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**A Grounded Theory of the Determinants of
Women's Under-achievement in Large
Construction Companies**

by

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

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ABSTRACT

In response to impending skills shortages and changing employment patterns in recent years, the construction industry has made considerable efforts to attract more women to its professions. However, despite women's increasing representation, they exhibit high organisational and occupational mobility patterns in comparison to men. This threatens the success that women have had in addressing the gender imbalance within the industry. This research investigates the careers of men and women working for large contracting organisations, in order to establish the determinants of women's career progression, and to develop human resources management (HRM) strategies to improve their retention.

A primarily qualitative methodology was employed for the research, in which career profiles were developed through interviews with 41 matched pairs of male and female employees. This allowed the gender specific determinants of careers to be established across a range of different organisations, and from informants from different vocational and life-cycle stages. The career profiles were supported by a range of other qualitative and quantitative data, which were analysed within a grounded theory framework. This led to the formulation of a set of eight interrelated theoretical models, from which a theory of women's career development was constructed. This approach provides insights into the interaction of structural, cultural and action-centred determinants, which combine to subordinate women's positions within construction organisations. The theory reflects that the construction workplace is a competitive and conflictual environment, where women are overtly and covertly discriminated against by men, who use structural systems to deliberately undermine their contribution. Women's actions in dealing with these barriers are shown to perpetuate existing work cultures. This leads to a self-fulfilling circle of women's continued under-achievement.

The research provides insights into the compatibility and conflicts between personal actions and resolutions, and the HRM policy of large construction companies. It suggests that previous research efforts in attracting women to work in construction may have been

misguided, as the industry's patriarchal culture must first be moderated if women are to have the opportunity to develop their careers in parity with men. "Soft" HRM initiatives are suggested as offering the potential to facilitate the cultural change necessary.

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LIST OF ABBREVIATIONS

ASI	Architects and Surveyors Institute
BIAT	British Institute of Architectural Technologists
BSRIA	Building Services Research and Information Association
CIB	Construction Industry Board
CIBSE	Chartered Institution of Building Services Engineers
CIC	Construction Industry Council
CIEC	Construction Industry Employers Council
CIOB	Chartered Institute of Building
CISC	Construction Industry Standing Conference
CITB	Construction Industry Training Board
CLG	Contractors Liaison Group
Co.1	Company 1 (Principal research partner).
Co.2, 3, 4 & 5	Companies 2, 3, 4 and 5.
DoE	Department of the Environment
EED	European Employment Observatory
EO	Equal Opportunities
GT	Grounded Theory
HND	Higher National Diploma
HNC	Higher National Certificate
HR	Human Resources
HRD	Human Resources Development
HRM	Human Resources Management
ICE	Institution of Civil Engineers
IER	Institute of Employment Research
IIP	Investors In People
IMS	Institute of Manpower Studies
IOP	Institute of Planning
IPD	Institute of Personnel and Development
IStructE	Institution of Structural Engineers
LFS	Labour Force Survey
LMT	Labour Market Trends
NUDIST	Non-numerical Unstructured Data Indexing Searching and Theorising
OPCS	Office of Population Census and Surveys
PAS	Performance Appraisal System
PCAS	Polytechnic Central Admissions System
QS	Quantity Surveyor
RIBA	Royal Institute of British Architects
RICS	Royal Institution of Chartered Surveyors
RTPI	Royal Town Planning Institute
SET	Science Engineering and Technology
SPSS	Statistical Package for the Social Sciences

UCAS	Universities Central Admission System
US	United States
WAMT	Women and Manual Trades
WIBCC	Women in Building Consultative Committee
WICA	Women in Construction Alliance
WIDC	Women in Design and Construction
WISE	Women into Science and Engineering
WEB	Women's Education in Building

CHAPTER 1: INTRODUCTION

It is becoming increasingly important for UK construction companies to retain their professional employees in order to remain competitive, as impending skills shortages are likely to impact on the availability of such personnel in the future. Women are beginning to form an increasingly significant proportion of the professional and managerial staff employed by construction companies, and their representation appears set to increase in the future. However, whilst there is a growing recognition of the importance of attracting women to the sector, there is also evidence to suggest that retaining female entrants is proving problematic for construction companies. Currently, little is known of the barriers that women face, or how their careers develop in comparison to men's. This thesis argues that by gaining a greater understanding of the gender determined influences on women's careers, informed judgements can be made when developing human resources management (HRM) strategies to improve their retention in the future.

1.1 The Need to Promote Equal Opportunities in Construction

The industry employs around 1.75 million people, of which under 10% are women (Court and Moralee, 1995). This makes it the most male dominated of all major industrial sectors (EOC, 1996). However, despite this under-representation, it is likely that more women will enter the construction professions over the next ten to fifteen years. This stems from the industry identifying a need to diversify its work force in response to demographic changes in the UK labour market, which are likely to lead to severe skills shortages (Andrew, 1988; Briscoe, 1990; Srivastava & Fryer, 1991; Agapiou *et al*, 1995a). The experiences of other sectors have shown that improving opportunities for women leads to a work force that is better informed, and to organisations which are more adaptable, closer to their customers and more responsive to market changes (Coussey and Jackson, 1991).

Women's membership of the industry's professional bodies has increased year-on-year since the mid 1980s. The IER (1995) predicted that women's employment in the industry

will continue to rise from 141,000 in 1993 to 175,000 in 2001, an increase of 24% compared with 12% in all other industries and services. Women already comprise 18% of the undergraduates on built environment related courses (Kirk-Walker and Isaiah, 1996).

However, despite this sustained increase in the number of women choosing professional construction careers, there has been little significant change in the number reaching full corporate membership of construction related professional bodies (Sommerville *et al* 1993). Recent legal cases have suggested that women face discriminatory work practices, or find it more difficult to develop their careers than their male peers (Finch, 1994; Building, 1995). Only 25% of women construction professionals feel that they could reach the top of their profession (Finch, 1994). Clearly, career opportunities are fundamental to staff retention in organisations, as effective career development produces committed and loyal employees (Thomson and Maybe 1994: 136). Thus, as women enter the construction work force in increasing numbers, employers will have to promote equality of opportunity to secure their retention (Khazenet, 1996; Yates, 1992; Brett and Stroh, 1994).

The Hansard Society (1990) suggested that age bars, excessive mobility requirements, informal selection procedures, stereotyped assumptions, unspecified job criteria and the 'old boy' network were all responsible for women's under-achievement in paid work. All of these barriers can be seen to operate in the construction industry, and so the inevitable consequence of not addressing them is that women will be lost to other organisations, or to other industries. A large proportion of those who leave the construction industry do not return (Ball, 1993; Agapiou *et al*, 1995a). Professionals take between five and ten years to train and so the cost of losing such personnel is considerable. This has potentially adverse long-term economic effects on the costs of training, which are ultimately passed on to clients in the form of higher tender prices. Thus, high turnover of women professionals can be seen to contribute to the overall inefficiency of the industry.

In response to the under-achievement of women, the industry has recently identified a need to be more proactive in retaining them. The government sponsored "Constructing the Team" report (Latham, 1994) recommended that equal opportunities required urgent attention, and the ensuing working group report (CIB, 1996) called for practical action in

promoting and mainstreaming equality of opportunity in the industry. However, little is currently known of women's experiences of working in construction, or the reasons for their apparent under-achievement. As such, it is unclear as to what action could be taken to improve their careers and retention.

