstantial changes where individuals moved to part-time or more flexible work arrangements. On the Job Change Index this group of changes included: demotion; out-demotion; termination; drop shift; and drop-out shift.

7.11.9.1 Termination

Terminations accounted for around four per cent of all changes. These involved involuntary changes in employment relations:

I left there when the firm went under and went.... I think it was just the climate at the time. A lot of firms were going bust around here. ICC - 47

Put it this way I didn’t get on with the yard super there (colloq. supervisor). Well they asked me to leave, that’s all I’m saying. ICC - 12
Can’t really remember why I left there, I think they went under or something. ICC - 53

Just as I finished my apprenticeship I was made redundant. What a kick in the teeth. I didn’t bother with plumbing for two years after that, and went to work for my dad as a printer. ICC - 23

7.11.9.2 Drop Shift

These accounted for less than two per cent of all moves. This category of job change involved voluntary or mutually consented changes in relative function, reward and status:

I was on maternity leave so I had to agree with personnel what I was going to do when I got back. I’ve cut down my hours now and I’m helping prepare tools and the like before they go out on jobs. ICC - 27

When I got to about 26, I started having a bit of trouble with my back and my knees. I was no good to anybody really so they called me in and they said they would put me on lighter duties for a while. ICC - 17

7.11.9.3 Drop-Out Shift

These accounted for approximately four per cent of all changes and involved a drop in status, reward, function and employer. These included a varied array of changes, some similar in nature to that found in the drop shift, involved changes in circumstance, while others were due to turbulent relations with a previous employer:

the lass I was with then was due a bairn due so I looked for a job a bit closer to home. I had to take a pay cut in the end, because all I could find was a labouring job. The new boss was good though and there was a good group of lads to work with. ICC - 12

I sent up on my own.... things went bad at that point. They weren’t all that bad but I wasn’t making the money I was before and I thought I’ll just go contracting. I still had the flexibility as I was self-employed, I just didn’t have all the hassle of winning the contract and organising the work. ICC - 05
Stuff that I thought. I jacked it in. After that I just took the first job that came along really. ICC - 48

7.11.9.4 Demotion and Out-Demotion

Demotion was considered direct and involuntary changes in status usually as a result of a breach in discipline with no relative change in function. Out-Demotion was considered involuntary terminations in employment resulting in loss of status and reward and/or other. While neither of these change categories featured amongst the samples job changes, they warrant attention. The transcripts highlighted several occasions where suspicion would lead to conclusions that individuals had been demoted or left to resume a posts of less relative status, but where respondents had accounted for more control within the change. For example:

Things were going a bit bad there... anyway I left in the end...I was taking a cut in wages but I had enough in the end. ICC - 17

The nature of these moves was considered highly relative. In this moves such as, drop out shift or out lateral moves could be re-categorised in some instances as out demotion; while drop shifts or some forms of lateral moves could be categorised as demotions.

7.11.10 Meta-Level Analysis

From the preceding data it can be seen that job change is a fundamental characteristic of the sample. These changes involve shifts along all dimensions of: status; function; employer; reward; and work role orientation; although relative stability exists within the industry with only a few years spent in occupations outside of construction. What also can be seen is that job changes were usually unplanned and were typically the result of non-work related decisions.

As a backdrop to the changes, the employment environment must be considered. As such the following section introduces the specific narrative accounts of careers in
particular their emotional attachments to their careers and the social and environmental factors that contribute to this.

7.12 Do you think you have fulfilled your career ambitions?

After documenting the sample’s career to date and establishing the primary drivers for entering the industry, the research sought to establish how emotions affected the sample in their current career positions. Given the samples age range, it was envisaged that this would differ by various degrees.

7.12.1 Autonomy

Autonomy was cited as the most frequent contributor to those who suggested being happy with their current work role.

I’m happy with the industry as it is. It benefits me... I enjoy the freedom ... I’ve not considered progression. The industry doesn’t give you any clear routes through to say I dunno, project management level. Are there any clear routes? If there are I suppose I would maybe consider further development but you lose money if you retrain for other jobs don’t you? I work this way because I prefer it really, but I imagine that once I got a bit older and have kids and stuff it’ll change. Travelling would be a pain. ICC-10

7.12.2 Lack of Respect

A continued and widening gulf was seen to exist between white-collar and trade occupations (trade and office). There was a reported lack of respect for the trades, particularly from those entering the industry as graduates. This was experienced by those currently in the trades and those who were working in more senior occupations:

Degree graduates don’t listen, even if others have more experience than them. We were struggling just today on one job and one bloke came up and said “ooh you have to do it this way” (mock imitation). We tried it his way and it didn’t work. We thought stuff that and did it ourselves, our way. He came back later all smug as if he had made a blind bit of difference. We thought “he’d be buggered when they look at the drawings come maintenance”. ICC-11
Oh yeah I could have gone into private sector like the rest of the in the 80's and when it booms, because it goes up and down you know; peaks and troughs. I could have but it's more of a secure lark here. You have to make a trade; a trade off between security and finances. ICC - 15

7.12.3 Disadvantages Amongst the Trades

Emerging themes related to the ageing body and worry about decline in strength. The feeling of uselessness and an awareness of what the body could physically take were concerns. For many respondents, themes emerged that reflected a desire to keep the body in shape and the ability to tackle stress. In addition to these themes, many focussed on leaving the industry before physical decline set in. Although all occupational groups said that they were thinking more about health and disease with age, plumbers suggested an inability to maintain flexibility with age. Even though many talked about becoming more sedate in their occupational setting, there were also some who maintained that physical activity in their jobs was a bonus to combat lack of physical activity in leisure. The emphasis and the reasons for being more physically active were different across age groups, and involved aspects such as maintaining health, strength, pleasure, social milieu, and warding off personal problems. Age was therefore used as a reason both for being and not remaining in a physically active job.

7.12.4 Discrepancies in Resource Allocation and Trust between Staff and Trade.

Disharmony was alluded to in several informant account. This was often due to differences in resource allocations. Feelings of mistrust were also said to influence bad working relations between operatives and management.

We never really get the right tools for the job. Well you buy your own mostly, but I bet the same is not true for others. ICC - 43
There seems to be more and more paper work. They introduce new technology but it just burdens the job. They track where you are all the time. There is a complete lack of trust for the trades; but it isn’t the same amongst staff. If I’m gonna go it’s for those reasons. ICC-43

Managers don’t often appreciate the problems of certain trades. Wet trades in particular are never understood. Some trades are considered a bit more technical. So they are always first in line for training development promotion or ouwt like that. There is also a lack of respect for plasterers amongst the trades. They always lack consideration. ICC-31

7.12.5 The Desire for Seamless Progression and Seamless Progression

Incentives

A term mentioned in several accounts was “seamless progression.” Poor health was said to contribute to

Experience should be valued. Really they should have a system of progression. Natural progression. For instance, we have loads of the lads who are on the sick because of their backs and knees and that. It seems plane as day to me that when you get to 36 going 40, you’re not gonna want to lump and lug things about. Yet I hear their screaming for teachers at the local tech. There should be a system where you serve your time and move on. ICC-43

7.12.6 Anticipated Socialisation

Students in vocational or dedicated professional courses are likely to be provided with information earlier in their training about potential employment in their particular sector. (Garavan and Morley, 1997) suggested a stage model of organisational entry, where this first stage known as anticipatory socialisation, encompassed all learning that took place prior to individual’s first day on the job, which influenced their first organisational encounter and subsequent stages such as career development. A strong indication of this process was found applicable to the content and context expectations of the sample. As well as college experience, this was found to be due to the interplay of several factors such as: the nature of any job search activity; work experience; exposure to employers; recruitment and selection activities; and having family in the industry, all contributed to a set of expectations that were fairly grounded. As one
respondent observed, "the first day you walk on site its like Vietnam". However, these encounters were brushed aside as being "natural" when this suggestion was put to other respondents:

Course you hear about things that went wrong with other blokes. But that's to be expected. It's the nature of the industry. We're not ballet dancers, we're builders. ICC - 59

While confirmed expectations mostly referred to content and context variables such as the work itself and the work environment, respondents expressed a significant change in their emotional attachment to the construction environment and a developing unease. The following quote illustrates this:

After I got my papers I was looking to move on a bit quicker. But it seemed like there weren't any real options. ICC - 55

At first you're on a pretty good wage but then you get used to that. You realise the blokes who are earning the money you were told you'd earn have a lot more experience than you; and probably know a few other trades. ICC - 56

The necessity for overtime to achieve higher wages also emerged as an issue:

You're told you can earn sort of £400 - £500 a week. What you're not told is you have to work twelve hours a day and seven days a week to get it. I didn't expect that. ICC - 62

Although initial and first encounters with construction employment were often suggested as "to be expected", the majority of respondents reported feelings that their initial perceptions of careers were false. This had subsequently changed the nature of their career aspirations and goals. Alarm often increased as the years went on particular as they progressed from trainee or indentured apprenticeship to their first fully employed role. A theme reflecting adaptation underscored the passages concerning goals and aspirations. The data revealed a constant pattern of adjustment to meet the realities of construction life. Although work was seen from a practical standpoint, this perspective was expressed in relation to training and development:

I didn't really think I wanted to do any more training, but I found I had to in the end. I went to London and thought it would work out better but the cost of living is a lot higher. I came back up here and had to struggle a bit but I'm getting there. ICC- 01
Many of the sample began by describing how they had changed their goals over the years. However, they also admitted that this was also in response to the context of their lives, such as maturity, leaving home and family responsibilities. Although this initially appeared to reflect a pragmatic focus on the part of the individuals, it later demonstrated the often unstructured characteristics of the industry’s organisation of career development; and how respondents were forced to concede to circumstance rather than adapt.

**7.12.7 Emergent Dichotomies**

Many of the sample aspired to further career development in accordance with changing goals, however, some interesting dichotomies appeared in relation to management aspirations. One was related to family responsibilities and the other related to job security.

**7.12.8 Family Responsibilities**

An interesting dichotomy was found in relation to an adaptive mode towards a management orientation. Family responsibilities were cited as influencing goal revisions towards and away from management jobs. At one end of the spectrum some of the sample noted an orientation towards management based on family circumstance:

> Hadn’t thought of going into management at first. Things were alright at first. But I was travelling away allot and then we my girlfriend had a baby. I had been happy up till then as I was earning a bit of money and extra for working away. After that I was based closer to home so my earning potential went down quite a bit. I thought of going back to school, college or something but wasn’t sure how I’d get on. That’s when I started applying for jobs that paid a bit more. ICC - 28
However, another group cited family responsibilities as a restraint to management aspirations and goals:

I was asked to try a job as a manager. Thought about it at first, but it involved more responsibility, a cut in pay really and less flexibility. I mean most jobs are job and knock. Once you finish your last job you can be home late afternoon. When you’re a manager you have to stay over until the last van is in the yard. Then you get stress during the day if things aren’t working right. These things can directly affect your home life, late hours, stress, no not worth the hassle and for less pay for your sins. ICC - 23

7.12.9 Job Security

Amongst those currently working in operative roles (n=31), the mindset of job security also appeared to prompt a higher or lesser regard for management positions. Some expressed a strong desire to “stay with what they know”, in order to remain secure with current benefit, putting off additional education or career advancement opportunities:

It’s not worth it really. Anything goes wrong it’s the management for the chop. I would I take the time to go to college and study every night as well as doing a full days work, just so if anything goes wrong you get the push. I’m staying here thank you very much. ICC - 11

Others articulated the difficulty that project based employment presented, and that there was a greater chance of permanent employment in management oriented roles:

One minute you’re on a job, the next minute you could be off it. If you’re on the books as management; well it’s like a club, they all stick together. You’re never short of a job, but it’s the trades that keep you in the job it’s unfair. ICC - 44

When asked why this respondent had not considered going into management himself, a similar analogy of the “management club” was articulated:

You never get offered training, you’re never offered anything really they keep it all to themselves. As I say it’s like a club. Us that do all the work get nothing. They’re always being sent on this course or that course but they always come back the same. We have to learn on the shop floor as it were. We have to sort all the problems. ICC - 39

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The often antagonistic tone is often encountered when discussing management actions. As highlighted by one respondent a marked differentiation is drawn conceptually amongst the trades between "owning your own business" and being "a business owner":

Most people in the trades say they wanna own their own business, but what they really wanna do is be a business owner. Now there's a difference you see... when you own your own business it can be anything from mucking out on site and getting paid cash in hand. When you are a business owner... ah now that's when you proverbially get to sit on your arse and get the ones who own there own business to do your work. ICC- 24.

I used to work for myself just contracting and when I started I thought I was made. It was only after a while I realised I was not much better than when I was a normal plumber. Like anything after a bit you realise you're not always in the ideal position you were in when you started. You started of always thinking "that's it I'm happy now, I'm satisfied". Then a year or two down the line you're looking to move on – so it's a hard one to call. ICC – 12

7.13 What career development have you been encouraged to do?

The interviews and transcripts indicated that all respondents had developed skills common to all (or most) of the trade and craft workforce. In general, most of the sample had received training in broad level subjects included basic trade operative skills (up to NVQ 2), skills in communication and interpersonal skills, information and communications technology (ICT). Thirty per cent had received basic career self-management skills. As suggested in section 7.3.5 and corresponding Table 7.6, 50 per cent of the sample had made significant development and progression strides in reaching higher level occupational roles.

7.13.1 In-situ Career Development

Respondents reported that some organisations did have an in-situ career development policy. This began from monitoring entry level qualification and an evaluation
process consisting of annual or bi-annual development interviews. However, these were mainly reported to exist in Direct Labour Organisations (DLOs) such as larger construction organisations or local government employers. One respondent currently working as a sub-contractor presented an exception:

I do owe a lot to one firm I was contracted to. They had to train all their sub-contractors up. This was only because one of their main clients had expressed concerns over the consistency of standards but it has helped me get a lot of work since. ICC - 01

A comparative perspective was suggested in smaller firms particularly were the owner/proprietor had progressed from a trade occupation themselves:

The boss I've got now worked on the tools himself and worked his way up. He's always said he wants everybody to have the same opportunities he did. ICC - 12

In instances where significant progression had occurred respondents attests to self determination as a major factor in determinants of career development and progression:

In this game you're the only one who can make a success of your career. You have to be aware of your performance, how it is perceived by your employers and how it can be used to take advantage of opportunities. ICC - 34

7.13.2 Industry Specific Initiatives

Industry specific initiatives were also alluded to such as the work of the CITB. Many respondents were directly supported and engaged through the organisation and in some cases had been directly employed by them. However, this interaction was mostly experienced pre and direct post entry and, had not continued beyond attaining NVQ Level 2.

Situational circumstance was also cited on many occasions. This was expressed in two particular types of instance: where opportunities arise through company expansion, creating openings; and where opportunities arose from people leaving and
vacancies arise. These were often considered reactive moves by organisations and employees were offered brevets or temporary positions which led to permanent employment positions.

Similarly redeployment was suggested as one way of experiencing a developmental change. Expressed either through experience or through anecdote, it was suggested that workers experiencing change in physical circumstance, such as sensor-motor problems, would be placed in alternate work roles. Two respondents were redeployed because they had recently returned from maternity leave and could not take up their former occupational roles.

The authority has been really good. When I returned from maternity leave, they first placed me on light duties and then offered me the chance to train up as an estimator. I'm still work-shadowing at the moment but will take up my own duties in due course. ICC - 47

7.13.3 Problems in Career Planning

Although some respondents reported a lack of interest in development – characterised by the statement "I'm happy as I am really" – many of the sample respondents recognised a need for further development. Along with the changes in status at various career stages (i.e. from apprentice to fully fledged operative) and the level of personal maturation, various career needs began to emerge and evolve. Respondents suggested that at various stages they encountered career-planning problems or stagnation in role and job content. These were variously described as: limited value placed on career development by their employer; lack of industry driven support; lack of suitable courses and/ or funding; and external commitments.

7.13.4 Career Development Culture

The lack of an industry wide career development culture was cited by some of the respondents as a barrier to progression from trade occupations to management and professional roles. The general perception was that there are different cultures and
stages of development amongst the trades and that the industry is "partly segregated", with people who work in different trades gate-keeping progression, and neither contacting or co-operating with each other:

If you're a joiner or bricklayer you get more opportunities to progress. As a plasterer you are rarely given the opportunity to display your wider skills. You often go in a job on your own, so there is nobody to recognise any leadership or wider technical potential. ICC – 31

7.13.5 Trade Prejudices

Although most of the respondents in management roles (or capacity to employ) recognised the benefits of offering development opportunities to individuals from various trade backgrounds, there remained a strong perception that employers prefer to appoint people from within their own trade. It was suggested that some employers do not acknowledge the transferability of skills between occupations. A majority of the respondents claimed to have been rejected for posts in management or supervisory roles because of a lack of experience in other trades. This prejudice was found to be reinforced over a period of time. As one manager pointed out:

If you experience prejudice by particular groups of trade's men, later when you are responsible for taking on, you're likely to think badly about that group. Similarly, if you're led to believe certain trades haven't got particular skills, you carry that forward as a prejudice. To off-set this, you need a uniform set of criteria for evaluating skills to accommodate bias and prejudice. It makes sense to me. ICC - 50

7.13.6 Intention to Leave the Industry

The respondents generally believed that basic communication skills information seeking and manual handling skills are transferable to all sectors and should opportunity arise they would shift to a sector which offered more latitude for career development and progression. As one pointed out:

With these as a basis you can move sectors and focus on the other skills that are important to that sector once you are there. You never get a sense that you
are quite needed. You feel as though you can be discarded at anytime. Sites are never empty of operatives so the apparent skills shortage never reflects the way you are treated. You don’t work for the sake of it. You don’t just work for the money. You need to know that when your back gives in or your knees are shy from fit that you’ve acquired a new set of skills that will see you right in the future. ICC - 38

7.13.7 Education and Training

Many respondents reported difficulties and discrepancies with nature of vocational qualifications. Embarking on a higher course of study relies heavily on being able to complete vocational components within the work place. Gaining employer support for this was often considered highly problematic.

I had to push to do my level 3 although when I started I was told it was more or less expected that I would get on to do it. However, I should think myself fairly lucky because they’ve never said no to me. It’s just took it’s time. Not done much with it since mind, but I’m still trying. Other blokes I know just have been turned down flat. You can do it on a night course I suppose but you can’t get yourself ticked off if you’re not in a position to do so. ICC-40

The appropriateness of certain educational qualifications was often assessed. This considered the relationship between opportunities and perceived ability that affect their plans for the future. The younger respondents appeared more aware of the importance of educational credentials for increased career progression while the older respondents place an emphasis on hard work in occupational attainment.

7.13.8 Family Influences

Family situation and responsibilities are implied as important influences in change. This is experienced as an important factor in the men and women within the sample.

“My wife was a big influence in me going for that job. How wanted to go for more management jobs but, I wouldn’t have gone for it so early. I would have waited a few years, got a bit more money behind me. In the end I went for an office job not long after getting my papers” ICC-34
My husband has been very supportive over the years and has always pushed me to achieving more. There was a time when I felt that I wouldn't get on as well because there were a lot of men competing for positions. He's in the trade and would always give me bits of advice". ICC - 49

The majority of women in the sample were single although one was married and another although single, had childcare responsibilities. In this case of the competing demands of traditional gender roles formed a negative to her potential achievements:

I've been off recently on maternity leave. I would like to think about going for a management job or something but I've got the little one to think of. I've thought about maybe going into surveying or something but I'm not sure whether the authority would pay for me to go to college given that I've just coming off maternity leave" ICC-27

One respondent currently working as an asbestos technician was influenced by raising a family to sacrifice training:

I have two kids now. I had my first kid in the third year of my apprenticeship. I left to take the first job I could. I regret it a bit. I wish I'd have done the training and carried on f=as a joiner to gain experience. I could have done a lot more then. ICC-37

7.13.9 Implications of a Risk Management Approach

A senior DLO manager blames the problem of recruitment, development and retention squarely at the foot of the wider industry organisations:

We don't really have a problem here because we aim to hire, train and retain our workforce here, where as private organisations see it as cost. They'll lose out in the long run. The problem is that managers in construction are too scared to manage risk or they don't have the necessary skills to manage a direct labour force. It works for you not against you. But their rejection of it, makes it increasingly hard for those who want to attract it. ICC-13

I've had to make a lot of sacrifices to get where I am. The organisation has to make sure they have the infrastructure to support its employees... but the blokes themselves have to move a little. We see it here, there are a lot of people who are happy to pick up a wage at the end of their time: we have to encourage them, but they have to get off their backsides. ICC-29
7.13.10 Sick Lame and Lazy

An amusing encounter was found with the term “sick lame and lazy” which was a stigma labelled against those whose who flaunt the sickness policies of organisations. This referred to anecdotal suggestions that the only way to progress in some organisations (mostly DLO) was to either; be on long-term sick; have some recurring illness or disability; and or have duties impede certain duties due to illness.

I’m looking to be redeployed mined you I’ve had dodgy knees for a while...eh I’m not one of those sick lame and lazy you here tell of; I won’t be getting it easy. I’ll still put my time in. ICC-30

7.14 Why Do They Stay?

Half of the sample had experienced upward mobility to some degree. To this extent many seemed content or happy with their progression through the construction ranks:

I’m quiet happy with my progress really. I left school with few qualifications but I feel I’ve made up for it. I started off labouring and now I’m in a more or less in a management position. It shows it can be done. ICC – 34

It was noted that the sample did not separate their reflections into “personal” or “professional” growth or, even where they did, there was often considerable overlap. Several noted that it was difficult to know how much of their ambitions and intentions reflected their personal aims and issues in their wider life (ICC – 14); career (ICC-29); age (ICC – 11). The analysis, therefore, interweaves the reflections on these two areas of growth. The synthesis probably offers a more realistic view than would result from trying to force artificial dichotomies.

I am happy with things really. I have a beautiful wife, lovely kids and I recently did a bike ride across Scotland, I’ve always wanted to do that. I’m not really sure how much my job adds to that. Of course having good work does do a lot for you. You’re, well I’m here most of the time so I suppose it does contribute. I think you make of it what you can. Things outside your work life contribute a lot to it. ICC – 14
I’ve achieved quite a lot I suppose. It’s good to reflect on what you’ve achieved but I’m not sure if just making a go of your career is all of it. I mean if something bad in my personal life had happened along the way, but I was still in the position I’m in now, would I be happy? It’s a question luckily I can’t answer. ICC – 29

I feel I’ve done loads in the industry for my age. Other people haven’t done so well in other types of jobs and they’re the same age as me. As long as it keeps going like this I’ll stay. ICC – 11

In some cases negative emotional attachments to their careers were experienced, for example as a result of negative life experience such as failed marriage (ICC – 43), although they continued to maintain an identity to their career:

I’ll stay in the job for now but I’m not too happy at the moment. Don’t really know if it’s the job or stuff elsewhere. I mean I’ve recently got divorced. Not sure how much that has affected things. Used to be happy before and wanted to stay, so it’s is probably that. Hard to tell though. ICC – 43

In such cases it was hard to determine whether any negative responses were as a result of work conditions, or external social issues.

7.14.1 Entrapment Scenarios

There was evidence of situational, psychological and sociological factors that encouraged individuals to stay in their current work roles. The following section outlines themes which present reason for a seemingly long term commitment to the industry.

7.14.2 Situational Factors

Another participant expressed frustration over wanting a different job, but not wanting to sacrifice the accumulated benefit accrued within the organisation:

I do want to leave really but I’ve got my pension to think of as well as other benefits. I mean I’ve not had to buy a car for the last eight years since I’ve started this one. That’s at least £17,000 I’d probably have to find to buy one, or at least £300 - £400 a month if I get finance. ICC - 13
Another respondent working for a DLO lamented:

It doesn’t make sense leaving this job after twenty odd years of service. I’m struggling though. I mean you get certain benefits here. You get your own van, you get holidays and that, you get sick pay when you’re off. I could earn more money or be better off contracting or something but if you have a day off you don’t get paid. ICC - 41

One respondent, previously a plumber, but currently working as a heating and ventilations foreman displayed in one passage the characteristics of these traits:

I’m happy with the job... but I would like to go into the drawing office but I’d have to take a pay cut. Would also like to consider teaching or lecturing on the practical side. I have considered leaving but ... I’ve got the car and the house and it has taken me a while to get into this job. I like travelling to different sites. Being stuck in one job on one project would affect me. I probably would go then. ICC-09

In such cases it was often considered that there was attribution of external causes that limited movement to alternate occupations.

There aren’t any real jobs out there anyway. Everybody is in the same boat. You hear it on the news all the time. Even bank managers are loosing there jobs. ICC – 12

7.14.3 Psychological Forces

It was also suggested in that when the suggestion of failure is identified by respondents, they often became resilient against the notion of changing careers:

You can’t just give up if you fail to get promotion. You have to stick with it really. That’s what my dad told me anyway. ICC-1

One factor which emerges very clearly is that the decisions taken early in life serve to confine many of the respondents to their current career. These were considered difficult to reverse due to time spent in the industry, the time spent in training and the
time investment necessary to pursue an alternate career. This observation was particularly true of respondents who had progressed along their career.

It is not just the costs of re-training that are significant but the time. And who's to say I would like what I move into next. I could spend another 4 years studying to be a computer programmer but who's to say what'll happen. I'm better off staying put anyway. ICC – 4

Another aspect of this was some suggestions of control. Many respondents suggested that their present circumstances were down to timing and that they would eventually move on to other occupations:

I am thinking of going into property development. That's were the money is these days. I'm just working a bit longer to get a bit more money and then I will move on.... It's hard because you've got work that takes up most of your time and then you have bills to pay that stop you from saving. Then I suppose you have to learn a bit about the market, well you can't just go into it. But I'll get there soon. ICC – 39

7.14.4 Sociological Factors

While the above accounts refer to situational and psychological force that encouraged informants to stay, other sociological forces were evident, such as family commitments (ICC – 23) and ties to the social bonds developed:

I've got two kids now. It was alright when I was a lad and we were running up and down the country, job to job. I could have left then. ICC – 23

Most of my mates work with me. I like the bonding, now I'm not saying we skive or anything like that but we have a laugh. You see people going to work and they suffer from stress and that but that's cause you're not allowed to laugh when you're stuck behind a desk. No, I'll stay here for nothing else but the laugh. The work isn't too great but that makes up for it. ICC - 44
7.15 How could this have been improved?

One of the overarching claims was that greater career enhancement and career development would serve to make life in trade occupations a lot more tolerable. Similar to the Phase 1 study, many respondents expected to attain goals they had previously set:

I don’t see why I can’t go any further… I’d like to aim for the Directorship or something like that, why not? If I don’t get there … I suppose I’ll have to go into private practice. I would like to stay here. ICC-29

We as an authority lose a lot of people through not offering them broader opportunities as it were. I’m interested in driving the business forward, and that’s the only way we’ll move forward, by investing in recruiting, investing in training and development; and doing our best to make sure people stay here. You have to offer them something. ICC-29

7.15.1 Indentured Apprenticeship

The majority of the older respondents attributed their success to their own drive and initiative but also through the success of the indentured apprenticeship. A countervailing argument was that the lack of success is the retirement of the indentureship system. One respondent an electrical design manager who had come through the system, and had previously been responsible for organising recent trainees through their training commented on the difference:

The apprenticeship system as it was really good. You knew were you stood there was none of the palaver with funding and different standards and accreditation systems. There was one way. For me; the apprenticeship organised my career thinking and gave me a structured progression route. It wasn’t perfect mind but you knew where you stood. ICC-06

Today once you finish your NVQ2 that’s it. The problem is you need the supervision component to get your accreditation at NVQ3. You finish your NVQ2 at 17. Who’s gonna put a 17 year old lad in charge of your senior trades men? Under the old system you just carried on at college if you wanted to. ICC - 24
7.15.2 Social Reproduction

A key role in shaping occupational progression was a desire to achieve. This was seen as an important source of reconciliation that counterbalances educational limitations among individuals from more disadvantaged backgrounds. Young people were considered to have better opportunities for career development. The different opportunities and socialisation processes that exist across socioeconomic status levels. Individuals from privileged backgrounds were perceived to have more educational opportunities even when they start at trade and craft level. The trades are seen as a “stop gap” transition, mediated as a knee jerk reaction when faced with the arduous task of picking a career (making a career choice). Once the realities of the industry and work hit them they soon aspire to higher occupations, training and development.

You can make a start here and when you get your life in order move on. I feel I had to make a start that’s really why I came into this game. I know now I can’t stay in the job. When I get some backing behind me I’ll probably get on and do a night class or something. ICC – 48

7.15.3 Generational Shift

Many attributed industry problems such as skills shortages and attrition to the changing socio-historical context. Teenage aspirations in combination with higher educational attainment were considered a driving force for changing aspirations towards construction work.

Things were different then. Every trades man had a labourer, an apprentice or both. Things change a lot. ICC-30

7.15.4 Mentoring

A point which resonated in the majority of interviews was the absence of mentors naturally built in to the training structure. Many of the group from the middle and older age ranges widely acknowledge that career advancement was easier under the old indentured apprentice system:
In those days you did what they called an indentured apprenticeship which lasted four to five years. You'd have a senior trades man who would show you what to do. He'd wake you up in the morning and show you all the things you needed to do on the job. He'd show you the ins and outs of the job and if you wanted to move on it gave you a few tips or put in a good word. He was like your dad, your gaffer, your brother and if you needed it he'd be your marriage counsellor. ICC - 17

Having a mentor to work me through the apprenticeship was good for me. He was like a role model and gave me guidance sort of. Companies should find time to mentor apprentices, especially the big ones. Moving about the job helps. Not just yours but all the trades. You develop a bit of respect then. That's what they did in the old days, and in some smaller firms like the one I started at. You need hands on experience in all aspects of the trade. The guy's coming out the college now have limited knowledge and limited skill, but they're expected to take on the same responsibilities and take home the same pay; even when you're bailing them out all the time. ICC-11

Older respondents cited the emergent attitude of the new trainees as being a problem:

In those days you served an indentured apprenticeship which was about five years. Now you've got lads coming on site as green as lettuce; I mean how can you learn a decent job in two years. Kids don't want to learn. They want everything at their feet. You should bring back the old system. Let the kids have someone to show them the ropes before their let loose on site. Then they can't hack it and all want to go into management. Managers think they're brill and call it enthusiasm. Another two years later they come above you telling you what to do and a year after they get sacked cause they don't know the job. Train them up properly in the first place. It's not brain surgery. ICC - 16

The scheduling of flexibility was also mentioned in order to accommodate family responsibilities was outlined by a female respondent. This had been commented on in both negative and positive examples reflecting one organisation that gave priority to those with family responsibilities; and another which showed a disregard for the familial duties of its female workers:

They are really good here and they understand that sometimes you need to shoot off early and stuff. ICC - 25

When I started there were a few girls who started with me, but they all left. I'm the only one who stayed. But I'm not surprised that they're not many women though. I'm sent all over the place. If I had kids in school or anything like that I would never be able to cope. I couldn't tell the customer "ooh I'll be back in two hours after I pick up the kids". I'm not surprised there's not many women. Some of them wanted to start a family I think that's why they left. Some didn't like it. ICC - 21
Another commented on the work apparel as a reason for few women in the industry:

Why can’t they do anything about the uniforms?... I mean they’re not very feminine.... I’m not talking about the colours it’s just that they’re not very flattering are they? ICC - 27

7.16 Chapter Conclusions

This chapter presents the results and findings of the Phase 2 study of mature and experienced trade and craft workers. It provides a demographic overview of the employees who participated in the study and assesses the developmental process involved in formulating their careers.

The sample was taken from regions all over the UK mainland and was considered to have a vast amount of experience of construction practice both nationally and internationally. The sample were mainly male of white European origin although the sample had a larger than average representation of females and those from ethnic minority groups. The age range was considered normally distributed, with the majority of respondents being married. The sample was populated by all major occupations of the construction industry with a variety of occupational hierarchical groups although the majority of the sample was still working at operative level.

Few respondents were found to have undergone a considerable process of career exploration prior to entering into the industry, although many expressed preferred occupational choices but found numerous social and psychological limitations. Job change is a particular characteristic of the sample which brought with it changes in expectations and emotional attachment to long term career goals. However, longevity is a significant point and many found themselves bonded to the industry in the long term.

Chapter 8 presents a reconciliation of Chapters 6 and 7 and presents a discussion based on findings in relation to the construction management and careers literature. A
framework for examining careers in future is discussed along with the wider implications of this study.
Chapter 8

Discussion – Reconciling Phase 1 (P1) and Phase 2 (P2)

The first four chapters of this thesis identified the need for the research; presented the research question; the aim and objectives which directed the research (Chapter 1); and set out the theoretical framework for the investigation (Chapters 2 – 4). Chapter 5 outlined the methodology adopted to achieve the objectives together with a proposition which justifies the investigation. The previous two chapters (Chapters 6 and 7) reported the findings and results of the primary and secondary research phases (P1 and P2), exploring the definitions and perspectives of NETs and QEs within the construction industry. These Chapters also met the second and third objectives of the study. This chapter reconciles these findings and at key points, draws comparisons from the literature, with the aim of extracting the requirements for achieving objectives 4 and 5 as outlined in section 1.7 and sections 5.2.1 to 5.2.7 respectively.

The Chapter commences with a brief description of the whole sample (section 8.1) and then compares and contrasts the data from both research phases (section 8.2). In a retrospective presentation of discussion points, section 8.3 later outlines the model and framework used to compare and contrast.
8.1 Population – Key Findings #1

The respondents from both samples (including the P1 HNC group) numbered 641 in total; 579 from the 54 focus discussions and 88 interviews (26 from P1; and 62 from P2). A breakdown of the sample reveals that 621 were males and 20 were female (section 6.1.2 and 7.3.2).

8.1.1 Age Range

The respondent’s age ranges appeared between fairly evenly distributed margins which suggested that the sample was fairly representative of the construction environment, both in terms of NET and QE samples (section 6.1, Table 6.3; section 7.3.3, Table 7.3). This was particularly true of the five age categories between 25 and 50 years in the P2 study. The tendency to recruit qualified, experienced, energetic and dynamic employees would present one reason for this occurrence, so it is reasonable to assume that these age categories are typical of the age amongst the majority of construction projects and within their organisations.

8.1.2 Gender and Ethnicity

In terms of gender and ethnicity from both samples; 576 were white European, 17 Asian and 37 Afro-Caribbean (sections 6.1.3 and 7.3.2). Interestingly, none of the female respondents from the phase 2 sample were Asian or Afro-Caribbean. From a gender perspective, the limited female representation is understandable in view of the image of construction. It is widely perceived as male-dominated, characterised by bad social language, requiring brute strength and a tolerance for poor working conditions. As many authors attest (Gale, 1992; Dainty et al., 1998; Dainty et al., 1999; Agapiou, 2002), reconciling this image with women’s participation is highly problematic.
8.2 Comparing and Contrasting Data Sets (P1 and P2)

This section addresses objective 4 and compares and contrasts both data sets outlined in Chapters 6 and 7, in order to reconcile the perspectives of those currently entering into the industry and those with several years of experience. The analysis from this section is further explored in subsequent sections (Section 8.3 to 8.7) where cross connections to extant theory are made.

8.2.1 Career Search, Influence and Recruitment

Sections 6.3 and 7.6 detail the career search processes and influences on entering the construction industry. It was also established that individuals relied less on extended career exploration as they did on relational sources. While it was found that informants had preferred, alternate and fantasy careers (7.6.4), there were limiting beliefs and barriers to pursuing these career paths (section 7.6.5). It was further outlined that NETs had high expectations and aspirations (section 6.5 and 6.5.1) that were further encouraged by college experience, initial contact with employers and "promises" suggested in the industry's promotional material (section 7.12.6).

The findings have identified a connecting range of factors influencing construction craft career choice. Career choice is attributable to a complex interplay of actions (sections 6.3.2.1 and 7.7.2), recruitment (sections 6.3.2.2 and 7.7.3) and independent variables (section 6.3.2.3). The most significant of influences are familial and personal relationships; in particular, fathers, mothers and siblings, as well as the informal relationships they have with others already working within the sector. Individuals from their immediate relational and social environments (i.e. parents, family and friends) were identified as having a greater influence than professional advisers, who could, in fact, act as a negative influence on construction craft career choice.

These research findings challenge the notion of the career selection process as a wholly rational and autonomous process. For example, the low response rate to the
use of the internet was surprising, as many secondary schools use the web within the careers curriculum. This suggests that although many young people may have access to the internet at school and at home, it is not used extensively as a careers resource. Thus, the emphasis is placed on the industry in communicating its recruitment practices through other channels. One hundred and twenty-seven respondents (22.5% of total) indicated another (Other) variable as an extremely positive or positive influence on their career choice. Of these, 25 were situational factors (e.g. "no alternative choice"); 60 were individual factors relating to self-determination (e.g. "my own initiative"); 25 were factors of a financial nature (e.g. "the money"/"needed the money"); and a further 17 indicated an extended social influence (e.g. "my girlfriend"). In terms of negative influences; professional careers advisers and teachers featured as the most influential groups that advised against a construction craft career (6.4%). Other negative influences included internet resources (6.2%) and the media (5.5%). The result reflects the industry's unpopular image, but also identifies that there are many who still consider the industry as a way of meeting their aspirational goals.