1.2 Previous Research on Women in Construction

Previous research in the UK has focused upon women's career choice (Gale, 1990b; 1992; 1994), their passage through the construction education system (Srivastava, 1993), their initial entry to employment (Wilkinson, 1993a), and on women's interactions with professional sub-cultures within the industry (Greed, 1991). Barriers to women's entrance to the industry have been attributed to its poor status (Gale 1991a; Federle *et al* 1993; Bakos & Hritz 1991; Gale & Skitmore 1990; Morgan 1992), and to construction education departments acting as 'gate-keepers' to the professions (Gale, 1992; Johnson *et al*, 1992; Srivastava, 1992a; 1996). This may go some way to explain why the numbers of women graduating in construction related disciplines do not appear to be translated into qualified professionals in the practice environment (see Sommerville *et al* 1993).

Anecdotal evidence has suggested that women remain disadvantaged in comparison to men in terms of career development (Gale, 1994; Greed, 1991; Bagilhole *et al*, 1995). However, a literature search yielded no previous studies which had investigated the determinants of women's organisational under-achievement in the industry. Hence, little is currently known about the culture of the sector, the way in which women interact with it, or the structural constraints which impact upon their career progression. Only one study was identified which had empirically investigated career development in contracting, but this did not consider gender as a distinct issue influencing progression (Young, 1988). Moreover, since this study the industry has experienced a severe economic recession, and there are now greater demands on construction teams, with a resulting shift in roles and emphasis (McKenna, 1990).

Thus, there is now a clear need to identify the obstacles to women's careers within the industry (Khazanet, 1996). In particular, there is a need to establish why women do not

succeed in construction organisations, and how gender can be removed as a determinant of opportunity. Such a perspective views the organisation as the arena where the barriers leading to women's under-achievement are manifested (Kvande and Rasmussen, 1994).

1.3 Purpose of the Study

The need to develop equal opportunities and the failure of previous research in addressing this need, presents a fundamental problem for the industry. This is, that whilst it may be beneficial to attract more women to construction to mitigate skills shortages and improve the quality of entrants by expanding the recruitment base, this is likely to yield few long-term benefits if women subsequently leave, having experienced barriers to their career progression. Furthermore, recruitment initiatives are unlikely to have a sustainable effect on the number of women entering the industry unless those already working within it are seen to be successful. This points to a need to establish the factors that currently lead to women's career under-achievement, in order that their effect can be mitigated through HRM policies which encourage the development of an equitable work environment. In the context of this problem, the objectives of this study are as follows:

1. To establish the extent of women's career achievement in large construction companies, in relation to men's;
2. To explore the structural and cultural organisational factors defining career opportunities, and the interaction of the strategies of individuals in dealing with career opportunities and constraints;
3. To identify the specific factors, originating from both within and outside of the labour market, which lead to women's under-achievement;
4. To construct a theory of women's career development in construction organisations, which may act as a basis for further research of women's careers in the future;
5. To suggest HRM initiatives to address the factors emerging from the study which lead to women's under-achievement.

Hence, this study isolates career development opportunity as a determinant of women's retention to the construction industry. It compares the perspectives and experiences of

male and female construction professionals and managers within an organisational context, but also seeks explanations which originate from outside the workplace. This allows an assessment of the impact of women's life-cycle restraints on their careers. Using these data, an integrated framework of HR policy initiatives is developed, aimed at improving opportunities, and hence, the retention of women. The objectives are addressed through research propositions formulated at the end of the literature review (5.2).

The study represents a contribution to knowledge in that it moves away from the issue of attracting women to construction, to examine women's career experiences within the industry. It questions why campaigns to attract women to the sector were launched, without knowledge of women's experiences within the industry. Furthermore, it seeks to explore career development from the individual's perspective, and not just their employment progression characteristics. This provides an insight into the decision making-process of the individual, in terms of how they react to the obstacles and opportunities that they confront.

In addition to the practical benefits of the study, it is important for research seeking explanations for how social and organisational processes affect careers that it should contribute to the theory of work and organisations. This is because in cultural studies, academic theory and activism can inform each other (see Itzin and Newman, 1995: 6). Career opportunities in organisations can be seen to be dependent on the existence of internal labour markets. These tend to be found in larger firms, and those which operate in stable markets. Hence, in construction there appears an interesting paradox, that *large* firms operate in an *unstable* market. A theoretical question emerges from this incongruity: how do women's careers develop in internal labour markets which operate in dynamic and variable markets? By providing an answer to this question, the study contributes to wider social and organisational theory.

1.4 Research Approach

Whilst there has been little empirical work to explain women's under-achievement in construction, a body of research exists on women's careers in engineering (see Carter and

Kirkup, 1990a; McRae *et al*, 1991; Kvande and Rasmussen, 1993a; Evetts, 1996). This literature has yielded certain insights into the causal factors underpinning women's under-representation and under-achievement, some of which may be applicable to the construction industry. Furthermore, it has provided transferable methodologies for investigating women's careers in the construction sector.

Whilst the effects of structural factors as influences on careers are relatively simple to determine, a significant issue affecting careers is the individual's ability to fit into the construction industry's professional sub-culture (Greed, 1997). Furthermore, within construction, the cultures of organisations are also believed to form a barrier to women's participation (Booth, 1996). Thus, to understand the influences on women's careers, it is first necessary to gain an understanding of the cultural environment in which they work. This necessitated the use of a methodology which provided deep insights into determinants which affect their careers. As such, notwithstanding the quantitative contextualisation of women's representation in the industry (Chapter 4), and the limited statistical analysis used in the collection of feedback on the recommendations (Chapter 9), this research represents an ethnographic study utilising a primarily qualitative methodology (see Hammersely and Atkinson, 1995). However, to give the findings wider resonance outside of the participating organisations, a large sample was interviewed and data analysed using computer aided methods.

The method of data collection and analysis used a Grounded Theory (GT) approach, in which the issues relevant to the study are allowed to emerge freely from the data. Theories are then developed to explain the emerging phenomena which are systematically grounded within the original data (Glaser and Strauss, 1967). The analysis results in the development of a set of inter-related theories to explain the disparity in men's and women's career progression. From these theoretical explanations, recommendations are formulated to enhance women's career opportunities.

The research design utilises an established methodology used in a comparable study on the Norwegian engineering professions, in which matched pairs of respondents are compared in terms of their career experiences, attributes and perceptions (Kvande and Rasmussen,

1993a). By systematically comparing the careers of men and women across a variety of organisations, the effects of different cultures and structures are also established.

1.5 Industrial Collaboration and Relevance to Beneficiaries

This research was funded by the Economic and Social Research Council (Grant No. R000221679), and the Department of Civil and Building Engineering at Loughborough University. In-kind support was also provided by five participating companies who allowed their employees to take part in both the interviews and subsequent development of the recommendations. The principal research partner (Co.1) provided 50 informants. Their interest in the research stemmed from a need to improve the retention of their recent intake of sponsored undergraduates, 50% of whom were women. Four other large employers participated in the study, who provided a total 32 informants who were interviewed in an identical way to the Co.1 employees.

In addition to the obvious practical benefits of improving women's retention, an analytical framework for categorising the career determinants of professional and managerial employees was devised as part of the study. This framework may be applicable to investigating careers in a variety of sectors, as it allows the conceptualisation of structural and cultural influences on careers in a way which promotes the establishment of their theoretical inter-relationship. It facilitated the development of complex theories of career development incorporating a wide range of influencing variables. This reflected the complex realities of the informant's perception of their social world. Thus, the tangible benefits of the research are four fold: practical recommendations to provide economic benefits of reduced employee wastage for contracting organisations; improvements in career opportunities for women employees; a contribution to the theoretical understanding of careers; and an insight into the structure and culture of the industry and its organisations.

1.6 Organisation of the Thesis

The thesis is organised into ten chapters and six appendices containing additional information referred to in the main text. Figure 1.1 presents a schematic representation of

the thesis indicating how the chapters inter-relate so that the reader can establish the logical development of the final recommendations of the study. The content of the thesis is as follows:

Chapters 2, 3 and 4 review the relevant literature. These are substantial because investigating women's careers brings together two distinct bodies of literature: general management literature on career development; and women in work literature from the social sciences. Salient issues relevant to construction are brought into focus through the literature on women in construction, upon which the research propositions are formulated. **Chapter 2** presents an overview of career development theory, the nature of career development in construction, and explains the need for an empirical investigation of career development as a precursor to developing retention strategies. **Chapter 3** investigates women in paid work, the under-achievement of women in male dominated sectors, theoretical explanations for this under-achievement and presents the role of organisational level analyses in addressing these issues. **Chapter 4** presents a secondary analysis of published data pertaining to women's under-representation and under-achievement in construction, and reviews work which has sought to explain these phenomena from the construction management field.

Chapter 5 presents the research design and methodology. Drawing from the three literature chapters, the research propositions are formulated to address the objectives of the study. The preliminary and preparatory research carried out before the main data collection phase is explained, and the analytical techniques used in the analysis of the qualitative data and subsequent development of the recommendations is discussed.

Chapters 6 and 7 present the main findings of the study. **Chapter 6** presents a career dynamics analysis of the sample. Using career history data supplied by the informants, it provides a description of the interview sample and an overview of their career dynamics and progression rates. **Chapter 7** presents a career determinant analysis, where the interview findings are used to present a detailed account of the factors which affect the career development and retention of male and female construction professionals. The

findings are presented within an analytical framework developed to allow an ordered conceptualisation of the issues.

Chapters 8 and 9 present the analysis, discussion of the findings, theory development and the formulation of the recommendations. **Chapter 8** discusses the emerging findings of the study, and develops grounded theories to explain the phenomena emerging from each part of the analytical framework. By interrelating the findings of the career progression analysis (chapter 6) with the career determinant analysis (chapter 7), theoretical propositions are developed to explain women's under-achievement and lack of opportunity in the industry. **Chapter 9** develops recommendations to counteract the gender specific determinants which emerged from the analysis. Best practice from other sectors is combined with good equal opportunities practice from the construction industry to develop an integrated package of HRM strategies aimed at creating parity of opportunity for women construction professionals. The likely effectiveness of these recommendations is established via a postal questionnaire survey of the original informants.

Finally, **Chapter 10** presents the conclusions derived from the research, makes recommendations for the implementation of the proposed HRM initiatives, and suggests recommendations for further research.

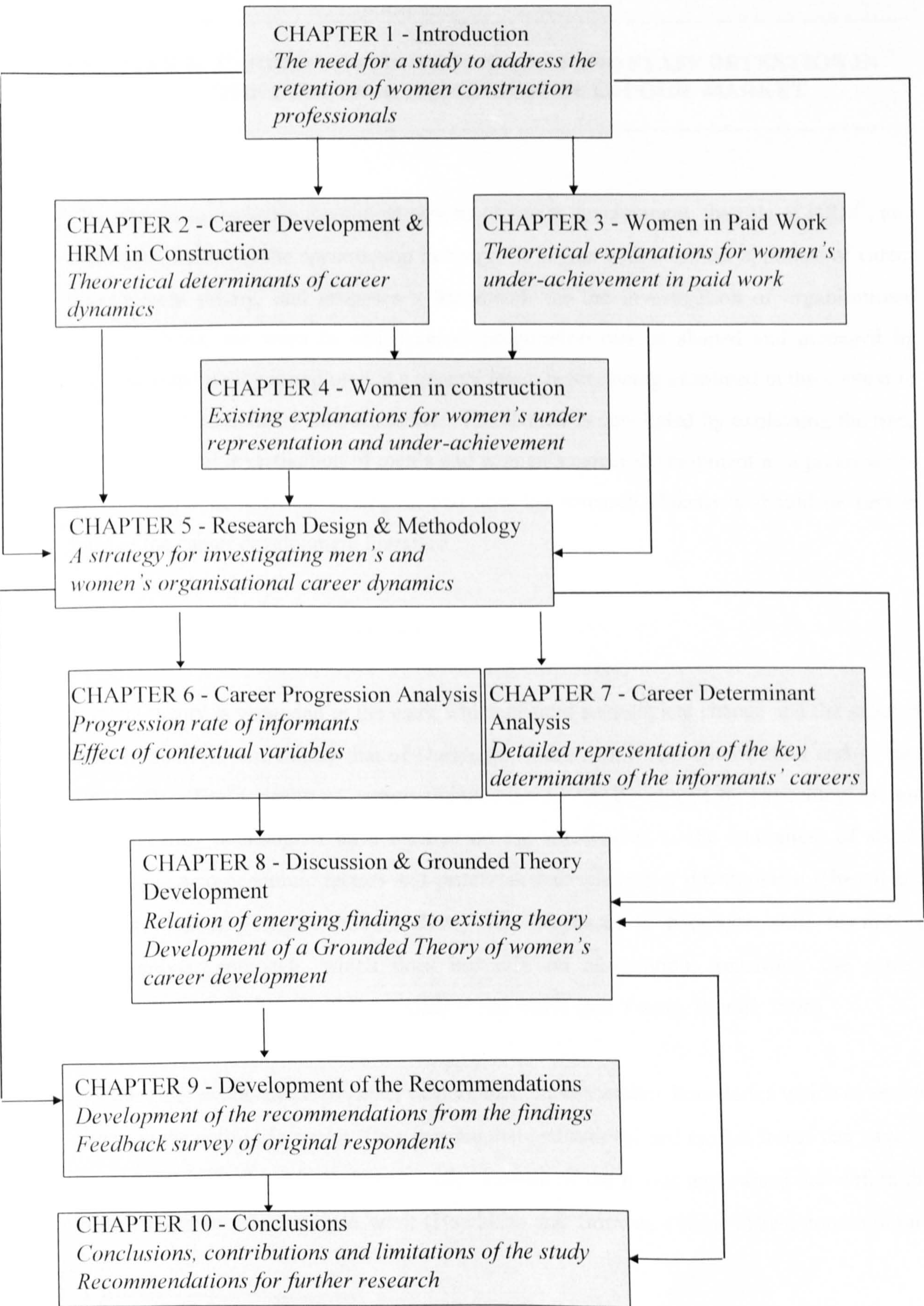


Fig 1.1: Structure of the thesis

CHAPTER 2: CAREER DEVELOPMENT, HRM AND STAFF RETENTION IN THE CONSTRUCTION INDUSTRY LABOUR MARKET

This chapter investigates theoretical aspects of career development, the role of HRM¹, and their applicability to the construction industry. It begins with a critical appraisal of career development theory, and proposes a framework for the investigation of organisational careers. Next, the ways in which career progression can be shaped and managed by organisational policy is explored at a general level, before being examined in the context of the construction industry labour market. The chapter is concluded by explaining the need for an empirical investigation of men's and women's career development as a precursor to the development retention strategies, and how the research objectives should be met in light of the career development literature.

2.1 Career Development Theory

Careers theory is grounded in the work which charted sociological change and the onset of modern society, particularly that of Durkheim, Marx and Weber (Sonnenfeld and Kotter, 1982: 19). The majority of careers theories have been developed by psychologists, but more recently sociologists have focused on the antecedents to the attainment of status, including socio-economic factors and gender as determinants of development (Brown and Brooks, 1996). Hence, careers theory has witnessed a paradigm shift towards a constructivist approach, which does not rely on assumptions regarding the actor's conceptualisation of the realities of their social world (see Young, R *et al*, 1996).