8.2.2 Priority Attachment to Career Development

Informants from both samples do consider themselves as having a career (sections 6.2 and 7.5). The quantitative findings in section 6.8 and the analysis of the transcripts in section 7.13 demonstrate that respondents did place a high priority on career development components such as formal training, achievement and advancement. Given the relatively low salary levels for new entrant trainees this was found as a negative factor (section 6.6.1) however, there was an appreciation of the attainable income afforded to those with more experience and higher qualifications.

Contrary to previous studies that suggest the importance of financial incentives to trade and craft workers (Hazeltine, 1976; Olomolaiye and Price, 1988), or the importance of accomplishing project tasks (Borcherding and Oglesby, 1974); the results of this study suggest that NETs and QEs place a high priority on career development. This would suggest that retaining recruits rests on meeting their long-term career development aspirations. Figure 6.18 represents the paired comparison
findings from section 6.7 (Tables 6.15 to 6.19) as a directed graph or diagraph (see Kendall and Babington Smith 1940; David, 1988) in which nodes \((F_1, F_2, F_3, F_4, F_5\) and \(F_6\)) represent each of the factors and all their relevant connectors.

The arrows indicate the direction of preferences so that all pairs of factors are asymmetric and unidirectional. A high priority is given to career development of NET’s. Previous studies have typically employed differing methodologies and the different data collection methods yielded differing results (Borcherding and Oglesby, 1975; Neale, 1979; Wilson, 1979; Maloney and McFillen, 1985; Olomolaiye; 1988; Olomolaiye, 1990; Davies and Duff, 1994). Utley et al., (1997) suggested for example, forced choice approaches involving respondents choosing between two attributes tends to result in findings that are inconsistent with Hertzberg et al., (1959; 1968) original theory, while free choice approaches involving the open selection of attributes may produce similar findings to Hertzberg et al.,

![Figure 8.1 Diagram indicating the relative direction of preference](image)

Figure 8.1 Diagraph indicating the relative direction of preference
However, using the paired comparison process outlined in section 5.7.4, ensures that results are less probabilistic and are likely to be deterministic, thereby yielding a clearer picture of participants' preferences (Saaty, 1996).

The digraph (Figure 8.1) suggests that trainees have a preference for career development over the other five factors. From these findings, career development represents a primary motive in respondent's career choice. Job security is the second most important factor with financial incentives third. This could be considered surprising within a construction management context given anecdotal suggestions that there is a high drive towards monetary rewards. Factors may be categorised into priority levels, based on the scale separation between attributes (Table 6.15 to 6.19): Low (Social Relations and Job Content); Medium (work Conditions); Medium-High (Financial Incentives and Job Security); and High (Career Development). Although financial incentives and career development theoretically occupy differing perspectives, they are not opposites, but separate dimensions of the career continuum. The results point to individuals having a bi-polar relationship to both.

While the literature suggests career development is a motivational factor, respondents show a closer link to hygiene factors such as pay, due to the fact that career development often implies an increase in relative wage over time. Similarly salary, although it may be the most visible aspect of a career at the outset of employment (Olomolaiye et al., 1998), it may lose importance over time. As Neale (1979) noted, financial incentives are only effective when newly introduced, as excitement wanes over time and workers require more satisfaction. In reference to the work of Hertzberg et al., (1959; 1968), the results of this research questions the existence of two independent motivator and hygiene factors (corresponding to Campbell, 1970), and suggests further research should be undertaken to explore the categorisation of work attributes.
8.2.3 Reconciling Career Development Aspirations against Realities

However, as found in Chapter 7, development through structured career development programs was only really experienced at trainee levels prior to attaining NVQ 2 (section 7.13.2) and respondents found it hard to engage with the qualification and funding structures (section 7.13.4). The analysis further revealed that barriers existed to their career development and that these had manifested themselves from a very early stage in their careers (sections 6.5.2 and 7.13.3). Comparing and contrasting both data sets, it is apparent that informants are led to continually re-evaluate their aspirations and future goals.

8.2.4 Career Development and Career Progression

Section 7.13 outlines informants' perceptions of career development within the industry. By reducing the narrative accounts, the career development perspectives can be further assessed. Data were grouped, categorised and condensed to identify both positive career development encounters (where individuals received positive assistance towards achieving their career development aspirations); and negative career development encounters (where their experiences related to little or no assistance). The critical attitudes and behaviours identified in relation to positive career development encounters were driven by a satisfaction with managerial, training, education and industry processes (section 7.13.6; ICC – 13). This suggested reciprocity of intention between employers and funding/resource allocation. The subprocesses that had the greatest impact on the cycle were: a strong career focus from management; appropriate policy and practice frameworks; and incremental career pathways. From the perspective of both anecdotal suggestion and actual experience, positive factors were a more significant variable amongst those working for larger organisations and public sector employers. Redeployment also offered opportunities for advancement where employees were offered a work role transition. A mediating factor was that individual’s determination to succeed in advancement terms, often required a move into supervisory, managerial, technical or professional positions. This relied on an individual’s ability to seek trade-offs in achieving their career
development goals; sometimes resulting in loss of time and/or reduced opportunities for overtime and increased remuneration.

From the transcripts represented in Chapter 7 (QE sample) 18 particular themes were identified to represent respondent’s perceptions. These themes were later categorised as Driver/Enabler’s (D/E) or Barrier/Impediment’s (B/I) relating to positive or negative career development connotations. Table 8.4 shows the categorisation of responses as organised into the general themes and basic descriptions of their individual characteristics.
Table 8.1 Thematic representation of Drivers and Barriers

<table>
<thead>
<tr>
<th>Drivers/Enablers (D/E)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Structured Progression Factors</strong> – Employer with an established career development policy (DLOs and MNC)</td>
</tr>
<tr>
<td><strong>Employer Initiative</strong> – Employer with a career driven focus (SME)</td>
</tr>
<tr>
<td><strong>Employee Initiative</strong> – Individual action towards career development</td>
</tr>
<tr>
<td><strong>Industry Initiative</strong> – Industry wide career development programmes</td>
</tr>
<tr>
<td><strong>Element of Chance</strong> – Circumstance, opportunism and/or serendipity</td>
</tr>
<tr>
<td><strong>Dead Men's Shoes</strong> – Vacant or the impending vacancy of roles within the organisation or across industry</td>
</tr>
<tr>
<td><strong>Redeployment</strong> – A necessary shift in work role due to physical stressors or circumstantial element (i.e. maternity as found in the case of two female respondents)</td>
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<table>
<thead>
<tr>
<th>Barriers/Impediments (B/I)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Apathy</strong> – Lack of a career development focus on the part of the individual</td>
</tr>
<tr>
<td><strong>Allocation of Resources</strong> – A focus on operational activities leading to a limited value placed on career development</td>
</tr>
<tr>
<td><strong>External Funding Issue</strong> – Lack of industry driven support for further or higher education</td>
</tr>
<tr>
<td><strong>Institutional Issues</strong> – No suitable course availability</td>
</tr>
<tr>
<td><strong>Access</strong> – Limited access to education</td>
</tr>
<tr>
<td><strong>Competitive Industry Variables</strong> – Financial constraint on the part of the employer</td>
</tr>
<tr>
<td><strong>Commitment to Work Role</strong> – Time constraints due to intrinsic nature of the industry or duties and responsibilities of the work role</td>
</tr>
<tr>
<td><strong>Accessibility</strong> – Bureaucratic structures that hinder access to further education and training</td>
</tr>
<tr>
<td><strong>External Commitments</strong> – Family and social commitments that do not support career development</td>
</tr>
<tr>
<td><strong>Applicability</strong> – Further training and education do not correspond to current work role</td>
</tr>
<tr>
<td><strong>Streaming</strong> – Restriction of individuals to certain work roles and perceived limits to progression through stratified hierarchy</td>
</tr>
</tbody>
</table>
Although some of the themes can be stated as individually derived (self schema i.e. Apathy), the majority relate to external factors or combined factors (others schema and inter-dimensional script i.e. Commitment to work role). By grouping responses according to the emergent themes each factor was quantitatively assessed by the percentage to which each theme occurred within the transcripts (as presented in Table 8.5). From Table 8.5: column (1) identifies the rank order in which codes relating to each particular theme occurred; column (2) identifies the theme nomenclature (see Table 3); column (3) shows the frequency to which the codes corresponding to each theme occurred; column (4) the average (Mean value = $m$) to which codes could be identified against sample respondents; column (5) corresponds to the percentage each theme occurs within the identified number of passages (2701); and column (6) identifies the category allocation of themes (Barrier/Impediment or Driver/Enabler).

Table 8.2 Rank order of themes and percentage of occurrence ($N = 62; n = 2701$)

<table>
<thead>
<tr>
<th>(1) Rank</th>
<th>(2) Theme</th>
<th>(3) Freq</th>
<th>(4) Mean within transcripts ($m$)</th>
<th>(5) Coded passages (%)</th>
<th>(6) Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Allocation of Resources</td>
<td>281</td>
<td>4.532</td>
<td>10.4</td>
<td>B/I</td>
</tr>
<tr>
<td>2</td>
<td>Competitive Industry Variables</td>
<td>263</td>
<td>4.242</td>
<td>9.737</td>
<td>B/I</td>
</tr>
<tr>
<td>3</td>
<td>Employee Initiative</td>
<td>205</td>
<td>3.306</td>
<td>7.59</td>
<td>D/E</td>
</tr>
<tr>
<td>4</td>
<td>Applicability</td>
<td>204</td>
<td>3.29</td>
<td>7.553</td>
<td>B/I</td>
</tr>
<tr>
<td>5</td>
<td>External Commitments</td>
<td>179</td>
<td>2.887</td>
<td>6.627</td>
<td>B/I</td>
</tr>
<tr>
<td>6</td>
<td>Commitment to Work Role</td>
<td>172</td>
<td>2.774</td>
<td>6.368</td>
<td>B/I</td>
</tr>
<tr>
<td>7</td>
<td>Element of Chance</td>
<td>162</td>
<td>2.613</td>
<td>5.998</td>
<td>D/E</td>
</tr>
<tr>
<td>8</td>
<td>External Funding Issue</td>
<td>161</td>
<td>2.597</td>
<td>5.961</td>
<td>B/I</td>
</tr>
<tr>
<td>9</td>
<td>Industry Initiative</td>
<td>154</td>
<td>2.484</td>
<td>5.702</td>
<td>D/E</td>
</tr>
<tr>
<td>10</td>
<td>Streaming</td>
<td>147</td>
<td>2.371</td>
<td>5.442</td>
<td>B/I</td>
</tr>
<tr>
<td>11</td>
<td>Accessibility</td>
<td>146</td>
<td>2.355</td>
<td>5.405</td>
<td>B/I</td>
</tr>
<tr>
<td>12</td>
<td>Apathy</td>
<td>135</td>
<td>2.177</td>
<td>4.998</td>
<td>B/I</td>
</tr>
<tr>
<td>13</td>
<td>Dead Men's Shoes</td>
<td>101</td>
<td>1.629</td>
<td>3.739</td>
<td>D/E</td>
</tr>
<tr>
<td>14</td>
<td>Access</td>
<td>91</td>
<td>1.468</td>
<td>3.369</td>
<td>B/I</td>
</tr>
<tr>
<td>15</td>
<td>Employer Initiative</td>
<td>90</td>
<td>1.452</td>
<td>3.332</td>
<td>D/E</td>
</tr>
<tr>
<td>16</td>
<td>Institutional Issues</td>
<td>82</td>
<td>1.323</td>
<td>3.036</td>
<td>B/I</td>
</tr>
<tr>
<td>17</td>
<td>Structured Progression Factors</td>
<td>81</td>
<td>1.306</td>
<td>2.999</td>
<td>D/E</td>
</tr>
<tr>
<td>18</td>
<td>Redeployment</td>
<td>47</td>
<td>0.758</td>
<td>1.74</td>
<td>D/E</td>
</tr>
</tbody>
</table>

B/I = Barriers/Impediments
D/E = Drivers/Enablers
$m$ = Mean value

From Table 8.5 it can be acknowledged that barriers and impediments to career development are a major factor in respondent's representation of their careers. By quantifying the number of codes, B/I themes accounted for approximately seventy per cent of all passages.
8.2.5 Key Findings #2 – Reconciling NET and QE Perceptions

The results support recent challenges to the rational systematic approaches to career decision making, in favour of a more holistic view that places others as a central resource in the decisional and choice process. Individuals are not self-determined in their outline of career options but are limited to opportunistic supply-side factors and external influences.

In relation to career choice, respondent's place an emphasis on financial reward. However, this is not a simple relationship and a range of reasons for this exist. For instance, security is a considerable factor, as are opportunities for career development and seamless progression.

Career development is important to respondents, particularly in later working life when the physical demands of the job take their toll. Trade and craft workers need to be proactive and seek opportunities; or rely on circumstantial factors when there is a shortage of skills/men in a particular area. At present, career development is relatively ad hoc in practice and often lacks organisation on the part of the employer. The onus is thus on the individual, as there is limited employer and industry-driven support.

The relationship between career development and financial reward is more complex. Financial rewards are often the only means for relative advancement. However, to obtain the kind of wages alluded to by industry promotions, workers have to engage in long working hours or attain knowledge of more than one trade.

In relation to career progression, whilst managerial and office-based employment would bring more pay, these moves often result in less pay due to loss of overtime earnings. In addition, such progressive moves are not always desired due to the loss of work relationships with other tradesmen and the perceived difference between "us and them".
Lack of respect from office and managerial staff are presented as a barrier to career progression. In addition, the limited value placed on career development and training by their employer is thus a confounding factor. A desire for equal treatment with office staff and opportunities for progression (when age proves a barrier to working) is required.

Furthermore, barriers between and amongst trades were suggested. Some trades view recruits from other trades, and their skills, less favourably. A gate-keeping process often ensures that work is kept within particular trades.

### 8.3 Theoretical and Conceptual Analysis

From the two data sets (P1 and P2) the research used a model and framework that draw together the literature on careers and career development: A trade and craft model definition of careers; and a framework for analysing the career dynamic process.

#### 8.3.1 Defining Trade and Craft Careers – Four Dimensional Model

Sections 5.7.8 and 6.2, outlined the method and results of the process used to define the trade and craft careers. Ontology has one basic question: "What are the fundamental categories of being?" i.e. "What exists?" (Blackburn, 1994 p. 269). In philosophy, ontology is the most fundamental branch of metaphysics. It studies being or existence as well as the basic categories of phenomenon, in an effort to find out what entities and what types of entities exist (Blackburn, 1994). To develop a trade and craft career model, the research adopted Crinson's (2001) analytical schema, used for the analysis of qualitative focus group data (section 5.7.8, Table 5.7). The schema outlines the analytical process and is designed to be transparent, showing the "analysis trail" from data to analytical conclusions.

From the narrative accounts, the term career envelops an ontological rationale (Blackburn, 1994), i.e. a proposition (declarative sentence subject to proof or
disproof; Ibid) to which there is a subject; objects; and predicate (connecting expressions; ibid). The term career was found to be a combination of entities (rather than a entity in itself) namely: i) the individual, who is subject to the nature of his or her; ii) work (object); to which a set (or sets of); iii) predicates, combined to form the "career paradigm" (proposition). This is represented in Figure 8.2.

![Figure 8.2 Defining the term "Career" as a proposition](image)

Figure 8.2 Defining the term "Career" as a proposition

One psychological approach exemplifying this is social cognition, which, broadly defined, concerns the scientific study of the cognitive, motivational, and affective processes involved in social interaction (Kunda, 1990; 1999). Various research (Baldwin, 1992; 2005; Baldwin et al., 1990; 1993; 1999; Baldwin and Main, 2001) has supported the hypothesis that people possess "Schemas", or organised knowledge structures, including specific facts, memories, and abstract beliefs organised, according to subjective theories (Abelson, 1981). With a direct link to Parsons' (1909) original work (see section 1.2), Baldwin (and others) propose an associative network of three schemas which converge to form a "Relational Schema" comprising of: a schema for self (a self-schema); a schema for other (other-schemas); and a connected interpersonal script (convergence of both).

Considering Parsons (1909) in comparison to Baldwin (1992) a basic model for viewing the relationship of individuals to the Construction industry (as a body of associated organisations) is as a triad consisting of: the 1) the individual; 2) employing organisations; and 3) the industry (converging body). The construction industry is very much an example of a “project based industry”. Project organisations form complex and ever changing employment relationships during the project delivery process. Aside from DLOs (Direct Labour Organisations), the analysis found it hard to determine whether individual commentary was on particular organisations
or the generic industry. The dyad (conjoined industry and individual organisations) pays homage to this. Within the process represented within this model, individual workers connect to their careers through their cognitive interpretation within the relational schema. The associated Relational Trade and Craft Schema (RTCS) consist of:

- **Self Schema** – The individual’s cognitive representation of the self
- **Dyadic Schema** – The individual’s cognitive interpretation of the industry and its composite organisations
- **Inter-Dimensional Script** – knowledge of patterns of related observations about self and the construction dyad (Industry/Organisation) – particularly about what behaviours are followed by what responses (the “if-then” contingency format).

Another way of viewing this is by identifying a career as having dimensions. Three spatial dimensions are necessary to give a complete description of all matter in the universe (Stapp, 1977; 1982; 1885; Goswami et al., 1993). In a description of the physical nature of matter, everything in physics can be described as having width, depth and height (Stapp, 1977; 1982; 1885; Goswami et al., 1993; Van Linden, 2003). A further temporal dimension (time) is also necessary, as a new three-dimensional description might be presented after a given time interval (ibid). This four-dimensional weave of time and space understood in the lexicon of physics can be applied to the concept of the career (Van Maanen and Schein, 1976; Johnson; 1977; Driver, 1979 Collin, 1984). For instance, Van Maanen and Schein (1976) used three dimensions to describe their career Cube (Section 3.11) consisting of environments, individual differences and phases. Similarly, Driver (1979; Section 3.12) also refers to the three dimensions of frequency of job move, direction of movement and change in job content. Johnson (1977) provides support for temporal dimensions by suggesting that, like age and social change, the study of careers is dominated by reference to the passage of units of time.
8.3.2 An Emergent Model of the Craft “Career”

During analysis, consistencies across responses suggested that definitions contained a few fundamental and basic elements of which an individual’s actions, perceptions, attitudes, and behaviours interact with, and react to. Through the retroduction process (Section 5.7.7); the indexed themes were grouped under four distinct dimensions:

1. **Content** – the process involved in conducting and sustaining work;
2. **Context** – a dyad of industry and organisation which work takes place;
3. **Ordinal Metric** – method of social or political ranking or value association; and
4. **Time** – the movement of the enumerated three from one state to another.