Sociological explanations of career development have thematic boundaries which extend to examine the entire life-cycle. They assume that institutional and market forces can have an equal effect (Tausky, 1984), but also take account of the norms and values that define the environment in which people work (Hotchkiss and Borrow, 1996). Thus, contemporary

¹ HRM (human resources management) is referred to in the context of the role of the personnel development function in large organisations.

research has focused on the way in which processes affect employees' careers within organisations, which act as the arenas for such events to occur within (Evetts, 1996: 103; Kvande and Rasmussen, 1994). This approach provides a perspective for the investigation of careers in this study, and is explored in detail below.

2.1.1 Career development and career dynamics

To gain a conceptual understanding of 'career development' and why variances occur between different people's careers, requires an understanding of the theoretical aspects of vocational development. Early careers research focused on the structural aspects which defined careers. This approach led to career development becoming synonymous with promotion and progress within well defined job hierarchies (Evetts, 1996: 104). However, career development is now widely acknowledged to encompass more than progression along an organisational career ladder (Hirsh and Jackson, 1996: 5).

The literature has struggled to develop an adequate definition of a 'career', because of the subjective and complex nature of vocational life cycles. These difficulties manifest themselves when trying to compare two different careers objectively (Guntz, 1989). Accordingly, Hall (1976) offers three fundamental issues that should be considered when researching careers.

- A 'Career' should not imply success or failure as these terms are relative to the individual;
- The subjective career consisting of values and attitudes differs from the objective career which is made up of observable choices - both must be considered;
- Careers are a process made up of many work related experiences. These do not have to be paid work or even related to an individual's chosen profession.

Hall (1976: 4) defined the career as being somewhere between a mere sequence of jobs and Goffman's (1961) broader definition of a series of life experiences:

“.... the individually perceived sequence of attitudes and behaviours associated with work-related experiences and activities over the span of a person's life.”

This definition is adequate for the purposes of this study, as it considers the interrelationship of the work career and the social processes that occur outside of the vocational environment. This is particularly relevant when examining careers from women's perspectives, as is explored in Chapter 3.

Defining career development as part of the life-cycle

Work dominates most people's lives in both a physiological and psychological sense. Occupational status contributes to social status, and so there is a relationship between the development of the working life, and fulfilment in the overall life-cycle. Maslow's (1966) typology perceived work as fulfilling virtually all human needs - physiological, safety, social, ego and self-actualisation. Thus, achievement in a work sense, in reaching an individual's potential, is what most people strive for, and highly self actualised people identify with their career work (Hall, 1976: 11; Maslow, 1968).

Careers do not comprise unilinear development through an organisational hierarchy, but are formed by the complex interaction of external determinants and actions. The 'family' is a key influence on vocational development in this regard (Super, 1957: 253), and hence, reasons for career choices may be generated internally or externally of the organisation (Driver, 1988). Super (1986: 95) defined 'work roles' and 'leisure roles'^[sic] as interconnected stages through which the individual passes. However, defining career development in a life-cycle sense is problematic, as these 'roles' exist only as a theoretical concept, and do not take into account external measures of career success. Accordingly, differences of opinion exist as to how career *development* should be viewed empirically.

Vondracek *et al* (1986: 17) described the development of the career as changes in a person's working life with some kind of systematic, organised and successive character about them. Hellriegel *et al* (1992: 681) proposed a broader definition in that it is simply the shape of a person's working life over time. Guntz (1989: 23) argued that managerial career development infers movement through a succession of posts in organisations. However, an individual remaining in one post but working on a variety of different projects could also be said to have experienced career development. These differing perspectives emphasise the lack of coherency in the career development literature.

Kroll *et al* (1970) proposed a compromise when they described the career development process as working out a synthesis between 'the self', and the real opportunities that exist in the world. They saw it as a process where by the individual compares their perception of who and what they are, with their career stage and position. As such, the 'self' becomes a cognitive construct, a personal representation of reality, and a datum from which to see their career in context. Thus, it is important, to understand an individual's conception of their career and how it fits into their overall life-cycle, if the relative effect of influences on their career development are to be understood. It is in this context that career development is viewed in this study, with promotion structures, being seen as objectified in the experiences and perceptions of the individual.

In adopting this paradigm, a successful career can be seen as a synergy of vocational and broader life-cycle self-actualisation. Whilst it is necessary to divide the objective and subjective careers for the purpose of empirical investigation, in reality the two are interrelated through the experiences of the individual (Derr, 1986). Thus, a career forms the development of skills within a field, which encompasses the whole of the life-cycle (Hall, 1976). Such an approach acknowledges that people function holistically, and so recognises the importance of individual values in the decision making process (Brown and Brooks, 1996: 368). This 'subjective' career perspective allows the researcher to understand how restraints and opportunities are managed by the actor, and which stages are considered crucial to their career development (Evetts, 1996). Without understanding individual career aspirations, it would be impossible to judge 'subjective' careers (Schein, 1992).

The physical nature of careers: organisational career dynamics

Career development at work is defined through 'mobility', a term used by labour economists to imply labour turnover, which may be defined as: inter firm movement (between organisations); intra firm movement (within the organisation); job mobility (within and between organisations); geographic mobility (movement of geographical location); or occupational mobility (changes in industry) (Young, 1988). All may contribute towards an individual's career profile and affect the physical rate of their

progression. 'Career dynamics' defines how such career progression takes place, and in particular the way in which careers develop within organisations (Armstrong, 1993: 472).

Understanding career dynamics allows organisations to be sympathetic to the decisions and dilemmas facing their employees (Greenhaus and Callanan, 1994). However, it is oversimplistic to isolate or focus on particular influencing variables when trying to describe career dynamics (Hedberg, 1984). Oversimplification of the influences on careers leads to 'reification', or the process of making a concept 'thing-like' (see Abercrombie *et al*, 1988; Evetts, 1992). Even single-organisation careers form a complex conceptual interaction of structures, actions and outcomes, and are not entities which can be modelled or constructed (Evetts, 1994a). Accordingly, careers theorists have developed conceptual representations of career stages. These are appraised below.

2.1.2 Phases of career development: a framework for investigation

In identifying a framework for the investigation of men's and women's careers in organisations, it is necessary to establish an approach which allows gender determined influences to emerge. Empirical investigation of careers can be broadly categorised under three approaches (see White *et al*, 1992).

Classical models

Traditional or 'classical' careers theories are based upon the premise that career pathways and tasks are predictable and constant, and that distinct phases of career development exist, at which the individual is likely to encounter particular influences (White *et al*, 1992). The number and timing of each phase varies according to the theorist (e.g. Hall, 1976; Schein, 1979; Armstrong, 1993). Hall (1976) used three generic career phases of 'education and exploration', 'identification and establishment' and 'maintenance and stagnation'. These were simplified by Armstrong (1993) as 'expanding' (approximate ages 15-25), 'establishing' (approximate ages 25-40) and 'maturing' (approximate ages 40-60). The rate at which people pass through these stages define their rate of organisational career development. According to Hunt (1992: 32), by their mid 20s, most men and women have satisfied their needs for relationships and then make choices between autonomy and

security, money and power. This results in a stage in their early 30s termed the 'career launch'. Energy is channelled into careers and organisations respond with offers of promotion, status and autonomy. This forms the key vertical progression stage.

Whilst it is useful to see careers in terms of distinct life stages, this infers that they will fit into predictable patterns. This approach fails to consider the interaction of work and non-work aspects of life, over emphasises the early stages of career development, and considers the individual as passive in the career development process (Sonnenfeld and Kotter, 1982). Thus, even vocational psychologists now advocate looking more broadly at career patterns (Makin, 1987; Super, 1986). Attempting to gain an understanding of the relationship of the career to life-cycle development has been the focus of many important studies on careers (Miller and Form, 1951; Hall and Nougaim, 1968; Schein, 1978; Super, 1980). The HRM literature links career stages to key phases in personal development which are developed through social interaction (see Vroom, 1966; Schein, 1971; Hall, 1976).

Neo-classical models

Neo-classical approaches recognise that out of work factors can also affect careers. For example, Super (1984), a proponent of the neo-classical approach, modified male models of development for women, and suggested that they could fit into several categories. This acknowledged that life-cycle constraints affected their development. However, this approach assumes that the career patterns of men and women may be similar if the life-cycle factors are taken into account (Super, 1984). This does not allow the researcher to explore the impact of these factors from the individual's point of view². Thus, neo-classical theories have also been criticised for their simplicity (Perun and Beilby, 1981), and for elevating the career *above* family issues (White *et al*, 1992; Kahn, 1984).

Dual development models

Contemporary approaches contend that there is such a difference between men's and women's careers that they warrant their own models of development (Osipow, 1983). These are known as 'dual development models', which acknowledge that there are

² For example, women may have similar career dynamics and progression as men, but may have different attitudes and coping strategies towards their development, or have had different experiences in reaching the same career stage.

fundamental differences between men's and women's situations, and take account of expectations of the appropriateness of each job; marital partners willingness to support each other's career development; differential parental roles; and different constraints in the workplace to career advancement (Gutek and Larwood, 1987).

Implicit in understanding dual development, is gaining an understanding of the individuals' beliefs and perspectives. Schein (1978; 1980; 1992) developed the concept of 'career anchors', fixed conceptual points that become a guiding focus for the individual's life and career. Career anchors define the way in which people describe self images caused by changes in their internal career (Schein, 1980). They firmly attach the individual to their perception of their own abilities, needs and values (Baron and Greenberg, 1990: 315). Schein (1978) identified five career anchors for his respondent group: technical and/or functional competence (a career organised around functional skills); managerial competence (a career based on the need for seniority in managerial position); creativity (a career based on the need to create new things); security and stability (the need for stability for both the subject and their family); and autonomy (empowerment for the individual to determine work-hours and life-style). Individuals will benchmark their own career stage against such anchors, which will be more compatible with some organisational cultures than with others (Handy, 1993: 231).

2.1.3 Classifying organisational career determinants

The paid work aspects of most careers unfold within an organisational context. Thus, it is important to understand the processes that influence organisational behaviour and the development of individuals (see Hall and Seibert, 1992: 255; Brown, R, 1982). Careers are determined by the mutually interdependent dimensions of structure, culture and individual action. Structure and culture are influenced by the decisions and actions of the individual, whilst at the same time helping to determine the decisions of the actor (Evetts, 1992; 1996: 24). This perspective sees the actor as defining their growth throughout their life of work and not as moving along pre-determined career paths (Sonnenfeld and Kotter, 1982). This is known as "interactionist", as it examines the interaction between the individual and their work culture. Whilst this is an heuristic representation of a complex interaction of

influencing variables, it allows a broad understanding of careers from the life-cycle perspective, with the organisation seen as the site of change (Evetts, 1996). The three dimensions of career development are explained below.

Structural dimensions of careers

Within organisations, two structural aspects set the framework within which employees can develop their careers - the organisation structure and the organisational processes which define work patterns (Evetts, 1996: 14). Employees need to perceive career opportunities as being in front of them. This in turn makes them feel motivated in pursuing occupational goals in terms of their psychological fulfilment (see Hall, 1976; McClelland, 1965). The frameworks which link posts and positions within an organisational hierarchy are known as career structures (Evetts, 1992). They are defined by salary and promotion ladders. Guntz (1989) described such promotional frameworks as 'climbing frames', where individuals can rise vertically in one career path, but then move laterally to develop their career on a different career route.

Organisational processes comprise the promotion procedures, work patterns and bureaucracy used by organisations which impact on the day-to-day working lives of their employees. Procedures have been shown to be powerful determinants of gender differentiation in achievement in organisations, because of the way in which they interact with organisational culture (Crompton and Le Feuvre, 1992). These include performance appraisal systems, which are widely used for assessing performance, training and developmental needs (see Lamb and Rooke, 1996; Darbyshire, 1995).

Cultural dimensions of careers

There is no single definition of culture which is widely accepted (Brown, 1995: 5). At a general level of discourse, the term is used as a descriptive panacea for the gestalt of variables that distinguish human societies (Williams and Best, 1990), or all things that are socially learned and shared by members of a society (Gaynor, 1987; McCuen, 1991). The culture of an organisation describes the unique way in which people act and interact within it (Greenwood, 1997). Organisational culture has gained attention in recent years because of the ineffectiveness of structural change to influence organisations (Hearn, 1994).

The pursuit of self-interest and power are basic processes within organisations, and so all companies should be viewed as political systems (Handy, 1993). Those who understand the power and politics within such systems are likely to develop more quickly (Hunt, 1992: 64; Kvande and Rasmussen, 1993). There are different cultural levels within an organisation, created through its practices and embedded in its values. However, a single individual can define these values (Schein, 1985), and they will recruit and promote those whom they consider to be in the same mould as themselves in terms of sex, social background and education (Mills, 1963; Kanter, 1977a; Sharma, 1990; Kvande and Rasmussen, 1993). These powerful figures prevent change, and so regardless of the extent to which an organisation is reorganised or restructured, if employees with ingrained attitudes and a belief in past systems remain, then the new structure is likely to fail (Kram and Hall, 1996: 131).

Organisational culture infers that people rather than structures should form the focus of attention (Brown, 1995: 251). Hofstede (1991) contended that cultures are more to do with a shared perception of daily practices than values, and as such they create an orderly set of rules which allow work to be carried out in a particular way. This reflects the differential power of workers and managers to create those practices (Robinson and McIlwee, 1991). However, culture can also be seen to be based at different levels, from simple 'artefacts' such as stories and symbols, through more fundamental beliefs and attitudes to basic assumptions embedded within society itself (Schein, 1985). Within an organisation, these cultural levels are created through its practices and embedded in its values (Hofstede *et al*, 1990).

Handy (1993: 180) developed Harrison's (1972) typology to offer probably the best known typology of organisational culture. He suggested that four types of *generic* culture exist, each one being tied to structural systems appropriate to it. These are the role, task, power and person cultures. The dominant culture is determined by the size, history, technology and goals of the organisation, as well as the people working within it and the environment in which it operates. In large organisations, the way in which the managing and operating

environments are differentiated also impacts on the organisational culture (Shirazi *et al*, 1996).

Organisational cultures present problems for HRM practitioners and researchers alike, as it is the hardest part of the organisation to change (Itzin and Newman, 1995), and the hardest to measure (Owen, 1993). As such, it forms an essential element of HR strategy (Guest, 1992: 18). The HR manager needs to be sensitive to the organisational culture as a significant determinant of career development, as it defines the behaviour required to be successful within organisations. Accordingly, most HR managers now claim organisational culture as their 'territory' (Brown, 1995: 130). They manipulate culture through a variety of mechanisms such as: the gate-keeping role in recruiting staff (i.e. control over the types of people that gain entry to the organisation); promotions and demotions (control over who reaches positions of influence within the organisation); induction and socialisation (a strong influence over the social dynamics within the organisation); codes of practice; mission statements; and reward/appraisal systems. They aim to remove cognitive and behavioural dispositions which deviate from the norm. The organisation will seek to reward what it considers favourable in an attempt to lead its employees to conform to its philosophy. This can be defined as the images that are associated with career success as well as the expectations that are attached to promotion achievement³.

In effect, if an individual strives for promotion and success, they will adopt the organisation's values as their own behaviour in pursuit of their goals (Baron and Greenberg, 1990: 300). Whilst attaining power and influence could be assimilated with career success, it does not necessarily require seniority. Penetrating the inner circle of organisational power is as likely to come through experience and contacts, which emphasises the politically constructed nature of careers (Pfeffer, 1989).