These dimensions and indexed themes have been pictorially related in Figure 8.3 along three spatial dimensions and one temporal dimension. Each dimension represents a set of variables. This model represents a spatio-temporal system (space and time) with each set of variables representing spatio-temporal co-ordinates.
On interpretation, the model represents the continual and reciprocal interaction of the individual within the context of a trade and craft career. Particularly in the context of self-employment the *Ordinal Metric* represents achievement-oriented criteria of assessing work involvement. The dimension of *Content* involved the skills, duties and responsibilities that respondents believe are prerequisite to developing careers. Particular to respondents, the *Context* was relative to the construction industry and any organisation respondents believe they will work within. As these dimensions change along a continuum (temporal conjunction) - *Time* is incorporated within the model to represent respondents’ history of work, their current state and future aspirations (Figure 6.5).

Careers may thus be viewed in either spatial terms i.e. forward/backwards, up/down, left/right (or moves from organisation to organisation, increased/decreased knowledge and responsibility/horizontal job expansion and rotation, promotion and demotion in status) or temporal i.e. time spent in a particular job (length of continuous service or investment in one occupation or organisation and history of work roles and future prospects). Just as a career may be regarded in terms of your job title,
promotion history and duties and responsibilities, it may equally be referred to in terms of length of service i.e. how long you have worked for an organisation or in one occupation. All of these dimensions and sets of variables are quantitatively defined in the normative traditional career models. The precise interpretation of linear understanding entails that phenomenal development takes place in the context of one-dimensional time. In other words, the arrow of time is assumed to have a merely positive direction so that all events move forward.

### 8.3.3 Components of Trade and Craft Career model

Table 8.3 and figure 8.4, place the 16 themes outlined in the *post hoc* discussions (P1) and place them within the four-dimensional model. The full representation of data taken from section 6.2.1 is detailed in Figure 6.5. Although the collected data may be classified into pre-existing themes, descriptions and interpretations from existing literature, an overarching argument remains that the themes in the literature are undoubtedly related to managerial occupations. The indexed themes and dimensions in this study have been developed through the definitions and interpretations of the principles under investigation in this research. The four-dimensional model is potentially useful as a conceptual link between the research findings and existing theories of careers.
Table 8.3 Thematic and dimensional representation of careers.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>The Individual Response - in relation to:</strong></td>
</tr>
<tr>
<td>Content---</td>
<td><strong>Instrumental</strong> - rudimentary obvious and basic statements</td>
</tr>
<tr>
<td></td>
<td><strong>Function</strong> - reflecting actions and roles</td>
</tr>
<tr>
<td></td>
<td><strong>Skills</strong> - intrinsic and transferable skills (role specific)</td>
</tr>
<tr>
<td></td>
<td><strong>Responsibility</strong> - reflect implicit duties</td>
</tr>
<tr>
<td></td>
<td><strong>Education</strong> - reflecting requisite academic knowledge</td>
</tr>
<tr>
<td></td>
<td><strong>Training</strong> - reflecting specific training</td>
</tr>
<tr>
<td></td>
<td><strong>Content Security</strong> - labour market demand/relative bargaining power to employment</td>
</tr>
<tr>
<td>Context---</td>
<td><strong>Situation</strong> - employer; lateral dynamics; vertical dynamics(a. industry and/or b. organisation)</td>
</tr>
<tr>
<td></td>
<td><strong>Context Security</strong> - economic stability (industry and/or organisation)</td>
</tr>
<tr>
<td>Ordinal</td>
<td><strong>Power</strong> - political influence/subordinator role</td>
</tr>
<tr>
<td>Metric-----</td>
<td><strong>Reward</strong> - relative remunerative evaluator</td>
</tr>
<tr>
<td>Temporal</td>
<td><strong>Status</strong> - social stratification (actual &amp; perceived)</td>
</tr>
<tr>
<td>Time-------</td>
<td><strong>Past</strong> - work history (relative)</td>
</tr>
<tr>
<td></td>
<td><strong>Present</strong> - current work related activities</td>
</tr>
<tr>
<td></td>
<td><strong>Future</strong> - prospects/aspirations /role succession</td>
</tr>
</tbody>
</table>

Within this model it could be assumed that three sets of variables (time, content and context) interact to produce career outcomes (ordinal metric). However, different meanings are adopted for the term career according to the perspective from which it is viewed (Collin, 1984a).

As supported by Van Maanen and Schein’s (1976) career cube model (section 3.1.2), from an outside perspective there is an emphasis on spatial movement which limits the overall viewpoint. The observer looks upon increased mobility and status and is the pre-eminent objective viewpoint. From the individual’s perspective, not only do they see their own career differently through thoughts and emotions, but they may also focus on more temporal dimensions of movement. This view will also be limited to other people, as they will only experience the subjective elements through empathy, inferred language and behaviour. From the career history chart (Figure 8.2), job change represents a fundamental characteristic of the sample. These changes involve shifts along all dimensions of: status; function; employer; reward, work role orientation (Figure 8.4). Although relative stability within the industry exists with only a few years spent in occupations outside of construction (section 7.10), from the
proceeding discourse (section 7.11.1 – 7.11.9.4), what can also be seen is that job changes usually were unplanned and typically were the result of non-work related decisions (section 7.11.9.2; ICC – 27).

From assessing the job change index and viewing the individual change types, a complex interrelation between the dimensions exists. For instance, in the case of outspiralising there is a high combination of change in status, function, reward and work environment. Similarly too with drop out shifts, although in this case, the change is downward in direction.

![Diagram of career representation](image)

**Figure 8.4** Thematic and dimensional representation of careers
8.4 Framework for Analysing Trade and Craft Careers

Underlying the definition of careers (section 8.3) are elements of social, political, technical and economic movement. The literature acknowledges movement clearly by presented traditional definitions that emphasise sequences and successive attempts to gain power, status or influence (Arthur et al., 1989; Thomas, 1989; Arnold, 1997; Arnold et al., 1998), or attempts to move onward and upward through organisational hierarchies (Arnold, 1997). The research found that these movements were characterised by the series of decisions that employees make at various points in time.

Figure 8.5 Full four dimensional model

8.4.1 Decision Making Characteristics of Job Change

The study found that job change within the career process is often characterised by turbulence and spontaneous decision making. Various authors have viewed careers as projects (Rose, 1989; Adamson, 1997). Like all projects, the quality of the outcome is presumed as directly related to the quality of thinking and planning up front. However, all projects are contingent on inconsistent environmental factors which change the course of predefined plans. Within the career process, few people have the
research skills or access to essential information to fully plan a career - taking into account all possibilities, opportunities and risks. Deciding on the right career path can be a complex undertaking. Careers are a significant part of an individual’s life. Sadly, for many people, work represents “a duty”- “a burden” – or “a means to an end” – or “an interruption to their weekend” (Rose, 1989). As Staw and Ross (1989) suggest, careers may be subject to decision making errors at various stages.

8.4.2 Underpinnings of the Framework

In Chapters 2, 3 and 4 the literature is developed and forms the basis for a theoretical framework to identify the various decision making stages of trade and craft careers. The framework is presented in Figure 8.6 (below). The sections of the framework are individually identified below:

**Stage One – Antecedents and Exploration**

1a. Career Decision – influences on considering the career

1b. Career Choice – process/determinants by which career was actuated

1c. Expectations & Aspirations – projected outcomes and individual goals

**Stage Two – Dynamics of the Industry – Organisation Dyad**

2. Congruence/Reality Shock – first experiences of the work environment

2a. Career Progression – transitions of responsibility, status and power

2b. Career Development – further training; education and skill acquisition

2c. Satisfaction – subjective evaluation of career decisions

**Stage Three – Attitudes and Behaviours**

3. Commitment – Intention to leave

3a. Positive – factors contributing to retention

3b. Negative – factors contributing to retention

3c. Reaction Strategies – combined manifestation of 3a, 3b, 3c
Stage Four - Consequences

4. Performance Delivery – subsequent effects on productivity, delivery, and quality

The framework adopts the perspective view of careers as projects (Rose, 1989; Adamson, 1997). Viewing the career as a project (Section 4.6) allows the research to examine the informants’ careers at various stages of decision making. Using the basics of Staw and Ross’s (1986) model of escalation as the underpinnings, the framework also uses: O’Neil et al., (1980; section 3.5), Gottfredson (1981; section 3.6), Ginzberg et al., (1951; section 3.7), Gati (1993; section 3.6 and 3.7), Gati et al., (1993; section 3.6 and 3.7), Rusbult and Farrel (1982; section 4.1) and Driver (1979). The refined framework structures the fundamental stages of the trade and craft career found in the study as outlined in Figure 8.6.
Chapter 8

Trade and Craft Career Process Framework

Stage 1.
Antecedent &
Exploration

1a. Career Decision

1b. Career Choice

Exit - Career Evaluation

1c. Expectations & Aspirations

Stage 2.
Dynamics of the Industry -
Organisation Dyad

2a. Career Progression

2c. Reaction Strategies/
Coping Mechanisms

2b. Career Development

2d. Reaction Strategies/
Coping Mechanisms

Stage 3.
Attitudes &
Behaviours

3a. Positive

3b. Negative

3c. Reaction Strategies/
Coping Mechanisms

Stage 4.
Consequences

3d. Reaction Strategies/
Coping Mechanisms

Exit - Career Evaluation

Performance Delivery

Dimensional Components of Trade and Craft Careers

Planned Behaviour
Outcomes

Reinvestment due to:
- sunk cost
- ego defence
- post hoc - rationalisation

Loyalty
Voice

Learned helplessness

Figure 8.6 Trade and Craft Career Process Framework (TCCPF)

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The framework represented in Figure 8.6, is shown in the form of a flow chart. Underlying many theories of career development are the identification of stages within the career process (cf. Super, 1953; 1957). Each section of the framework represents differing career stages. Although the framework primarily describes a life course developmental process, it may also represent a repeatable cycle. As such it may represent passage through a particular work role, organisation, or a person's entire life course. At each stage there are objective and subjective evaluations made. These evaluations affect each career stage, and shape clusters of distinctive activities and behaviours as influenced by changing attitudes and motivations.

8.4.3 Overview of the Framework

As a broad overview of the Trade and Craft Career Process Framework (Figure 8.5), Stage One (1a – 1c) is dominated by career explorations, investigations, related assumptions and subjective inferences about the individual, the work sector and related occupations. These may be synthetical, analytical, deliberate, or circumstantial; each acting in synthesis based on pessimistic or optimistic evaluations. Following the developmental task of exploring and selecting amongst career alternatives, Stage Two (2 – 2c) evaluates individual perceptions of the sector once conclusive career choices have been made. At this career stage an individual also focuses on active investments in their career by developing skills knowledge and professional ability. Individuals evaluate previously held attachments. It advances that the work environment may reaffirm prior assumptions; and more importantly at this stage within the framework emotions are sampled once questionable or negative results are received. It seeks to identify the nature of trade and craft career dynamics and incentives to career management. Whilst ensuring that previously established rewards and statuses are retained, Stage Three (3 – 3c) examines psychological, social and circumstantial forces for persistence, and samples determinants of attrition and retention. Stage Four (4) examines negative or positive consequences to the industry in terms of productivity, quality and delivery. At this stage an approach may be in conserving acceptable levels of performance whilst preparing for retirement or exits from a particular career path. Psychological needs and effective priorities change at various career stages, often in line with the changes in roles and job content.
As the timing of transitions from career stages is not prescribed by chronological age, a "recycling" process may occur, where individuals return to section one (or other relevant sections) if attitudes and career goals change. Aside from aspects of retirement, this recycling process often explains why people leave occupations, often in an attempt to find more adequate ways to meet career or life goals. If this does not occur, this is the stage in which entrapment processes may be encountered.

At each section or stage within the framework, an individual prescribes a set of priorities which guide decision and choice variables. Transition from each stage may be smooth or turbulent based on past experiences and perceptions of future outcomes. If perceptions at each intersection are negative, possible coping mechanisms may be enacted. The framework uses Rusbult and Farrell's (1982) system of coping mechanisms (exit, voice, loyalty and neglect) to describe alternate solutions. As the literature outlined in section 2.6 alludes, decision and choice making within each career stage can be conceptually linked to "work effect concept systems" (Jepson, 1984), which presuppose three facets of preferences and priority attachments: a) the relative importance of a factor to a deliberating individual; b) the most preferred level of a factor to an individual; c) and the readiness to compromise.

8.4.4 Sectional Analysis of the TCCPF Framework

In meeting objectives 5, the thesis explores the framework in relation to extant and emergent careers theory and explores the wider implications of the findings of P1 and P2 on the project delivery process. The individual sections of the framework are discussed below in relation to the data (Chapters 6 and 7) and the theoretical and contextual perspectives as outlined in the literature (Chapters 2, 3 and 4).

8.5 Stage One – Antecedents and Exploration

The framework commences at Stage One where individual’s determine the range of career options and evaluate opportunities. Career choices (1b) are then made. Choices are not only based on interests and preferences, but socially and
psychologically imposed limitations. At 1(c), individuals have a range of preconceived notions corresponding to beliefs, assumptions, motivations and goals. These perceptions are influenced by initial recruitment and training encounters (section 7.12.6). These are in relation to career progression and career development (outlined later in this chapter).

8.5.1 Stage 1 (a) and 1 (b) - Career Decision and Choice

As exemplified in the literature in Chapter 3, career exploration has been described as the gathering of information and experiential learning prior to confirming a career (Arnold, 1997). Career exploration entails information gathering about oneself and available employment opportunities (Stumpf et al., 1983). It entails a readiness or cognitive preparation to identify desirable and realistic job opportunities (Stumpf et al., 1983; Schwab et al., 1987; Arthur et al., 1989; Philips and Blustein, 1994). Career decision is the determination of which set of occupations are plausible or realistic; while career choice is the career finally selected above all others (Schwab et al., 1987; Arthur et al., 1989; Arnold, 1997). The majority of career theorists acknowledge that as well as these physical and cognitive processes, socio-economic background and academic attainment are often predictors of vocational choice.

8.5.2 The Interplay of Careers Information, Relational and Informal Networks on Career Decision and Choice

Section 6.3, identified the range of influences on the P1 informants. The notion of conflict was evident throughout the results (cf. section 7.6.1; Table 7.8). The data revealed different intensities of thought and information seeking prior to joining the industry; often interlaced with contradiction and the imposing influence of others within the social environment (sections 6.3.2 and 7.7). The exploration, decision and choice process were identified as highly dynamic; involving the influence, interaction and conflict of several factors. These included: the thoughts of the individuals' social environment, other people, situational variables, circumstance, and happenstance;
which represented inclusive: thoughts, activities, and interactions; rather than any one activity in itself.

8.5.3 Conflicts within Decision and Choice

The recollection of the processes often seemed contradictory, although several themes emerged which systematically explained the processes that underscored the samples identification of vocational identity. From the P2 study a similar scenario was encountered, also emphasising social class and peer perceptions as influences in all antecedents. Section 7.6.4 and 7.6.5, identified that while informants had considered a range of alternate and fantasy careers (7.6.4); their eventual career choice was less a result of personal disposition but of limitations (7.6.5). In her original treatise, Gottfredson (1981) argued that young people develop ideas about the appropriateness of certain occupations, consider the relationship between opportunities and their ability. This cognitive process was said to affect plans for education and employment. To concur, the research evidence in this study points out that the young people are oriented to social class reference groups and were guided by their parents' aspirations for them. It has been suggested that parents have and, youngsters adopt, different views about what is an acceptable job depending on their social class (Ginzberg et al., 1951; Gottfredson, 1981; Rosen, 1956). Parental encouragement for young people to attend college in pursuit of an occupation increases by both social class and ability level.

The discourse sections 6.3 and 7.7 and corresponding Tables 6.9 and 7.11, both emphasise the complex array of influences that are likely to come together to determine an individual's career choice. Merely focusing on a single influence is likely to present an incomplete picture of how an individual came to a particular career decision. For example, if career selection is believed to be made on the basis of "self-determination", that focuses on autonomous career exploration and systematically considering a range of options, then the individual is considered to be a rational and adaptive decision maker, who uses formal systems to support methodical and un-impulsive decision and choice processes. This model would assume considerable levels of social autonomy and self-direction. This would ignore the
wider and often complex processes that constitute career decision and choice. Thus, examining the construction industry's current recruitment practices in isolation may conceptually marginalise the role of paternal, relational and socio-environmental networks in shaping career choice processes. A more robust appraisal of career choice must conceptualise a multi-dimensional phenomenon.

8.5.4 Career Exploration

The extent and nature of career exploration depends on the career stage of the individual. Section 7.7 observed that more proactive job search and career-related activities was experienced by informants who made a career transition into construction. This included self-directed career exploration (which is defined as purposive behaviour and cognitions that afford access to new information about occupations, jobs or organisations (Super et al., 1963)), self-marketing and networking (Stickland, 1996). Additionally, these more proactive job searches and career-related activities emerged at later stages of informant's careers as they looked to make stronger commitments. These commitments were often simultaneously linked to increased responsibility to spouse and dependents.

8.5.5 Section 1(c) - Career Expectations and Aspirations

In Chapter 6 (sections 6.5, 6.5.1 and 6.8) it is outlined that a major feature of respondents thoughts are orientated toward future events and outcomes. Even though future events motivate everyday behaviour over a life-time; thinking and planning for the future are particularly important for young people for several reasons. First, adolescents are faced with a number of normative age-specific tasks set by their parents, peers and teachers. Second, adolescents' future-oriented decisions, such as those related to career, life-style, and future family, crucially influence their later adult life. Third, how adolescents see their future plays an important part in their identity formation.
Porter et al., (1975) note that individuals do not enter employment as a completely "blank slate". They bring with them a set of "cultural baggage" and expectations formed as a result of their education processes and social experience. Dean et al., (1985) identify four processes which influence the career expectations, namely; childhood experiences, societal stereotypes, formal and informal training processes, and organisational recruitment and selection processes (section 7.12.6). The interplay of these variables creates expectations about job content, job context and future goals.

From the P1 study, informants displayed high expectations of what their careers would offer them in the future. The majority expecting to reach self employment or become business owners (section 6.5 and 6.5.1). Section 6.7 and corresponding data outlined in Tables 6.14 – 6.18; and Figure 6.1, suggest that financial incentives are not always a fundamental priority. This suggest that the ability to motivate an individual will draw on an individual's needs with regards to their future and the appraisal of internal and external factors for satisfying them. As well as the supporting notions of anticipation, or the expectancy of career development within any work role, the results of this study demonstrate that trainees are willing to prioritise progression related factors.