Action dimensions of careers and personal resolutions

When exploring structural and cultural influences on careers, the focus is primarily on what determines or constrains career action (Guntz, 1989). When research focuses on the

³ These include ability, hard work, determination and competition.

individual's experiences and actions, an alternative kind of explanatory model results. This is the subjective career associated with the interactionist approach (Evetts, 1996: 19). This approach assumes that constraining forces on careers are mediated by the actor. In effect people develop strategies to deal with the constraints and barriers put in front of them in achieving their career aims. The advantage of using the concept of strategy, is that it allows the researcher to take into account that structural and cultural factors will not have an identical effect on every individual. This is because responses to them are dependent on the personal situation and perspectives of the actor (see Crow, 1989). The notion of a 'career strategy' implies an external goal and purpose outside of, and separate from, occupational and professional objectives. This 'career identity' emphasises the inner development and experience of linking self and structure through the interplay of actions, contexts and organisations.

2.2 HRM and its Role in Staff Development and Retention

The focus of this study is on careered occupations. These are non-manual occupations with a knowledge base acquired primarily through academic and further vocational qualifications (Evetts, 1994a). This section explores the role of the organisation in developing and retaining staff in such positions.

2.2.1 HRM and HRD

HRM and HRD are part of organisation theory, designed to maximise employee integration, commitment, flexibility and quality of work (Guest, 1987). 'Personnel management' has been replaced by HRM as a strategic management process, as it offers long-term solutions to labour force planning, and creates competitive advantage for the organisation through its human resources. Effective HRM relies upon a set of empirical and conceptual observations about the factors affecting the structure, and the social behaviour of people within organisations. It provides a strategic approach towards acquiring, developing, managing, motivating and retaining people (Armstrong, 1993: 34; Storey, 1992). HRD represents the developmental side of the HRM function in assessing and improving individual performance, career management and management development.

HRM plays an important role in managing organisational culture, as systems, policies and practices have leverage over the manipulation of it (Hunt, 1992). In most companies, senior management have responsibility for cultural leadership (Bratton and Gold, 1994). They can use structural policy to create a shift in the attitudes and values held by employees (Steers, 1991). As such, HRM and organisational culture have evolved hand in hand, through a close conceptual relationship (Brown, 1995: 130).

Companies can use both “hard” and “soft” HRM approaches in managing the development of their staff. Organisations adopting hard models of HRM treat their human resources as any other factor of production whose cost should be minimised (Formbrun *et al*, 1984). In soft HRM models, employees are seen as requiring careful training and development, combined with careful management of the organisational culture (Storey, 1992). The long-term developmental approaches required for soft HRM, predominate in organisations where decentralised line management structures exist under short-term pressures (see Kirkpatrick *et al*, 1992).

Effective career development increases the likelihood of retaining the best staff to the organisation, ensures that the right people will be available to meet the organisation’s changing human resource requirements; reduces frustration stemming from down-sizing and flattening of organisational hierarchies; encourages employees to project a positive image of the organisation; and ensures a positive contribution from minority groups and women (Thomson and Mabey, 1994: 136). Inequality of career development opportunities has been identified as a principal determinant of high turnover of non-traditional entrants (Arvey *et al*, 1996; Brett and Stroh, 1994; Davidson and Cooper, 1992). These can be addressed through careful use of HRD strategies, as is discussed in chapter 9.

2.2.2 Career management and management development

Organisational policy and structure integrate to define career dynamics at an organisational level through the HRM procedures that they generate (Armstrong, 1993). Large organisations must develop their human resources so that at any time a sufficient skilled management work force are available. Management development is the processes by

which the organisation manipulates their employees' careers to develop 'succession planning' (see Armstrong, 1993: 479; Langford and Newcombe, 1992; Harrison, 1992). Very high levels of organisational commitment are not desirable as they stifle personal development and can create an over-reliance on past policies and procedures (Schein, 1968). Thus, these systems are designed to moderate staff turnover to a level appropriate to the development of the organisation.

Organisations control and manipulate career development through career management. Career management is about shaping the progression dynamics of individuals in an organisation-centred way, to ensure that individual employees reach their potential within the assessment of organisational needs. This ensures a satisfactory career for the employee, and optimum use of the human resources at the disposal of the organisation, so that employees match the needs of the business (Thomson and Mabey, 1994: 129; Handy 1993: 228; Hirsh, and Jackson, 1996). Use of career management has led career development to become more tailored towards individual needs (Derr and Jansen, 1993). The career management process as a route to career progression is shown in Figure 2.1. It can be seen as an interaction of market demand, HRM support and individual career planning.

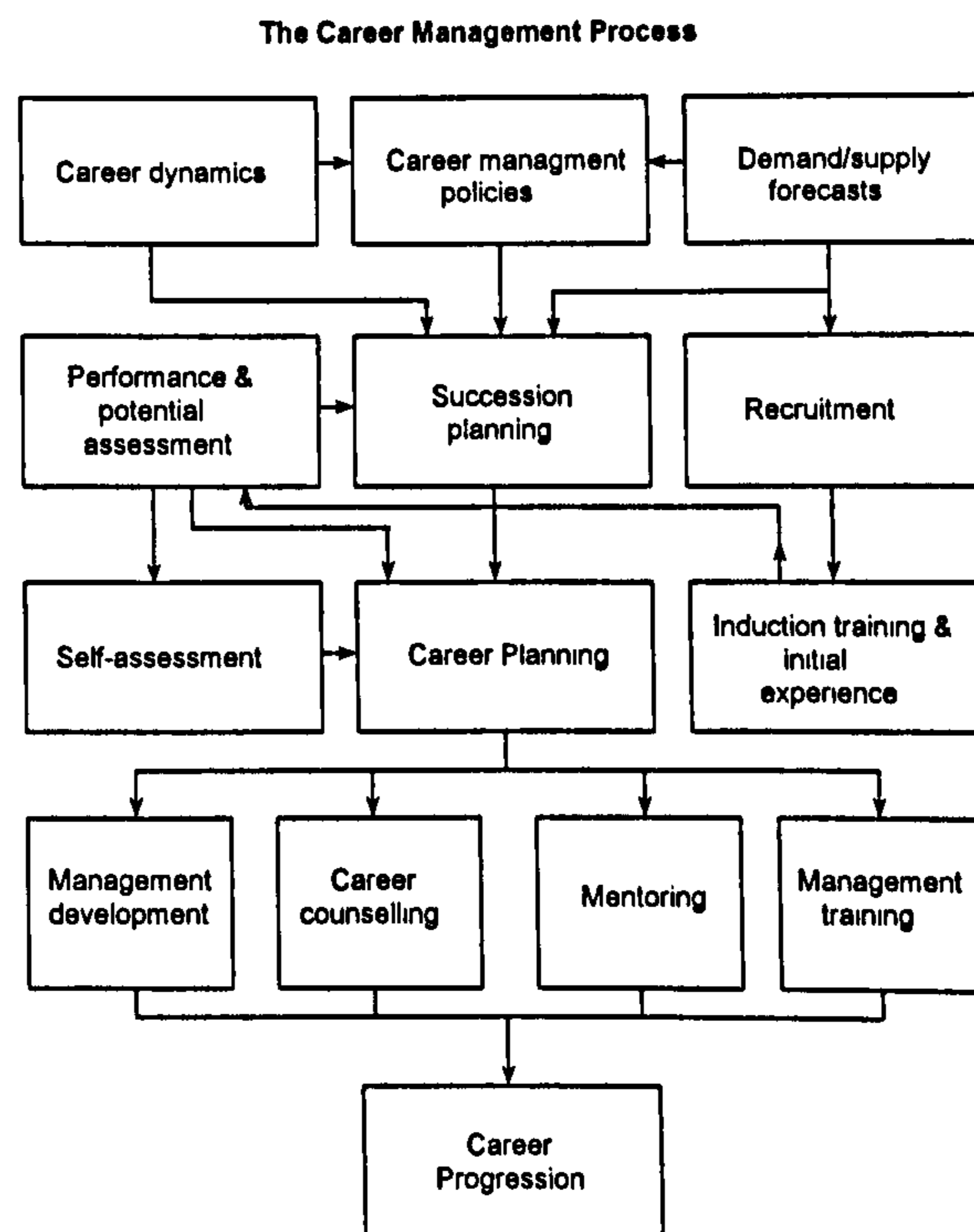


Fig 2.1: The career management process (Armstrong, 1993: 473).