Trainees' expectations and aspirations were projected along fairly linear dimensions and many expected to achieve their career ambitions within a limited time frame. Expectations are not simply a cognitive phenomenon. They are profoundly social and cultural. Career dispositions are inextricably bound up in both their wider social contexts and in the more immediate social conditions. Exposure to employers through recruitment and selection processes (section 7.12.6), is argued in the literature as becoming one part of a series of social episodes which influence the development of appropriate expectations and inform the early development of individuals' psychological contract with the organisation (Herriot, 1984; 1989).

Porter et al., (1975) distinguish between self-initiated recruitment and organisation-initiated recruitment. In the first case, the individual seeks out the organisation. The organisation (in this research, the construction industry) should not build up an overtly favourable image. A look at the recent marketing strategies in construction, the industry seems to have taken aggressive steps to entice individuals to populate trade
occupations. In this study the down side to this is uncovered, where relative unrealistic expectations are adopted, although the “bright picture” as Dunnette et al., (1973) call it, has often failed to materialise.

8.6 Stage Two – Dynamics of the Industry/Organisation

Dyad

Stage Two is the process whereby individuals enter and engage within the dyad.

8.6.1 Congruence/Reality Shock

At stage 2, (Congruence/Reality shock), the initial experience of the work environment is encountered, where high expectations are either confirmed or negated. At this point behavioural forces (social and psychological) become activated as positive or negative outcomes materialise or become salient. Coping mechanisms are often enacted. The negative synchronisation of expectations to outcomes at this stage may encourage an immediate withdrawal (exit), however psychological or social forces may encourage persistence regardless of immediate perceptions (loyalty, neglect). These may come in the form of family commitments (section 7.12.8). Any incongruence may encourage vocal expressions of discontent (voice). At this point, individuals may make investments of money, time and sustained effort to achieve success. During this process of investing, individuals periodically evaluate the fit between aspirations and goals and the opportunities that the industry or organisation offers. These consider acceptable levels of career development (2b) and an appropriate degree of career progression (2b). As suggested in section 8.2.2 these may be objectively or subjectively referenced based on personality differences.

8.6.2 Incongruence within the Dyad

The existence of an incongruent experience often creates problems in the employment relationship leading to employee turnover and absenteeism. The results of the paired
comparison demonstrated that, at various priority levels, intrinsic factors (such as advancement) and extrinsic factors (such as wage) are important to employees. Informant discussions highlighted that the work environment contributes greatly towards shaping the cognitive and behavioural processes. The comparison of construction trade and craft workers' career priorities with early career opportunities revealed that all too often aspirations do not align with the realities of career opportunity. This suggests that, rather than trade and craft employees lacking a natural focus on career development issues, experiences associated with negative career development or lack of opportunity, often shift focus onto financial gains. It should be noted, however, that the analysis did not explicitly consider issues of socio-economic status and class, or the distinct influence of individual organisational contexts; both of which are undoubtedly important influences. Such an analysis should be included in future research into craft career choice.

The research suggests that the transition into work is, for some, a turbulent one, with individuals experiencing a wake up call. This transition encompasses what Arnold and MacKenzie-Davey (1992) called unmet expectations, Herriot et al., (1993) termed "dashed hopes" and Adamson (1997) terms "Reality Shock". The present research suggests that this early phase is characterised by more than just the unpleasant reality that early and high expectations may not be achieved. For many, this phase is also about adjustment, and thus the individual's key task seems to be one of orientation to the demands of work and a change in goals accordingly (Section 7.13). Within this research Holland's (1997) idea of congruence appears implausible as expectations are unlikely to be met prior to complete experiences within the work environment.

Behaviour at this point was determined by individually derived attitudes and by the opinions of the individual's social environment as suggested in Ajzen and Fishbein, (1980). Hence, employees rationally decide how much effort to devote to a particular behaviour. Circumstances within the work environment were found to affect a compromise towards or against certain attributes and this ultimately determined a primary focus on immediate rewards. Within the context of this study, such a perspective suggests that, rather than trade and craft employees lacking a natural focus on their career and career development, it is the negative career development experiences that lead to their focus on financial rewards.
8.6.3 Project Based Nature of the Industry

Informants displayed a greater inclination to quit one work setting in search of others that satisfied goals to a greater extent. From the research job change is seen as a frequent and ubiquitous event. In reality two physical types of changes are occurring; controlled by two psychological variables. The physical variables are: a) the instantaneous; and b) the evolutionary. The psychological variables are 1) the required; and 2) the not required. As well as individual's mobility from position to position, positions themselves change and evolve in response to changes in the environment. In turn the job holder's cognitive and emotional states change in response to the situational, social and environmental conditions. As such any career analysis should recognise all types of changes that occur. Industries, organisations and individuals themselves are continuous and changing; career processes may be dynamic and changing; or static and uniform. The description of careers should be capable of detecting meaningfully the presence or absence of mobility patterns.

In their analysis, Nicholson and West (1998) identify the basic descriptive dimensions of job change to assess whether the job change involved: a change in employer; or whether they involved a change in function. By including the relative status of the move, they assessed whether the move involved: upward mobility; downward mobility; or no relative change in status. Using this analysis structure and combining change dimensions, it is possible to identify twelve types of job change. Beyond expectation, the chronological flow of the samples careers was fairly explicit; and allowing for some approximation; the samples' careers were charted in a precise manner which allowed for a comprehensive analysis. Within this analysis a wide range of career transitions and changes of work roles were identified. These included: any moves between jobs; alterations in the content of work, duties or activities; including work reorganisations. In addition the process also identified: periods of unemployment; deliberate absence from the labour market; and periods of vocational education and development. It was noted subsequently, that while Nicholson and West's (1998) coding was suitable in identifying movement and status change, it did not fully identify the four preferences (a – d; section 7.8) in relation to the relative
rewards associated within these moves, or periods of non vocational activity such as unemployment.

The move across labour segmented field often involves a change in pay structures. For instance an operative moving from site to office based employment may shift from being paid hourly, or by levels of production, into a structured salaried pay system. Within these moves potential earnings may become limited as an increase in salary is often unattainable by working extra hours or increasing individual levels of productivity. The research identifies the coping responses suggested in Rusbult and Farrell (1982), which refers to an individual's efforts to either master, eliminate or temper the effects of any work related tension. Rusbult and Farrell (1982) proffer four such coping mechanisms: (a) exit, (b) voice, (c) loyalty and (d) neglect. In this research exit responses were characterised by changes in employer, characterised by reactive moves or drop-out shifts (7.11.3.3).

8.6.4 Dynamics of the Industry – Organisation Dyad

From the narrative accounts in Chapter 7, it appears that career development is often limited to learning processes through on the job training within a company or on a particular project. Essentially, this involves the acquisition of occupational and practical knowledge which enhances engagements to work activities, but often disregards theoretical knowledge and knowledge of management and supervisory process required for advancement. This is directly attributable to the industry's increased move towards flexibility and increased fragmentation (Winch, 1998, Harvey, 2001) and the subsequent impact on employers' commitment to training. Recognition should also be given to the hierarchy of management actions that impact on employee's willingness to engage in their personal career development. The construction industry is dictated by the policy frameworks and structures that are created by its governing institutions. These are then influenced by management actions, although these are subsequently influenced by wider environmental factors such as project variables, work conditions and situational problems on-site. In addition to limiting wider skill development, unfavourable conditions within the work environment tend to increase the human cost of construction practice. The workload
often becomes the source of discomfort especially if the individual is unable to advance their learning. The data reveals not only a direct link to work place disruption and loss of productivity, but also alludes to psychological issues involving insecurity and stress. These were found to induce the individual to leave the project, trade or ultimately the industry in the longer term. This supports Schein’s (1978) assertion that attrition is a consequence of limited growth opportunities, and this compels the argument that both hygiene factors and motivational factors must be accounted for within the employment relationship.

8.6.5 Career Progression

The four-dimensional model of careers (section 8.2.1.1; Figure 8.4) alludes to subjective and objective interpretations of career success. What career means is closely related to how people define the term career. As external careers had been the focus of most past career research, the external, objective perspective of career success has been at the centre of research. Typically this type of research has been construed as consisting of extrinsic or objective factors with visible metrics, such as salary, promotions, or status (Gattiker and Larwood, 1989; Jaskolka et al., 1985). From this approach, career success is viewed as hierarchical advancement, a larger income, and increasing recognition and respect from others; these aspects are traditionally associated with career success. The achievement of a managerial career is typified by sequences of spiralling moves, approximately a third of which entail a change in employer. Both forms of spiralling are amongst the most radical of all job changes, requiring simultaneous adjustment to the new demands of lateral and vertical movement. In the case of out-spiralling these moves also require an adjustment to the demands of the new organisation setting (Watts, 1981; Nicholson and West, 1998). These moves are characteristic of those career-centred employees who seek opportunities to further their careers.

Measures of labour market success are often determined by variables such as earnings, socio-economic status, occupational prestige and job satisfaction. Nonetheless earnings are usually the established performance metric of career progression (Olomolaiye et al., 1998; Mills and Hill, 2001). Using earnings to
measure labour market inequalities is attractive because it allows both comparisons on a common metric and the detailed study of individual differences. However inequalities of earnings are only part, albeit an important part, of what we normally mean by labour market inequality (Mills and Hill, 2001). A naïve economic argument might be that in competitive labour market equilibrium observed earnings must contain all of the information about the comparative desirability of different jobs. Yet, no actually observable labour market is either in equilibrium or fully competitive. Moreover, a cross-sectional ranking of jobs and individuals according to income is likely to obscure the inter-temporal inequalities associated with differences in expected future income streams. A novel measure of labour market success is the Index of Job Desirability or IID (Jencks et al., 1988). The IID combines monetary and non-monetary aspects of jobs with weights determined by how the sample survey respondents rate their own job compared to a notional average job. The research by Jencks et al., (1988) showed that earnings are not sole or even chief determinant of how people view their career. Instead they found that progression is the most important single determinant of job desirability, 13 non monetary job characteristics together were determined.

The sociologist’s alternatives to earnings, socio economic status, (SES), occupational prestige and various measures of social class have the disadvantage that they work with aggregated occupational units rather than with the information about the actual jobs held by individuals. People in similar class positions or of similar social standing can still be heterogeneous with respect to the desirability of the jobs they hold. Job satisfaction indices explicitly measure individual differences, but they suffer from the difficulty that one man’s meat is another man’s poison. Job satisfaction incorporates purely idiosyncratic variation to serve as a good measure of generalised labour market advantage. What we need then is a way to combine monetary and non-monetary job attributes in a way that reflects society’s weighting of the contribution of each attribute to making a job desirable.
8.6.6 Glass Ceilings and Velvet Ghetto's

Two terms used in the 1980's to describe the restrictions of career mobility amongst minority ethnic and females are that of the "Glass Ceiling" and "Velvet Ghetto". The Glass Ceiling refers to invisible, artificial barriers that prevent qualified individuals from advancing within their organization and reaching full potential (cf. Eagly and Carli, 1981); while velvet ghetto refers to these groups enjoying better jobs than an earlier generations, but restrictions exist to certain types of jobs, with still fewer promotion prospects (cf. Ghiloni, 1987). From informant perceptions, similar scenarios exist at trade and craft levels where progression becomes contingent on such limitations of opportunity (section 7.12.3; ICC-31). Winch (1998) explored the growth in labour-only subcontracting on self-employment. The research looked at the reasons behind this development and concluded that the main reason was increased emphasis on flexibility over productivity as sources of competitive advantage. The implications of this strategic choice, was the compromise of productivity and quality due to the ways in which non paternalistic employment patterns hinder employee participation and investment in training. Research by Gann and Senker (1998) suggested that training provision in UK construction trades has largely failed to adapt fully to the needs of a modernising industry.

Formal training programmes have been inappropriate in content and inadequate in quantity. Clarke and Wall (1998) concur and suggest that the UK construction training system is out of step with European counterparts and is confined to training for traditional trades. Training is employer-led, discounting the needs of workers and is largely dominated by qualification structures broken into narrow task-related units. Coffey and Langford (1998) looked into the propensity for employee participation by electrical and mechanical trades. They showed that workers have a strong desire to participate and to have significant potential for participation in defining and controlling their everyday work. Lack of training and lack of participation in work was found evident amongst informants (section 7.12.3, ICC-31; 7.12.9; ICC – 12).

Recognition should be given to the hierarchy of management actions that impact on employees. As Olomolaiye (1989) points out, in productivity terms only 25% of the
productive time is influenced by employee motivation and that 75% is controlled by management actions, and on-site problems are more important than operative influence. It represents a fundamental unbalance in thought as career development and progression is viewed as a prime motivational factor in retention of employees at managerial and professional levels. Undeniably, many informants have reached higher positions (section 7.3.5, Table 7.6) and had attained mobility in the direction of their goals. However, many still believe they are prevented from advancement based solely on their current labour market position. A rational perspective assumes an organisation would emphasise movement from within only if the benefits of retaining and developing employees are greater than the costs.

8.7 Stage Three - Attitudes and Behaviours

In Stage Two, it is identified that initial expectations at Stage One may be congruent or incongruent with realities encountered within the industry. At Stage Three, a rationalisation process is encountered which determines a positive or negative commitment to the associated aspect of the dyad (either organisation or industry). The rationalisation process involves an appraisal of past performance, circumstance and an evaluation of future opportunities. If the rationalisation process is positive, the individual is assured that past investment is justified and active reinvestment (time, effort, money) may occur as a positive commitment. If the rationalisation process is negative, then two alternatives are possible.

8.7.1 Referencing Psychological Variables of Cognition, Emotion and Motivation

A key finding of this study is that job change is a major characteristic of the career process. However while some moves may be due to progression factors, many moves are characterised by disruption and unhappy relations within employment relations. During the analysis the affective nature of responses was examined by using the laddering up system. In this respect emotions were sampled by using the questions “how did that make you feel?” or “do you like that?” Content analysis was used to
quantify participants' emotional statements into frequencies (section 5.8.7). The nature of the passages were coded into positive or negative statements reflecting pleasure and simultaneously coded to reflect the nature of arousal. Responses were interpreted emotionally in any number of ways, ranging from the most joyful to the most noxious. Allowing for the cross coding and referencing of the interview data, the qualitative analysis identified 1047 passages reflecting emotions towards the samples occupations, careers, work, their organisations and the industry. This represented an average of 16.887 passages across respondents. These were drawn from the structured and open ended portion of the interviews.

While a number of sentences could make up an identifiable segment in a flow of conversation (with dominant content), sentences were chosen to reflect the importance and intensity of the resulting emotions. From the graph in Figure 8.7, a plot is developed \((X,Y)\) where Pleasure \(X=x_1-x_2\) \((x_1=\text{high pleasure};\ x_2=\text{low pleasure})\); and Arousal \(Y=y_1-y_2\) \((y_1=\text{high arousal};\ y_2=\text{low arousal})\) are charted.

Through interactively examining pleasure and arousal, a two-by-two matrix is developed. Figure 8.7 shows the circumplex chart of the entire sample. Figures 8.8 and 8.9 show the circumplex model with respondents differentiated by age and occupational scales respectively. According to the circumplex model, emotions can be categorised in terms of two underlying dimensions: pleasure and arousal. Combining these two dimensions results in four major emotion groupings, (i.e., quadrants of the circumplex). Emotions such as stress, anger, and frustration are situated in the high-arousal/low-pleasure quadrant; depression and sadness fall in the low-arousal/low-pleasure quadrant; contentment and relief are classified a high pleasure/low-arousal; and, finally, emotions such as excitement and surprise are considered high-pleasure/high-arousal. As shown in Figure 8.7 and tabulated in Table 8.4, the four cells are split based on the two dimensions of pleasure (positive and negative) and the two dimensions of arousal. Negative emotions are displayed on the left hand side of the three graphs and positive emotions displayed on the right. Thus four emotional states are presented: Q1) high pleasure/high arousal (top right hand quadrant); Q2) high pleasure/low arousal (bottom right hand quadrant); Q3) low
arousal/low pleasure (bottom left hand quadrant); and Q4) high arousal/high pleasure (top left hand quadrant).
Figure 8.7 Emotional circumplex chart of sample
Figure 8.8 Emotional circumplex chart by age group
Figure 8.9 Emotional circumplex chart by occupational scale
Table 8.4 Tabulation of emotional by age

<table>
<thead>
<tr>
<th>AGE GROUP</th>
<th>POSITION ON EMOTIONAL CIRCUMPLEX</th>
<th></th>
<th></th>
<th></th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 – 24</td>
<td>1 Pleasure/High Arousal</td>
<td>2 Pleasure/Low Arousal</td>
<td>2 Low Pleasure/High Arousal</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>25 – 29</td>
<td>2</td>
<td>5</td>
<td>3 Low Pleasure/Low Arousal</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>30 – 34</td>
<td>2</td>
<td>1</td>
<td>2 Low Pleasure/Low Arousal</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>35 – 39</td>
<td>2</td>
<td>6</td>
<td>5 Low Pleasure/High Arousal</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>40 – 44</td>
<td>3</td>
<td>8</td>
<td>1 Low Pleasure/High Arousal</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>45 – 49</td>
<td>2</td>
<td>2</td>
<td>3 Low Pleasure/Low Arousal</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>50 – 54</td>
<td>1</td>
<td>3</td>
<td>1 Low Pleasure/High Arousal</td>
<td>1</td>
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</tr>
<tr>
<td>55+</td>
<td></td>
<td></td>
<td>5 Low Pleasure/Low Arousal</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>12</td>
<td>28</td>
<td>16 Low Pleasure/Low Arousal</td>
<td>62</td>
<td></td>
</tr>
</tbody>
</table>

Table 8.5 Tabulation of emotional circumplex by occupational classification

<table>
<thead>
<tr>
<th>CLASSIFICATION</th>
<th>POSITION ON EMOTIONAL CIRCUMPLEX</th>
<th></th>
<th></th>
<th></th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 1</td>
<td>5 Pleasure/High Arousal</td>
<td>11 High Pleasure/Low Arousal</td>
<td>12 Low Pleasure/Low Arousal</td>
<td>3</td>
<td>31</td>
</tr>
<tr>
<td>Category 2</td>
<td>2</td>
<td>5 High Pleasure/Low Arousal</td>
<td>4 Low Pleasure/Low Arousal</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Category 3</td>
<td>4 Pleasure/High Arousal</td>
<td>4 High Pleasure/Low Arousal</td>
<td>5 Low Pleasure/High Arousal</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Category 4</td>
<td>4</td>
<td>5 High Pleasure/Low Arousal</td>
<td>2 Low Pleasure/Low Arousal</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Category 5</td>
<td>1</td>
<td>3 High Pleasure/Low Arousal</td>
<td>2 Low Pleasure/High Arousal</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>12</td>
<td>28</td>
<td>16 Low Pleasure/Low Arousal</td>
<td>6</td>
<td>62</td>
</tr>
</tbody>
</table>

Table 8.6 Tabulated representation of emotional circumplex (Figure 8.6)

<table>
<thead>
<tr>
<th>POSITION ON EMOTIONAL CIRCUMPLEX</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 High Pleasure/High Arousal</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 High Pleasure/Low Arousal</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Low Pleasure/Low Arousal</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Low Pleasure/High Arousal</td>
<td>6</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Q 1 is populated by twelve respondents; Q2 by twenty eight respondents; Q3 by sixteen respondents; and Q4 by six respondents. From the circumplex of emotions, it is clear that not all respondents are happy with their current work role. From the three graphs (Figure 8.6 – 8.8; Tables 8.4 – 8.6) the clear majority of respondents expressed emotions in the quadrant Q2 (high pleasure/low arousal), with a high range between Q2 and Q3 (44 respondents; 70 per cent). At the Q2 level it can be surmised that while they are relatively relieved or content with their current work role, some concerns exist. At the Q3 level, respondents can be said to have a less than adequate
involvement with their work role. The Q3 and Q4 levels are where major concerns would exist for employees and employers equally.

Despite there being no statistically significant inferences, from researcher observations and analysis; emotional states appeared to increase with age. This is supported in the literature (Gibson and Klein, 1970; Siassi et al., 1975). For instance, Gibson and Klein (1970) found an increase in satisfaction with age over all tenure levels in their sample. They explained the age-satisfaction relationship in terms of changing needs, a mellowing process, and changing cognitive structures associated with age. From their studies, Siassi et al., (1975) reported higher levels of job satisfaction in workers over 40 than in workers under 40, regardless of length of service. They explained this result by suggesting an increase in coping capacity with age, perhaps as a result of greater stability, ego strength and similar factors. Nonetheless, this may also be attributed to lack of alternatives or ambivalence.

Several factors can be said to contribute to changes of emotional states. What governs an individual's career decision and choice processes are often seen as the most proximal indicator of their future intentions. The research examines the careers of trade and craft employees. As such the thesis rest on the assumption that (i) respondents regard themselves as having careered occupations; (ii) trade and craft employees desire that career; and (iii) they intend to develop those careers. People experience emotion when expected patterns of relating are consistent or are disrupted either positively or negatively (Mandler, 1975; Russell, 1980; Russell et al., 1989; Mandler, 1997; Fehr and Harasymchuk, 2005). If patterns of relating are consistent, then individuals are said to display emotions in Quadrant 2 (content). If patterns of relating are disrupted positively, then individuals occupy Quadrant 1 (surprise or elation). If patterns of relating are negative, depending on circumstance, individual emotional states occupy either Quadrant 3 (sadness, depression) or Quadrant 4 (anger frustration). For instance, the experience of gaining employment may trigger extreme positive emotions because of the sudden hope of facilitating individual goals. Conversely, when expectations are not met, intense negative emotions may be triggered because goals and plans are adversely impacted. The results outlined in Chapter 7 suggest that emotional reactions do vary depending on the type of relationship in which emotion is experienced. Autonomy was cited as the most
frequent contributor to those in Quadrant 1. An example is given in 7.12.1 (ICC – 10). It was interesting however that this respondent had not reached high levels of progression or development, but was happy in terms of financial security (p. 268). An example of this is found in section 7.12.6. There were examples of extremes and it was identified that where expectations were higher than what was experienced in reality, respondents tended to populate the Quadrant 3, an example of this is given in section 7.12.6.

8.7.2 Continued Vocational Identity

Vocational identity is variously described as identifying and committing to a particular type of work (Vondracek et al., 1986b; Arthur et al., 1989; Vondracek, 1995; Arnold, 1997). This involves searching, exploring, deciding and then choosing a career, the actively reinvesting, on order to reaffirm an affinity to that career course. From the narrative accounts presented in Chapter 6 and 7, it appears that all respondents have developed a career identity. From the statistics in Chapter 7 (Table 7.11) and accompanying histograms (Figures 7.5 to 7.8), respondents have a significant amount of continuous service within construction trades. This is indicated by both the concentration of respondents at the higher extremes in Figure 7.5 (length of service) and lower extremes in Figure 7.8 (discontinuous service). The years spent outside of the industry were primarily before embarking on a construction career. However, four significant factors point to evidence of entrapment: 1) for the most part initial career entry was usually the product of incomplete career searches; 2) while most respondents confirm an affinity to the industry many confirmed that they have failed to reach their over all goals; and 4) from the emotional circumplex statistics, a high number of respondents would concur with a diagnosis of sadness and/or depression.

8.7.3 Career Entrapment

There are great difficulties in documenting the turnover rates within the industry as many moves do not involve an abject detachment from the industry, but rather a shift
to alternate construction related roles. In spite of this, from the indication of negative emotions and informant accounts, there is not a great deal of endearment to the industry due to unfulfilled expectations. The question would remain that if informants feel that their initial decision and choice of career was a mistake, and expectations and goals are unmet, why stick with it? Although many respondents reported being less than happy in emotional terms with their careers (Q3, and Q4; 28, 16 and 6 respondents respectively); as outlined in section 7.10, an unmitigated factor is that respondents continue to remain within the industry. The theme of social binding and psychological binding to a sub-optimal decision is evident in most career accounts to a greater or lesser extent. Continued attachment to money and glamour suggest that the cost of leaving the industry is too high.

Driver (1979) has called workers interested in traditional career promotions: linear career prototypes. These were considered long-term achievers seeking to move upward through the ranks of an organisation and/or a vocation. There was considerable evidence of this amongst informants. These individual’s had developed elaborate long range plans for upward progression. However stagnation was also found to occur at various career points.

Driver also suggests there are three other career prototypes that individuals can hold: (a) steady state, (b) spiral, and (c) transitory. The steady state prototype is characterised by stability in a vocational field. Such individuals, in late adolescent or early adulthood, use a minimal amount of information to arrive at a stable career concept that is rarely re-examined. Once trained in their chosen vocations, they typically maintain necessary performance skills for remaining in them. These types were also found in the study. Some steady-starters, however, would like to be in another field.

A spiral career prototype is exemplified by individuals who make career moves every five or ten years in pursuit of personal growth. These individuals likely have a shorter time perspective on when they feel entrapped. Indeed, the possibility of becoming entrapped may be a powerful force stimulating career change for spirals. Individuals with a transitory career prototype change positions even more frequently than spirals because of their need for variety and stimulation. In fact, it may even be questionable
to refer to transitories as careerists, since by definition a career implies vocational
stability. Transitories, in any case, likely have an even shorter time perspective on
entrapment than spirals. Both spirals and transients avoid becoming bound to their
chosen careers. This flexibility may result from a lack of side bets (such as tenure) or
a willingness to sacrifice side bets while perceiving attractive alternative career
choices. These workers are more likely to think about and execute career changes.
However, those who are entrapped are likely to become resigned to the situation.
Because of this process, the desire to change careers diminishes as career tenure
accumulates.

8.7.4 Social Stigma of Failure

The career change patterns of the sample shows that although people, move from
employer to employer they largely stay within the wide confines of the industry.
This would suggest either some basis of career satisfaction, or underlying variables
which restrict and confine the workforce. Fundamental to careers is often a primary
interest in finances to support family or lifestyle preferences. In which case; career
choice, attachment to the labour market, performance and emotions must be related to
this. Large portions of the construction labour market are unskilled or semi-skilled.
These involve a wide range of unskilled or mundane tasks.

Many of the informants in the P1 sample suggested that working with their hands,
travel and the variety of projects. No matter how mundane, the variability of factors
(work conditions, weather, work location, project design etc) and autonomy which
workers are allowed, means that work is unpredictable and un-regimented. Unlike
other forms of manual work (for instance factory production) workers have a degree
of autonomy in their work. Many theories of motivation speak of autonomy and
control as a need to be satisfied (Hertzberg et al., 1959; Hertzberg, 1968). It is easy
for research to overlook obvious sources of motivation and career satisfaction. A
reason for informants taking roles is reflected informants self-identity. However, in
evaluating reasons for staying in their employment, informants were to some extent
justifying their original selection of the career. Furthermore, as established in section
8.5.3, many career decisions are not based on rational free choice or a complete understanding of their ideal work roles.

One suggestion for their persistence is fear of failure. The theory of need achievement (Atkinson, 1957; see also McClelland, 1965) proposes that individuals can be broadly characterised in terms of their motives to avoid failure and approach success. The bulk of research dealing with these phenomena considers need achievement as a uni-dimensional continuum that has success orientation at one pole and failure avoidance at the other.

Several authors have considered failure from a self-worth and motivation perspective (Beery, 1975; Covington, 1984, 1992, 1997; Covington & Beery, 1976). This focuses on individuals' need to protect their self-worth. According to the self-worth theory of motivation, the need to protect self-worth arises primarily from a fear of failure and the implications that this failure may have for one's private and public sense of ability and subsequent self-worth. Individuals who see failure as reflecting poorly on their ability are inclined to self-protect because ability is typically equated with self-worth (Covington, 1984, 1992, 1997).

According to Covington and Omelich (1991), self-worth motivation theory predicts that all but the optimists (who are self-confident) are motivated by the need to protect their self-worth. They suggest that over-strivers defend themselves from failure by succeeding. They are usually bright, hard-working, and meticulous, and whilst they can be optimistic, they harbour doubts about their ability and so their success is to a large degree motivated by the need to avoid failure Covington and Omelich (1991, p. 86). The failure avoiders are motivated primarily to avoid failure rather than strive for success (high in avoidance and low in approach). These individuals manoeuvre prior to achievement scenarios in a bid to alter the meaning and implications of failure if it should occur. Failure accepters can also be seen as a defensive mode. Failure accepters tend to withdraw from the settings altogether as the primary means by which they protect themselves from the failure they are certain is going to occur. These individuals are generally disengage themselves from confronting problems and
display a helpless pattern of motivation (Abramson, Seligman and Teasdale, 1978; see also Covington, 1992, 1997).

The data reveal not only a direct link to workplace disruption and loss of productivity, but also allude to psychological issues involving insecurity and stress (Q3 in the ECM). A finding of this research is that while lacks of progression and development factors are found to influence the significant occurrence of job change or encourage individuals to leave projects or organisations, tenure to the industry is not affected. This supports Schein's (1978) assertion that attrition is a consequence of limited growth opportunities, and this compels the argument that both career development factors and financial incentive factors must be accounted for within the employment relationship.

### 8.8 Stage 4 – Consequences

At Stage Four, the cumulative experiences from stages One to Three will have a profound impact on workers' continued emotional states. This in turn has a profound impact on workers' performance and quality of outputs within the project delivery process. If congruence has been perceived throughout, a high level of performance will be maintained. Dissatisfied employees, will further engage in coping strategies to manage stress or unhappiness associated with their careers. This will also manifest itself in active reinvestment in careers. This will also be dependent on emerging opportunities for advancement within or external to the organisation. If an individual fails to evaluate a positive fit, two alternatives are possible. If congruence is low and perceived investment is low (time, effort, money), individuals may sacrifice past investment and change careers (section 7.11.3.). However, psychological and social forces may encourage persistence (section 7.12.8). Persistence may also be mitigated by perceptions that too much has been invested to exit. This may lead to scenarios identified in Chapter 4 as entrapment. Resource allocation by employers, justification of investment, and perceived constriction of career options results in the pathology described in this research as career entrapment. Reconciliation to negative situations
may result in further investments in the organisation, or a temporary reconciliation characterised by lateral moves within the industry (section 7.11.3).

8.8.1 Emotions, Attitudes and Behaviour in the Contexts of Productivity

Despite the issues/evidence (sections 7.12.2, 7.12.3, 7.12.4,), to the accepted and initiated there are many retention factors (section 7.12.8, 7.12.9), and continuous service is evident (section 7.10). Many employees are attracted to the industry based on the high rate of potential earnings and the strong male oriented cultural aspects of the trade and craft workforce. While money is often accepted as a ubiquitous employment factor (Olomolaiye et al., 1998), social relations are a prime factor in the recruitment process, with many workers entering into the industry through family and friends (section 7.7 and 6.3.1.2)). This develops the citizenship behaviour within the industry and provides the informal membership of the construction community (Gale, 1991) and many individuals are attracted to work environments populated by people of similar social backgrounds (section 7.7.5). This is often seen as a prime motivational factor to employees committing to future employment.

8.9 Chapter Conclusion

This chapter presents the reconciliation stage of the thesis by comparing and contrasting the findings of the Phase 1 (P1) and Phase 2 (P2) studies. It culminates in presenting the major aim of the study by drawing together all the objectives. The belief that a career involves a long-term commitment to personal development is evident from respondents' definitions and interpretations in this study. Although a consensus was not held amongst all of the respondents, definitions put forward suggest a sophisticated view on behalf of many informants belying many suggestions within the literature detailing trade and craft operative perspectives. From the data gathered from the P1 study and comparative views from P2, a model definition is presented which corresponds to objective 5. Respondents recognised that careers involve a progression of skills and responsibility which can be attained through further training and development. They recognised too that the context to which
careers are set has an impact on the nature of an individual's work relationship. From respondents' accounts careers have a degree of movement and transition of power and status. All factors are recognised as being affected over time. The definitions presented may bear similarity to the normative, achievement-oriented model of careers, although analysis of data would suggest that in the case of status and power, the aspirations are not of positions with boundaries of organisational structures.

In meeting objective 5 and its component objectives, a framework is developed that develops a conceptual view of careers in relation to the literature and explores the wider implications of trade and craft careers to the project delivery process. The P1 and P2 studies are mutually supportive in establishing the complex interplay between factors that influence recruitment. In particular, they show the powerful influences of friends and relations on the career choices of craft workers. The results reveal that, contrary to anecdotal suggestions, craft workers are not purely influenced by monetary reward but gravitate towards expected career advancement. Many trainees aspire to develop their career beyond the confines of their specific craft specialisation.

The data combined in this chapter outlines that preferences regarding the level of involvement in a career are not predetermined and static. As such careers are subject to ongoing change in response to a number of factors. Financial incentives alone are not necessarily sufficient to motivate craft workers in the long term. Indeed, multiple incentives will be required to influence behaviour and these must include structured career development programmes.

The comparison of construction trade and craft workers' career priorities with early career opportunities revealed that all too often aspirations do not align with the realities of career opportunity. This suggests that, rather than trade and craft employees lacking a natural focus on career development issues; experiences associated with negative career development or lack of opportunity often shift focus on to financial gains. It should be noted, however, that the analysis did not explicitly consider issues of socio-economic status and class, nor the distinct influence of individual organisational contexts, both of which are undoubtedly important influences on the aspirations of the respondents. Such an analysis should be included in future research into craft career choice.
Those embarking on trade and craft careers are more likely to do so because of perceived opportunities to develop rather than opportunities for remunerative reward. However, the new entrant workers' optimistic aspirations towards development are often incongruent with the reality of opportunities.

Emotional responses are found to be directly attributable to the industry's increased move towards flexibility and increased fragmentation. This flexible approach to employment relations adopted by the industry; results in job change as a ubiquitous facet of construction employment. Recognition is given to the hierarchy of management actions that impact on employees' willingness to engage in their personal career development based on employers' commitment to training. The failure to meet these early expectations combined with a lack of progression opportunities, has a direct impact on the long-term retention creating a combined problem of worker dissatisfaction and reduced effectiveness of construction organisations. This misalignment of aspirations and career opportunity is not found to the same extent in managerial and professional occupations. The data reveal not only a direct link to workplace disruption and loss of productivity, but also allude to psychological issues involving insecurity and stress.
Chapter 9

Conclusions

This thesis set out to understand the trade and craft career dynamics within the construction industry. It explored the contextual data on trade and craft labour and the literature surrounding careers theory. This secondary data was used as the basis of a framework for conducting exploratory and primary research examining the career perspectives of New Entrant Trainees (NETs) and Qualified and Experienced workers (QEs).

Understanding how individuals choose their careers and how their careers subsequently develop is an area that has attracted much speculation and research. The type of career an individual chooses has implications across their whole life role and in all aspects of the wider society and at varying societal levels. As employers are beginning to understand that people are the greatest asset to any organisation, industries are increasingly aware of the need to retain the services of trained and experienced workers.

Recruiting and retaining an adequate trade and craft workforce is vital to meeting the construction industry's demands and sustaining its current growth. These employees are at the cutting edge of productivity, as they represent the direct producers of the industries product and, as the closest link to its customer base, are the most visible
aspect of the industry. Recruitment and retention difficulties need to be addressed at all levels of the industry due to the challenging context in which construction employment is set. Careers at this level are based on labour intensive work, often involving mundane and repetitive operational tasks. The geographically dispersed and project based nature of the work, is characterised by its transient and sporadic patterns. Rigid practices, poor health and safety conditions, long working hours are compounded by a low commitment to training and development.

The recent growth of the construction industry has raised recruitment and retention to the forefront of the industry’s performance improvement agenda. The wider management literature advocates understanding careers as a vital component to devising recruiting and retention strategies. Although several studies have considered the careers of management and professionals, no research has empirically investigated careers of trade and craft workers. As such, little is known about the dynamics within the industry which serve to engage and establish the career process. Accordingly, the research set out to understand trade and craft career dynamics from the perspective of individual workers.

This aim was to be achieved via five specific objectives, set within a sequential and iterative research design:

1. develop a broad review identifying the career issues relating to trade and craft employees;
2. explore New Entrant Trainees (NETs) perspectives of trade and craft careers;
3. explore Qualified and Experienced workers (QEs) perspectives of trade and craft careers;
4. compare and contrast NETs and QEs perspectives to see if career needs change over time; and
5. develop a conceptual view of trade and craft careers in relation to extant and emergent careers theory and construct a model of trade and craft careers.

Objective 1 outlined the basic research questions and directed the investigation of secondary data through informal interviews with key industry stakeholders.
Objectives 2 and 3 represented the exploratory and primary data gathering phases respectively. Objective 4 and 5 directed discussions and presented findings in relation to the literature. Through objective 5, a model definition of careers was developed from informant accounts and a framework developed for examining the career process.