At its worst, career management can form a 'weeding-out' process which seeks to establish which employees can fulfil organisational needs rather than seeking to develop employees skills (Handy, 1993). This policy is dangerous as a variety of different abilities and ambitions are needed if the organisation is to be successful in adapting to dynamic markets (Kossek and Lobel, 1996).

Management development activities are determined by information supplied as a result of an audit of the organisation's managerial needs (Ashton and Easterby-Smith, 1979). Employees can be categorised by their potential and performance within the organisation, and these data used to identify those with senior management potential. Such employees are likely to benefit the most from career planning, perhaps from fast-track programmes. Another result of this process will be the discovery of 'plateaued' managers. This group are unlikely to receive further promotion or added responsibility (Baron and Greenberg, 1990: 323). Any manager remaining at a particular level for seven years or more within an organisation can be described as plateaued (Veriga, 1981; Davies and Deighan, 1986). Such individuals may need to restructure their career elsewhere within the organisation. As such, management development and career management can be used as a monitoring device in identifying people that are likely to be lost if career issues are not addressed.

There are many obstacles to the effective implementation of career management and management development, and organisations can show varying degrees of commitment to it (Ashton *et al*, 1975). An inherent problem with proactive HRM is trying to establish the extent to which the individual and the organisation take responsibility for careers (Thomson & Mabey 1994: 126). A result of the decline of employer paternalism and job security is that employees have begun to focus on managing their own development and professional growth to a greater extent in recent years (Schirmer, 1994).

2.3 HRM in the Construction Industry

Despite the effects of the economic recession of the early 1990s, the construction industry remains a major employer in the UK economy, accounting for over 800,000 people

excluding the self employed, and over 1.5 million including the self employed (LMT, 1996). Since 1993, these figures have remained fairly stable (DoE, 1997). This section explores the economic, organisational and cultural framework in which contracting organisations operate. Recent changes to the labour market and the challenges that they present for construction organisations are explained, and the applicability of HRM and HRD discussed.

2.3.1 The construction labour market

Demographic trends

Management in contracting is particularly important because of the labour intensive, uncertain, unique and geographically diverse nature of construction projects (Hillebrandt and Cannon, 1990: 115). There is a dominance of specialist professionals, with senior posts tending to be filled by heads of the production divisions who tend to be recruited from the construction sector. Despite calls for the recruitment of more non-cognate graduates (Lansley, 1990), and undergraduates without science 'A' levels (Romans, 1990), most graduate entrants originate from construction degrees.

Over the last ten years, there has been a gradual recognition that the industry requires long-term solutions to cope with an impending skills crisis (Vetter, 1989; Andrew, 1988). In the past, these concerns have been met with scepticism by some industrialists, who have contended that predictions of skills shortages have not been supported by micro-economic data (Alexander, 1991; Sheridan, 1991). However, recent figures from the DoE (1997) indicated that 151,000 managers and 43,000 professionals work in the construction industry, compared to 186,000 managers and 53,000 professionals in 1991. This represents a total fall of 45,000 over this period. Hence, any increase in output is likely to cause the predicted 'demographic trough' and associated skills shortages to become a reality in the UK industry, both for trade and professional positions (Clarke and Wall, 1998; Knutt, 1997a; Ford, 1997; Building, 1996; Agapiou *et al*, 1995a, Construction News, 1994).

It has been predicted that the costs of high labour turnover will be significant in terms of delays and higher construction costs caused by trained employees leaving the industry

(Ball, 1994). This is supported by recent reports which have indicated that skills shortages have already led to increased salary levels for professionals (Hanson, 1995; Cargill, 1996; Knutt, 1997c). Increased remunerative costs lead to competitive labour markets which have inflationary effects on the cost of construction work (Agapiou *et al*, 1995a). Briscoe (1990) predicted that the UK may actually start to lose projects to other countries due to increasing wage levels resulting from skills shortages.

Labour force mobility

Labour mobility presents a pragmatic problem for the industry as a whole (Sommerville, 1996). The industry is inherently labour intensive, and as such, its human resources are its most important asset (Djebarni, 1996; Agapiou *et al*, 1995c). However, this has only recently started to be recognised (Langford *et al*, 1995), and so the incidence of inter-company mobility has traditionally been high in construction in comparison to other industries (Young, 1991). In a recent survey, 42% of construction managers and professionals said that they were actively seeking new positions (Ford, 1997). It is likely to be the better employees that will be lost as the internal labour market becomes more competitive (Druker and White, 1996: 15). Hence, of all the flows in a manpower system, wastage can be seen to be the most fundamental for construction companies' strategic HR planning (Huang *et al*, 1996).

High staff turnover is particularly prevalent in times of high economic activity, where construction professionals and managers move frequently to widen experience and increase salary levels (Ford, 1997; Druker and White, 1996: 27). There are now concerns that as the industry recovers from recession, mobility may increase further (Knutt, 1997b). Thus, construction companies must develop long-term approaches to labour force planning if they are cope with future demographic changes in the labour market (Cargill, 1996; Agapiou *et al*, 1995b).

2.3.2 Careers in construction companies

Little is known of the career development of construction professionals (Young and Duff, 1990a). Careers in the industry remain surprisingly under-researched considering the

importance of human resources to construction companies. However, the literature provides a useful contextual portrait of the organisational and internal labour market within which careers unfold.

Construction companies' operating environment

The construction industry and its operating environment are dynamic and fluid (Betts and Ofori, 1994; Gale and Fellows, 1990). Construction projects involve the assembly of a new site team made up from the transfer of existing staff from within group operating companies, and new staff recruited to the organisation. Projects tend to be short-term in nature, and so staffing decisions need to be taken quickly (Ball and Wood, 1995). The industry is also fragmented, with functional division amongst different disciplines ingrained within its structure. Accordingly, contracting organisations comprise many diverse types of manager and professional, all of whom have different responsibilities and career paths. Furthermore, globalisation of the industry has led to different priorities for construction companies in the way they are strategically operated (Betts and Ofori, 1994). The combination of these factors present difficulties in establishing reasons for variance in career development patterns.

Organisational structure of construction companies

Organisational typologies can take on many different forms, and individuals can fit into these organisations as either specialist or as functional managers. Bresnen (1990) described organisational structure in construction as being dependent upon external factors (such as resources and information embodied in the terms of the contract), and internal factors (the administrative procedures used by organisations to tighten their procedures in competitive markets). Docherty and Langford (1996) found that a divisional structure was the most successful for large companies. This is where the organisation is sub-divided into a series of autonomous, multi-functional divisions responsible for operations, but with a central office which provides supporting departments and monitors their performance. The majority of large UK construction companies use such an arrangement.