9.1 Key Findings

From reviewing theoretical and contextual data (Chapters 2, 3 and 4) and, through combining and comparing the findings of two datasets (Chapter 6 and Chapter 7) a set of general findings are presented:

i) **Paucity in Research** - There is a paucity in specific research relating to trade and craft careers

ii) **Career Decision and Choice** - Employees are not comprehensive in their information and search of career options

iii) **Financial Incentives** - Employees do enter their employment with an interest in the most visible aspect of their employment; although

iv) **Priority Attachment** - contrary to anecdotal perceptions, trade and craft employees approach their employment with a high priority placed on career development;

v) **Opportunities** - career development is limited due to the realities (opportunities, operational conditions) of the industry;

vi) **Post-Hoc Socialisation** - the realities influence attitudes of individuals and their peers;

vii) **Re-Evaluation** - individuals readdress their priorities based on their experiences, which subsequently affects an orientation towards extrinsic rewards;

viii) **Career Pathologies** - Employees often encounter a series of decision errors which affect the employment relationship;

ix) **Career Entrapment** - These decision errors rarely affect a detachment from occupations, and employees become locked into their prior occupational choice. Ultimately this affects the working environment and has a long-term impact on the quality and production.

The secondary data revealed that there is a gap in research which directs empirical investigations into the careers of trade and craft workers. While the contextual data attempts to understand labour market and productivity through quantified demand forecasts, careers theory is based primarily on the working lives and practices of managers and professionals. Little research addressed the specific issue of trade and
craft careers although extant theoretical and contextual data can be used as a skeletal framework towards theory development.

Traditional career definitions highlight the inequalities which pervade society. The old meaning of career suggests a course of professional advancement. This usage is invariably restricted to occupations with formal hierarchical progression, such as found with managers and professionals. However, in acknowledging that definitions of careers are often complex and, involving objective and subjective components, interpretations and definitions must be regarded as different for males, females, adults, adolescences, white collar and blue collar workers respectively.

The antecedent processes to career entry are highlighted as: career decision processes which outline the range of alternative options; career choice processes which are definitive resolutions to enter into an occupational field; a range of underlying expectations that individuals have prior to entering employment; and aspirations which direct and shape the individuals thought processes.

The results of the study indicated that while NETs have a primary interest in developing a long term construction career, they are often limited in their career search and both objective and subjective assessment of career options. The results further indicate that once recruited to the industry, the work environment often serves negatively in advancing their career development and attending to their career needs. The organisational and project priorities, requirements and flexible structures dominate the industry. The transient and highly atomistic culture of the industry often limits opportunities, although workers with a high degree of self confidence can attain significant career advances.

9.2 Contribution to Knowledge

The overarching contribution has been to define the trade and craft career in terms of a four dimensional model, based cognitive patterns of relating to work environments and work roles (RTCS model - Relational Trade and Craft Schema- section 8.6). The
research also details a framework for assessing the carer process and, captures the nature and dimension of job changes and transitions within the industry.

The dynamic internal and external environments within which the construction industry operates, requires an ability to influence employee recruitment and retention through further investment in active career development programmes. The conceptualisation of career development initiatives as a guide to facilitating recruitment and retention is not new and the literature directed attention to many academic disciplines which focus on careers research to achieving these aims. However, previously such thought has focused primarily on professional and managerial occupations, fundamentally disregarding other occupations. The research identified that initiatives should be developed uniquely to redress the complex problems that challenge trade and craft tenure. Understanding how careers are currently engaged and developed is the antecedent process.

The research explored the basis of previous research and the various approaches to examining careers (section 3.3) and establishes that an appropriate strategy for research would be in converging theoretical perspectives (section 3.4). The study also suggests that any research of diverse populations must consider the emerging principles of contextualism (section 3.9.1) and constructivism (section 3.9.3).

Using post hoc discussions the definition of careers was mapped out from the perspective of NETs. This approach was used to construct, de-construct and co-construct (between researcher and researched group) traditional meanings and understandings of careers. From this process, a four-dimensional model of careers was developed, consisting of:

i. **Content** – the process involved in conducting and sustaining work;

ii. **Context** – a dyad of industry and organisations in which work takes place;

iii. **Ordinal Metric** – method of social or political ranking of occupations or value associated with each work role; and

iv. **Time** – the movement of the enumerated three from one state to another along a continuum.
Within the process represented within this model, individual workers connect to their careers through their cognitive interpretation of a relational schema (RTCS). Careers are considered a developmental process involving an individual, an employer and the dynamic relationship between the two:

- **Self Schema** – The individual's cognitive representation of the self
- **Dyadic Schema** – The individual’s cognitive interpretation of the industry and its composite organisations
- **Inter-Dimensional Script** – knowledge of patterns and related observations about themselves and the construction dyad (Industry/Organisation) – particularly about what behaviours are followed by what responses (an “if-then” contingency format).

As theory on careers is well established and a vast amount of contextual data exists on the construction labour market, the foundations for a theoretical framework were apparent. The framework outlined in fulfilling objective 1 was refined in conjunction with the findings and results from objective 2 and 3. The process in which careers emerge is categorised into distinct stages:

**Stage One – Antecedents and Exploration**
- **1a. Career Decision** – influences on considering the career
- **1b. Career Choice** – process/determinants by which career was actuated
- **1c. Expectations & Aspirations** – projected outcomes and individual goals

**Stage Two – Dynamics of the Industry – Organisation Dyad**
- **2. Congruence/Reality Shock** – first experiences of the work environment
- **2a. Career Progression** – transitions of responsibility, status and power
- **2b. Career Development** – further training; education and skill acquisition
- **2c. Satisfaction** – subjective evaluation of career decisions
Stage Three – Attitudes and Behaviours

3. Commitment – Intention to leave
   3a. Positive – factors contributing to retention
   3b. Negative – factors contributing to retention
   3c. Reaction Strategies – combined manifestation of 3a, 3b, 3c

Stage Four - Consequences

4. Performance Delivery – subsequent effects on productivity, delivery, and quality.

The research has been instrumental in outlining the people attracted to trade occupations and the antecedent processes involved in their selection. Contrary to perceptions of the type of people the industry attracts, respondents showed a high regard for career development. This was particularly reflected in the relative importance placed on career development in the rank assessment and the importance placed on developing new skills. Respondents possessed a high need for learning and displayed a strong desire to be challenged. In this study, career development was given effective *a priori*, as despite numerous literatures which proffer career development as superseding financial incentives as a motivator; little empirical data supports this notion at trade and craft level.

The results also support recent challenges to the rational systematic approach to career decision making, in favour of a more holistic view that places others as a central resource in the decisional and choice process. Individuals are not self-determined in their outline of career options but are limited to opportunistic supply-side factors and external influences.

The investigation also contributes to knowledge by balancing the attitudes of trainees towards against the experiences of older workers. By analysing results of the quantitative study with narrative accounts of actual experiences it was found that the anticipations toward career development do not correlate with the actual realities of working within the sector. The current provisions of the industry do not support most
career endeavours and many find themselves continually shifting work roles, organisations and many consider leaving the industry in pursuit of life-long goals.

The study has been explicit in detailing occupational transition within the industry. This outlined historical and objective measures of transitions, according to work role, pay, position and status. Key to this process was the determination of informant’s emotional attachment to their careers and explored trade and craft identity, motivations, and career preferences.

There is a high and predictively rising rate of mobility within this occupational sector. While there are some respondents whose careers are relatively stable and orderly, these were in a minority. Radical career moves involving a change in function, employer or both are far and away the most common experienced by trade and craft workers, with few of these moves involving promotion.

The complexity of occupational patterns that emerges, suggests simple economic generalisations are not capable of reflecting the dynamics of construction careers. Financial rewards are often the only means for relative advancement. However, to obtain the kind of wages alluded to by industry promotions, workers have to engage in long working hours or attain knowledge of more than one trade.

Career development is important to respondents, particularly in later working life when the physical demands of the job take their toll. Influenced by often harsh working conditions, respondents increasingly look for relief through career development and progression. The career process experienced by respondents is profoundly affected by social and cultural characteristics of the industry. Trade and craft workers need to be either continually proactive seeking alternative opportunities; or rely on circumstantial factors when there are shortages of skills/men in particular areas. At present, career development is relatively ad hoc in practice and often lacks organisation on the part of the employer. The onus is thus on the individual, due to limited employer and industry-driven support.

The relationship between career development and financial reward is more complex than within other occupational sectors. In relation to career progression, whilst

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managerial and office-based employment would bring long-term benefits, these moves often result in fewer immediate benefits due to loss of overtime earnings. In addition, such progressive moves are not always desired due to the loss of work relationships with other tradesmen and the perceived difference between "us and them".

Lack of respect from office and managerial staff are presented as a barrier to career progression. In addition, the limited value placed on career development and training by their employer is thus a confounding factor. A desire for equal treatment with office staff and opportunities for progression (when age proves a barrier to working) is required.

Furthermore, barriers between and amongst trades were suggested. Some trades view recruits from other trades, and their skills, less favourably. A gate-keeping process often ensures that work is kept within particular trades.

An exploration was conducted of individual's personal career narrative within the work roles. The study introduces the notion of careers as self-directed projects. As such they are susceptible to serial decision making errors associated with careers. Individuals may become locked into these decisions by social and psychological factors that encourage persistence. The research uncovers that as well as factors that contribute to employee turnover, there are numerous social and psychological determinates that impact on a negative cycle of retention. These career pathologies may also be used to explain individual alienation and cultural conflicts that become significant barriers to process and productivity improvements within the sector.

The theoretical contributions have been widely disseminated through conference and journal publications (Kappia et al., 2003; 2004; 2005a; 2005b; 2005c; 2006a; 2006b; see Appendix B).

9.3 Recommendations
Ignoring the often complex processes involved in career selection, ignores the development of appropriate recruitment strategies. As a consequence, recruiters and practitioners cannot always identify whether work related decisions/choices are impulsive options due to demand constraints or choices made on the strength of individual preferences.

Research in this field cannot truly generate objective results as it often assumes a deterministic career decision, preference and choice process. Relational influences are often the mediating factor between opportunities and choices. Individuals in their real-life decision making are limited by incomplete and changing information and are neither comprehensive in their information search or investigation of options.

Retaining an operational share of the workforce is key to the industry’s success. However, the objectives of industry-funded work on careers has focused on solving the labour resource crisis rather than improving it. While the industry focuses on recruiting significant numbers by offering individuals the hope of developing a secure career, there is neither the structure to support career development nor the culture to encourage it. Neglecting career development impacts on the industry’s future ability to retain its workforce.

Many of the phase and stage theories of career development provide the basis for persuasive arguments. However, these can be highly problematic in that the link between theory and data is often not explicit to manual careers or – particular to this study – construction trade and craft careers. Reviewing the discourse presented in this thesis, the most important test of validity is its acceptability to common sense and the degree to which it relates to the wider contextual data outlined in the literature Chapters. To this extent the research throws light on previous understanding and provides resonance with the experiences in construction practice. Thus, taking the view that the research does indeed strike a note with the contextual understanding of the industry – i.e. recruitment and retention deficits, the key question becomes: how can the findings and approach to this study of careers inform practice?

Research should take account of the complex process under which career choices are made. Ensuring wider society has a positive disposition to the industry is
fundamental to the sector being able to convince potential new entrants of the merits of construction craft careers. Future promotional activity should aim to address all within society and not just the potential new entrants themselves. Relationship and exploratory networks should be considered as integral to the industry becoming more attractive to school leavers in the future.

Promotion activities should also focus on mature entrants as they often represent a more stable workforce. Additional grant support should be made accessible, transparent and openly promoted to this group.

Establishing equity amongst all employment sectors within the industry (professional, managerial and trade/craft) should be a priority. This demands the creation of a labour market in which employment, career development and progression opportunities are equal. Skills should be recognised across the trades by employers; opportunities to gain these skills and greater value placed on training should be encouraged. Mentors should be available for new recruits, suitable career development interventions devised and seamless progression promoted.

Understanding incentives, demands that employers discover what aspects of career development is of value to their employees; and that they assess employee capabilities to ensure that the right mechanisms are in place to facilitate their career aspirations. Such an approach, has the potential to encourage positive occupational choices and increase the likelihood of employees remaining within their job roles. There is also a role for employer organisations to define more appropriate career pathways to enable individual aspirations to be met. Although this does not reflect the contemporary view that careers tends not to be rooted within particular organisational contexts, the role of organisational influence in shaping career aspirations nevertheless warrants further investigation.

The construction organisation must respond to the current situation and the individual’s priorities should be accounted for regardless of occupational orientation. This could be achieved through constructive dialogue and feedback in order to reach a consensus on the shape of career development structures. The aim should be to provide all employees, regardless of their entry point, with defined career pathways
which accord more with their own motives and orientation. Although this would be problematic, given construction’s preference for sub-contracting and outsourcing, moving towards more socially responsible career development structures has to be a priority if the industry is to attract and retain motivated and productive trade and craft workers.

9.4 Limitations

The analysis in this study demonstrates that in constructing their historical career process, individuals embrace broader notions of career. These align with both traditional notions of a career as outlined in psychological and sociological theories. It does however suggest that some inadvertent bias may exist beyond the control of researchers’ discretion and may influence subsequent flaws in any generalisations imposed on the target population. To some extent, the nature of speakers’ accounts may simply be an artefact of an interview schedule whose goal was to solicit such commentary. For at least the last 30 years, career theory and development has been dominated by hierarchical, bureaucratic notions of career, and when we examine individual’s accounts of their careers, the impact of the pervasive careers discourses can be seen.

Moreover, as the sample consisted of mainly white male respondents, it could be suggested that the definitions of careers obtained from this study describe white male perceptions of a career. Additionally the main informant sample used to define the careers were of a 16 -18 age group (section 6.1; P1 study). Although this does accurately reflect the types of person recruited to the industry (8.1), the research could have benefited from drawing definitions from a wider demographic sample, or the older informants (as in the P2 study).

It would be ideal, albeit difficult given the time scale, to gather subjective and objective data from a large national sample of equally representative numbers of male, female and ethnic minority construction workers. If this were possible, the research may have uncovered greater gender and ethnicity differences in career
relationships. While unbalanced in representation of white male informants, the figures for gender and ethnicity give cumulative figures higher than those for the wider industry. This may suggest that some recruitment advances have been made although these findings cannot be considered conclusive. The research did not set out specific research aims in relation to gender and ethnicity, so wider inferences cannot be drawn.

However, in keeping with the traditions of a dominant qualitative study, the research set out to report on the career patterns found in the sample rather than to generalise about the distribution of these patterns. Therefore, how representative the sample was of the general trade and craft population was not ultimately considered. Adopting a qualitative approach to the study of careers which specifically focuses on participants' own narrative serves to add richness to our understanding of the subjective career. It also serves to increase our understanding of those models of career development which purport to explain phases/stages of personal and career development. Moreover, such an approach also allows us to conduct a detailed examination of the way(s) in which individuals themselves go about the task of bringing meaning to their careers.

9.5 Further Research

While there is no reason to believe that the quality of information achieved has been significantly or adversely affected, future research into trade and craft careers may also benefit from a wider perspective and greater employer input. Employee perspectives are a key ingredient to the development of theory but it is only one factor. Management, investment levels and technology are also important factors and are increasingly interlinked. This problem could be resolved by approaching sectoral umbrella organisations initially and asking them for potential respondents. Future research could create multiple case studies of employment settings to bring further reflection on the nature of career development. Training in the construction sector needs to be placed into a broader business context if it is to affect real change. This
would suggest that national training organisations such as CITB-ConstructionSkills should be partners in broader sectoral research.

In keeping with shifting theoretical perspectives of career research, there is a need to further explore the nature of careers from the perspective of all occupational groups, particularly those hitherto neglected. Further research will develop a deeper understanding of construction occupations.

It should also be noted, that the analysis did not explicitly consider issues of socio-economic status and class, prior academic attainment, or the distinct structure and influence of separate organisations. These factors would undoubtedly be important influences and these should be included in future research.

The analysis of operatives emotional attachment to work can be further advanced. This knowledge is important for future research in deriving the most effective coping strategies to tackle job stress and hence reduce the threat of burnout. This would enable avoidance of burnout and would be considered desirable for both the well-being of construction workers and the overall performance of the industry.

Future research might also adopt a longitudinal design which enables an important contribution to theory. The study reported in this thesis displays characteristics of cross-sectional research, which is unable to ascertain the causal direction of relationships between the variables of career development and retention. Future longitudinal studies will be better able to address this interrelationship; and also assess relationships between, job stressors, coping mechanisms and career entrapment. Measures of job characteristics, quantification of burnout and individual/organisational outcomes may also be evaluated.

9.6 Concluding Remarks

Although the power to create what is wanted from a career rests with the individual, it is guided by opportunities afforded to the individual by the external environment.
Whether an individual wishes to be self-employed, change career fields entirely, hold a certain kind of position, or volunteer their time. Career development requires the individual to be self-reflective, resourceful, motivated, flexible, and able to keep their skills and competencies up-to-date. This calls for numerous interventions on the part of the employing organisation and wider industry stakeholders.
References and Bibliography
List of References


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Ref ID:


Ref ID:


Wiley.

Ref ID:


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Ref ID:


Ref ID:


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Ref ID:


Ref ID:


Ref ID:


Watts (1981)


Ref ID:


APPENDICES

List of Appendix

A. Research question and sub categories
B. List of publications
C. Phase 1 questionnaire
D. Phase 2 Instrument - Indicative Content Checklist (ICC)
E. Research Storyline
F. Original Research Proposal - Strategies for Improving the Retention of Construction Workers
G. Phase 2 Sample – Biographical Data
H. Construction Excellence
Research Question and Sub Categories

To understand the nature of craft workers' career dynamics and whether the opportunities available to such workers meets their expectations and aspirations.

1. Population
   (a) What types of people are attracted to trade and craft careers?
   (b) How are people attracted?
   (c) What is it about craft careers that attracts people?

2. Trade and Craft Career
   How do trade and craft workers define the term career? (Section 2.2.2)

3. Career Development
   (a) How do the careers of trade and craft workers develop?
   (b) Are there stages or phases in the development of trade and craft workers?
   (c) Do workers seem to progress through these stages independently of age or generational effects?

4. Career Dynamics
   (a) What are the significant experiences that influence trade and craft career development?
   (b) Are there identifiable kinds of events that are particularly important to growth in the role?
   (c) How are workers affected by the interplay of the unique organisational and industry factors?

5. Career Achievements
   (d) What are the achievements of trade and craft workers?
   (e) How do trade and craft workers perceive their personal and professional growth since entering the field?

6. Career Identity
   (a) Do trade and craft workers experience the professional “disengagement” suggested in the developmental psychology literature?
   (b) Do trade and craft workers perceive themselves, as noted in other fields, becoming gradually more cautious?
   (c) Do trade and craft workers gradually become more fatalistic?
Appendix B
Appendices

Refereed Journals and Conference Papers


Career Questionnaire

This questionnaire seeks your own opinions about your present career choice and the type of career choices you wish to make once you have finished your training.

Section 1: About You

In this section please tick boxes ( □ ) or provide answer in the space provided as required.

1. Are you? Male □ Female □

2. How old are you? .................................. Years old

3. Which of the following best describes your ethnic background? Please Tick ( □ )

<table>
<thead>
<tr>
<th>Indian</th>
<th>Black Caribbean</th>
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</thead>
<tbody>
<tr>
<td>Pakistani</td>
<td>Black African</td>
</tr>
<tr>
<td>White European</td>
<td>Other (please state below)</td>
</tr>
</tbody>
</table>

4. What Course are you doing? ............................................................

4 a. At what level? ..............................................................................

5. Are you: Full Time Student □ Part Time Student □

6. Are you: Currently employed in a construction related occupation?

   Yes □ No □

6 a. If yes, state below how long you have been working:

   ............................................................................................

Section 2: Career Choice and Influences

Instructions For these sections: Please mark ( X ) in the section which would indicate your preferred response to each question.

7. To what extent did the following influence your career decision: Strong Positive influence Positive influence No influence Negative influence Extremely negative influence

   1. your Mother?
   2. your Father?
   3. your Teachers?
   4. your friends?
   5. close family members?
   6. television, magazines or newspapers?
   7. Connexions careers advisor?
   8. an open day at the college?
   9. an internet site?
   10. Please state any other significant influence

...........................................................................................................
Section 3: What is Important About Your Career?

8. How important is it for your career to offer the opportunity to:

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<th>Very Important</th>
<th>Important</th>
<th>Moderately Important</th>
<th>Of little importance</th>
<th>No importance</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>work with your hands?</td>
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<td>2.</td>
<td>live close to your work?</td>
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<td>3.</td>
<td>earn a lot of money?</td>
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<td>4.</td>
<td>develop good social relations with colleagues?</td>
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<td>5.</td>
<td>improve your skills?</td>
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<td>6.</td>
<td>take on greater responsibility?</td>
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<td>7.</td>
<td>be appreciated for the work you do?</td>
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<td>8.</td>
<td>have pleasant physical working conditions?</td>
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<td>9.</td>
<td>have a secure long-term job with a company?</td>
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<tr>
<td>10.</td>
<td>gain promotion to a senior position?</td>
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<td>11.</td>
<td>to be well managed?</td>
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<tr>
<td>12.</td>
<td>retain an active social life?</td>
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<td>13.</td>
<td>receive a good pension and retirement package?</td>
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</table>

Section 4: About Your Career Development Opportunities

9. Do you think that your career could offer you:

<table>
<thead>
<tr>
<th></th>
<th>Very Strong Possibility</th>
<th>Strong Possibility</th>
<th>Moderate Possibility</th>
<th>Low Possibility</th>
<th>No Possibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>the chance to move into a professional occupation</td>
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<tr>
<td>2.</td>
<td>the chance to move into a managerial position</td>
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<tr>
<td>3.</td>
<td>the chance to move into a technical occupation</td>
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<td>4.</td>
<td>the opportunity to progress into a supervisory role</td>
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<td>5.</td>
<td>the chance to learn skills in other occupations</td>
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<tr>
<td>6.</td>
<td>the chance to own my own business/work for myself</td>
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</table>

Section 5: About Your Future Career

10. Please tick (□) the one box that most describes what you would like to do in the future:

1. Work in a professional or managerial position such as an Architect, construction manager or Project Manager
2. Own your own business/ Work for yourself
3. Work in a technical occupation
4. Work as a supervisor in your chosen trade
5. Work as a fully qualified operative in your chosen trade
6. Work in another industry/ Do a different type of work altogether

11. Please state what you think are:

<table>
<thead>
<tr>
<th></th>
<th>The three most positive things about your career</th>
<th>The three most negative things about your career</th>
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</thead>
<tbody>
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<td>1.</td>
<td></td>
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<tr>
<td>2.</td>
<td></td>
<td></td>
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<tr>
<td>3.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Read the phrases and definitions below, and consider how important each one is to you and your work. Then for each section choose by marking (X) one out of the two paired items that is more important to you e.g.

| Job Security | OR | Work Conditions |

Career Development: Developing new skills and abilities.

Financial Incentives: Wages, Bonuses, Overtime payments.

Job Security: Long-term employment, continuous employment over time.

Social Relations: Getting on with people you work with.

Work Conditions: Working environment, including health and safety.

Job Content: The type of work you do, what your daily duties involve.

<table>
<thead>
<tr>
<th>Career Development</th>
<th>OR</th>
<th>Financial Incentives</th>
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<td>Financial Incentives</td>
<td>OR</td>
<td>Job Security</td>
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<td>Job Security</td>
<td>OR</td>
<td>Social Factors</td>
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<td>OR</td>
<td>Work Conditions</td>
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<td>Work Conditions</td>
<td>OR</td>
<td>Job Content</td>
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<td>OR</td>
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<td>Financial Incentives</td>
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<td>Work Conditions</td>
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<tr>
<td>Job Security</td>
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<td>Job Content</td>
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<tr>
<td>Career Development</td>
<td>OR</td>
<td>Work Conditions</td>
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APPENDIX D
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<td>Time:</td>
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<td>Marital Status:</td>
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<td>Employment Status: Employed</td>
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<td>Temp</td>
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<td>Current Occupation:</td>
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<td>Designated Trade:</td>
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<tr>
<td>Length of Service in Current Occupation:</td>
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<tr>
<td>Length of Service With Current Organisation:</td>
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<tr>
<td>Length of Service In Construction Occupations:</td>
<td></td>
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<tr>
<td>Organisation Size</td>
<td>No. of Direct T&amp;C Employees</td>
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<tr>
<td>Construction Sector</td>
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</tbody>
</table>

1. Could you describe your career history since leaving school?

**Antecedents**


**Current**

7. Education 10. Duties
8. Training 11. Responsibilities
9. Skills

**Indicators**

12. Evidence of Horizontal Development 15. Career Prototype
13. Evidence of Vertical Progression
14. Relative No. of Career Moves

2. Do you think you have fulfilled your career ambitions?

17. Prior Aspirations 21. Subjective Assessment of Development
18. Career Development 22. Developmental Objectives

3. What career development have you been encouraged to do?

24. Individual 27. Considerations of higher

4. How could this have been improved?

30. Suggestions Offered

5. What are your further career ambitions and intentions?

31. Commitment 34. Reaction Strategies
32. Motivation 35. Entrapment Scenario
33. Intention to Leave
APPENDIX E
Research Storyline

The story of the research began with presenting a research proposal, then proceeded by: formulating and clarifying the research topic; conducting a scoping study (stakeholder interviews and preliminary review of the literature); evaluation and clarification of the process; a structured review of the literature; adopting a strategy; designing the research and structuring the process; pilot testing (each research/data collection technique); collecting and analysing data (two phases); then writing up. This is a rationalised outline of the process as a linear stage by stage account. In reality there was a need to revisit many of the stages more than once. Each revisit involved a reflection on associated issues and a refinement of ideas. In addition, emerging ethical and access issues were highlighted and resolved. Each research instrument (questionnaire/Interview Schedule) was pilot tested and refined several times before commencing data collection. Although quantitative methods were used extensively, the primary research method (dominant paradigm) involved the qualitative analysis of narrative career accounts obtained from the QE sample. In the first phase of the research, 563 questionnaires were carried out, along with 54 post hoc discussions and 26 semi-structured interviews (NETs). The Phase 2 stage involved 62 semi-structured interviews of QE informants. The two phases were compared and contrasted in order to form a basis for further empirical research.

The diagram in Figure E1 (page ii), presents the research as a series of linked stages. At stage 2 of the process, time was spent formulating and clarifying the research topic. This emphasised the research question that needed to be answered and the research objectives that needed to be addressed. The diagram shows the process through each subsequent stage concluding with the writing up. An emphasis is placed on a continued need to reflect and revise basic ideas and fundamental way in which the research was to progress. Stages were revisited systematically- including the research question and objectives - at which point the processes involved were reconsidered. The need for forward planning was also crucial in order to ensure that preliminary work for later stages had been undertaken.

Research process

1. presenting a research proposal;
2. formulating and clarifying the research topic;
3. conducting a scoping study (stakeholder interviews and preliminary review of the literature);
4. an evaluation and clarification of the process;
5. a structured review of the literature;
6. adopting a strategy;
7. designing the research and structuring its process;
8. pilot testing;
9. collecting and analysing data -
   Phase 1 – quantitative and qualitative study of new entrant trainees (NETs)
   Phase 2 – qualitative study of qualified and experienced workers (QEs)
10. then writing up.
Start

1. Research Proposal

2. Formulate and Clarify Research Topic

3. Scoping Study

4. Evaluating and Clarifying Research process

5. Structured Review of the Literature

6. Adopting a Strategy

7. Designing the Research

8. Pilot Testing

9. Collecting and Analysing Data

10. Writing Up

Finish

Preliminary Lit Review

Stakeholder Interviews

Forward Planning

Reflection and Revision

Phase 1

Phase 2

Figure E1. Research storyline flow chart
Strategies for Improving the Retention of Construction Workers

Research Question

How can the construction industry retain its qualified workforce in order to develop and sustain growth?

Issues in Context

The construction industry is currently witnessing its best period of sustained growth since the late 1980's (Construction Forecasting and Research (CFR), 2003; Building, 2003), with sales growth of 15% over the last twelve month’s outstripping the national industrial average (Benchmark Index, 2003). However the construction labour market is tight (Bridging the Gap, 2003). There is a high turnover of experienced employees at all levels, and the industry is largely failing to attract new trainees or experienced/mature personnel. This labour market climate threatens the industry’s ability to sustain growth or even meet current demand.

Although there exists a wide body of statistical data, little academic research has been conducted into the turnover of staff at trade and craft level, nor practical recommendations suggested to stem this flow of labour. Through developing and practising effective career development strategies, it is possible to maintain a high level of consistency between the industry and it’s employees needs. However, the career development theories that dominate the field have mainly arose through research conducted on males of mainly European descent. With the industry continually diversifying a key issue is whether these theories can apply uniformly. Furthermore, of the several streams of research devoted to career development, a large portion has focused on professional and managerial populations, even though the industry is made up of a wide variety of trade and craft occupations. Due to the construction industry’s diversity, labour intensive nature and subsequent human capital implications non-managerial employees from all backgrounds are vital to the industry as direct producers of it’s key outputs, and closest links to the customer base. As an industry wide promoted and practised strategy, specific career development initiatives and policies are capable of attracting, recruiting and retaining an operational and proportionally representative share of the UK workforce.

This research will explore potential reasons for the industry’s poor record in retaining qualified trade and craft operatives. By exploring the perspectives of trainees, qualified trades people from diverse backgrounds and at a variety of career stages, it will present a business case for the exploration and expansion of career development initiatives at trade and craft level. The expansion of knowledge will be used specifically to develop practical career development policy measures, aimed at securing the industry’s skills base in the future.

Research Aims

The aim of this research is to:

Develop a set of policy and practical career development measures, to aid the retention of trade and craft employees to the construction industry.
Research Objectives

The following objective will be undertaken in order to achieve this aim:

- Conduct a thorough review of the UK construction labour market in order to identify key drivers for the development of effective retention strategies.

- Develop a conceptual view of careers in relation to trade and craft employees, to act as a framework upon which to base the empirical investigation.

- Identify the perspectives and expectations of apprentice trainees at the outset of their careers and the influences on deciding to choose a construction career.

- Examine the perspectives of trade and craft trainees who have recently left the industry to identify possible factors behind their disillusionment with the sector.

- Explore the realities of working within the industry from the perspectives of a stratified sample of trade and craft employees at various stages of their careers.

- To develop a business case for the utilisation of career development initiatives in aiding employee retention.

- Develop a set of policy and practical measures to retain trade and craft employees in the construction industry.

- To validate these measures through data analysis and discussion with key stakeholders.

Research Method

Currently in the process of conducting an initial scoping study, the research will review the established career development literature in conjunction with statistical and contextual data relating to the construction industry. As a further development, a questionnaire of trainees leaving the industry will be conducted, along with interviews from the wide variety of the industries stakeholders, including employers, employees and training providers.

Key Outputs

- To expand knowledge of the diverse trade and craft level career perspective.

- Present a business case for greater emphasis on career development at trade and craft levels.

- To influence practical and representative career development policy measures.

- Support current employee retention initiatives.
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Occupation

Trade Origin

Pipe Rtter
Pipe Rtter
Plumber
Painter & Decorator
Asbestos Technician
Plumber
Bricklayer
Electrician
Joiner
Plasterer
Carpenter & Joiner
Plumber
Plasterer
Lecturer
Unemployed
Plumber
Plumber
Joiner
Painter & Decorator
Contract Foreman
Gas Engineer
H & V Foreman
Plumber
Carpen1ry Supervisor
Depot Supervisor
Gas Engineer
Carpenter
Project Manager
Mechanical Engineering Manager
Electrician
Project Manager
Design Planner
Supervisor
Tiler
Driver & Labourer
Bricklayer
Electrical Proj_ect Mana5ler
Bricklayer
Plumber
Personnel! & Training Manager
Computer Programmer
Responsive Repairs Manager
Business Owner
Chargehand I Acting Surveyor
Joiner
Senior Project Manager
Electrical Design Manager
Joiner
W indow Fitter
Planning Maintenance Manager
Surveyor
Mason
Contract Manager
Plumber
Bricklayer
Plumber
Business Owner
Senior Mechanical Engineer
Senior Storeman
Plasterer
Bricklayer
Electrician

Plumbing/ H& V
Plumbing/ H& V
Plumbing/ H& V
Finishing Trade
Carpentry & Joinery
Plumbing/ H&V
Bricklaying
Electrician
Carpentry & Joinery
Finishing Trade
Carpentry & Joinery
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Finishing Trade
Ca~entry

Bricklaying
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Carpentry & Joinery
Finishing Trade
Bricklaying
Heating & Gas
Plumbing! H&V
Plumbing/ H&V
Carpentry
Joinery
Plumbing/ H& V
Carpentry
Joiner
Heating & Gas
Electrician
Plumber
Carpentry
Joinery
Finishing Trade
Joinery
Bricklaying
Electrician
Bricklaying
Plumbing/ H& V
Finishing Trade
Bricklaying
Carpentry
Carpentry
Plumber
Carpentry
Joiner/Surveyor
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To deliver individual, corporate and industry excellence in construction. Innovation - Aspiring Excellence
Best Practice Knowledge - Demonstrating Excellence
Productivity - Measuring Excellence

Merry Christmas

- More KPI Masterclasses to come
  A new series of KPI Masterclasses is being planned for 2005 - watch this space!

- Northamptonshire Club Launch
  See a Press Release from Constructing Excellence in the East Midlands on the Northamptonshire CE Club launch.

  Pen Green Centre, Corby - one of three RIBA East Midlands Award Winners 2004.

- ODPM's Steering Group for new Code for Sustainable Buildings includes three Strategic Forum Experts:
  - Peter Rogers, Chair, Strategic Forum/Constructing Excellence
  - Michael Ankers
  - Ian D.Coull

Top Ten Downloads for November 2004

- The Gloucestershire Constructing Excellence Club ...
  holds its first meeting on 20 January and is looking for members.

Building Services
- Technical Exchange ...
  for more effective collaboration between BS companies & universities / research orgs.

Case study from ITCF
- Using IT to deliver a service to clients on a maintenance contract.

Workflow Software for Small Builders
See the ITCF website
BetterBuild 05 in Yorkshire & Humber
The four Best Practice Clubs in Yorkshire and Humber are working together to stage BetterBuild 05, an exhibition to be held near York on 28-30 April 2005. It will be an excellent networking, knowledge transfer and marketing event covering the whole construction industry and its clients.

KPIs on the beach!
We told you last month about the Portuguese visitors to our London KPI Masterclass and about KPIs being developed with our help in New Zealand and Grand Cayman in the Caribbean. The Grand Cayman group said: "We all thought the workshop was a great success, as CSDL we certainly gained the knowledge we needed. The feedback from our consultants and contractors was equally positive. Thanks for a very polished and professional job." Here is a picture of the workshop group in Grand Cayman to cheer you up for Christmas. Martin Print tells me they didn't draw radar charts in the sand!

FORTHCOMING EVENTS

SECTOR EVENTS
- Delivering Sustainable Communities Summit - Manchester 31 Jan - 2 Feb
- Prefabulous Homes 7 - London 24 January
## CONSTRUCTING EXCELLENCE REGIONAL EVENTS

- Themed Cluster Meeting on Collaborative Contracts in conjunction with TG2, CPN and BCEC - Bristol 18 January
  » more

- Midlands Demonstration Projects - Birmingham 19 January
  » more

## CONSTRUCTING EXCELLENCE CLUB EVENTS

- Gloucestershire CE Club - first meeting 20 January
  » more

## CPN/CIEF EVENTS

- Use of the EFQM Excellence Model in Construction Procurement (CPN) - Durham 11 January
  » more

- Supply Chain Management: developing and managing supply chains in Scotland (CPN) - Glasgow 20 January
  » more

- Socially responsible construction: key design aspects (CIEF) - Glasgow 24 January
  » more

- European and UK Off Site Manufacture: Can it ease the pressures on the development market? (CPN) - Birmingham 26 January
  » more

- Working with wildlife training (CIEF) - Cardiff 27 January
  » more

## PARTNER EVENTS

- BEST - Building Excellence Skills Today

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If you would prefer not to subscribe to it please send an e-mail by clicking on the link below and press "return" after "signoff ce" in the text of the message.
Modular SUDS training - Planning and evaluating SUDS (sustainable drainage systems) - London 19 January

Lean Construction: The Next Generation - Salford 19 January

**OTHER EVENTS**

Construction: The Opportunities & Challenges Ahead - London 14 January

Roman Engineering in Hereford - Hereford 18 January

Building Performance - London 18 January

Institution (of Civil Engineers) Update and How it will affect you - Northampton 18 January

Employment Law Conference (ACAS) - Liverpool 19 January

Birmingham New Street Station: Proposed Redevelopment - Birmingham 19 January

Easy Access Environmental Management - Leeds 13 & 20 January *see other dates & venues*

6th Annual Facilities Management Legal Update - Cambridge 24 January

An introduction to employment law - London 21 January

Unsubscribe
Sustainability Works Training Courses on New Upgraded Software - London 25 January
» more

» more

Partnering Contracts - Dublin (morning seminar) 26 January
» more

Product Design: Techniques for Innovation - London 26 January
» more

Glazing at height: guidance for designers and clients - London 27 January
» more

An Architects' Guide To Implementing Part L & the EPBD - London 27 January
» more

Construction Industry Scheme - Inverness 28 January
see other dates & venues
» more

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