The complex environment found in construction companies leads to a decentralisation of authority through delegation (Shirazi *et al*, 1996). Organisations tend to combine the line

and staff structure with the communication channels of the networked organisation (Langford *et al*, 1995: 70). Traditional line and staff structures are common as overall operating structures for large companies (Langford *et al*, 1995). In some cases, functional specialists will have line and staff relationships with different parts of the organisation. Examples can be found in organisations with divisional structures, each division being serviced by support departments. Career development in line and staff organisations is simple, with movement being predominantly vertical along defined career paths. Slightly more ambiguity exists for those in staff positions, who tend to occupy supporting or specialist roles within the organisation. The resulting 'role' cultures offer stability and a predictable rate of progress up a particular functional route (Handy, 1993: 186).

At a project level, the principal variables affecting organisational form are the environment in which the project operates, and the technical complexity of the work (Shirazi *et al*, 1996). Projects tend to be structured in either matrix or line and staff models (Langford *et al*, 1995: 89), with sites given a high degree of autonomy to manage their own operating environments and project teams tending to use shallow management structures (Woodward, 1980). Two chains of command exist under matrix structures, where individuals belong to temporary teams responsible to a project manager, *and* to a functional team with responsibility to a line manager. Thus, promotion is along their functional line even though they may report to another superior on a daily basis. This type of organisation structure is common in construction because of the complexity of the tasks required (Brunsdon, 1995; Newcombe *et al*, 1990: 102; Davis and Cochrane, 1987).

Informal influences on career development in construction

Promotion structures and career paths are not always clear cut, as they are objectified in the experiences and perceptions of individuals (Dainty *et al*, 1996). Promotion comes to be perceived as a matter of acquiring stated criteria and necessary experience needed for the next position. Higher grade posts have subjective, non-written criteria, where individuals rely on informal contacts and past reputation as a means to reach higher positions. Under such informal arrangements it is more important to network and to have good self-presentation skills (Evetts, 1996).

The construction industry is also well known for operating along informal lines with regards to recruitment and selection (Druker and White, 1996). Under half of construction companies rely on formal advertisements to fill vacancies (EOC, 1990), and contacts are highly influential in inter-company mobility, where recruitment is often left as a responsibility of line management (Bresnen *et al*, 1995; Hillebrandt and Cannon, 1990).

Progression patterns, tenure and mobility

Super (1957) simplified Miller & Form's (1951) classification of career stages into four distinct career patterns: stable, conventional, unstable and multiple trial careers. These were defined for construction by McCrary (1993), as: stable careers - for those who received appropriate education and training and stayed with the same organisation for life with little risk; conventional careers - the norm, reaching positions at usual ages within several organisations; unstable careers - where a person does not settle in a career and continually moves having just stayed long enough to be established in each post; and multiple-trial careers - those where an individual never settles in a career. These four classifications provide generic categories of career types for the industry.

In terms of tenure at each position, Young and Duff (1990) found that as an individual progressed through a career hierarchy which was particularly well defined and structured, they had a progressively long tenure at each level. The 'pyramid imperative' takes effect where there are fewer positions available for employees to move in to (See Rosenbaum; 1984). In effect, vertical career progression slows progressively, the further up the individual rises in their organisation.

Young (1988) found that the average rate of mobility for construction professionals was 1.8⁴. Career paths were generally well defined through graduate routes, were sequentially structured and were not necessarily restricted to a single employer (Young and Duff, 1990). They suggested that the ease by which individuals in construction management transferred to other jobs was explained by the homogeneity arising from their management skills acquisition. Thus, job mobility is partially dependent upon experience, with younger managers being more likely to change their employers than older employees (Young,

⁴ Indicating that they had on average 2.8 employers.

1988). A possible explanation is that companies try to avoid the loss of senior personnel at strategic levels, whilst junior managers are encouraged to leave and work for another contractor to obtain experience to move back later (Hillibrandt and Cannon, 1990: 129). However, career development in construction is also influenced by the laws of economic demand and supply (Young and Duff, 1990; Bresnen *et al*, 1995). Thus, it is unclear what the length of tenure and typical development patterns are in the post-recessional climate of the late 1990s.

Development dynamics and transitional difficulties

Young and Duff (1990) broke down the levels of the ‘construction management’ career structure into three levels: level 1 (junior management) were classed as site managers and sub-agents at a site operating level; level 2 (middle management) were classed as contracts managers and project managers who act as the link between office and site, taking responsibility for negotiation with suppliers, sub contractors and plant hire specialists; and level 3 (senior managers) were classed as directors and regional and divisional managers with less involvement in the process of construction, but more in negotiation with clients and long term financial planning. These levels reflect Kast and Rosenweig’s (1979) three notional functional levels of task, organisational and institutional management. This delineation is significant as they represent transitional phases through which an individual must pass during their career development.

Promotion from site based to middle management levels overseeing a number of projects⁵ or leading a particular function over a number of projects, inevitably divorces the manager from direct involvement with the task, towards co-ordination of the technical system within the institutional system of the organisation (see Kast and Rosenweig, 1979). As such, managers go through a fundamental role transition, moving from this ‘hands-on’ operating environment to a more distant function. Hillibrandt and Cannon (1990: 119) suggested that project level managers had difficulties in adapting to business-oriented functions as they encounter this role transition. The lack of direct control that senior managers wield is one possible explanation for lower morale amongst this group (Lansley, 1996; 1994).

⁵ Usually known as contracts management.

Motivation is dependent upon both the nature of the work and the career structural environment (Cramer, 1993; Rynes *et al*, 1988). In construction, the type of work with which people are involved (intrinsic factors) can explain up to fifty-percent of the observable variance in job satisfaction (Davies and Duff, 1995). In the later career stages, intrinsic self-development is replaced as a motivator by the needs for remuneration, and then responsibility coupled with security in later career stages (Young, 1988: 290). As such, occupational and career needs change throughout working lives, but the managerial role remains as a significant motivational tool (Male and Stocks, 1989). However, the demands of the industry increasingly emphasise the organising, decision making and managerial aspects of construction work as opposed to the technical aspects of the role (Lansley, 1996). Hence, organisations must find other ways of encouraging work satisfaction, loyalty and commitment through strategic HRD.

2.3.3 HRM and HRD in the construction industry labour market

The demands of the industry and its operating environment lead to particular difficulties for HRM and HRD.

The role of HRM in construction

Despite the large number of contracting organisations, a select number account for a disproportionate share of the available market. Recent figures from the Department of the Environment (1995a) show that 0.5% of construction companies account for 46% of the total industry output⁶. Of these the largest 0.02% account for almost 13% of the industry's turnover. These are the organisations employing over 1200 people, of which there are only 33 in the UK (DoE, 1995b). It tends to be these larger employers that set the framework for employment relationships in the industry (Druker *et al*, 1996). Whilst medium sized firms are likely to have some kind of administrative HR function, it is only really these larger companies that have a defined department with responsibility for HRM policy (Langford *et al*, 1995).

⁶ These account for all contractors employing over 60 people.

A possible reason for the historical use of short-term approaches to HRM in the industry is that construction companies experience pressure to maximise flexibility in employment arrangements for its core staff. This is due to the variable nature of the industry's output (Bresnen *et al*, 1985; Hendry, 1995; Huang *et al*, 1996). The result is that HRM tends to be relegated to a reactive, second order function (Winch, 1988; 1994). Even in larger companies, the HRM function is often devolved to line management (see Bresnen *et al*, 1995). Hillebrandt and Cannon (1990: 94) contended that operational managers merely use specialist HRM departments for information, as opposed to policy making. This has resulted in a short-term piecemeal approach to HRM prevailing in the industry (Hillebrandt and Cannon, 1990: 158). Only 28% of HR managers in construction occupy a board position compared to 54% in other private sector companies (Druker *et al*, 1996). Thus, if strategic involvement represents a key element of HRM, few construction companies adopt true HRM policies (Druker *et al*, 1996).

Another possible explanation for the historical subordination of strategic HRM, is that long-term career planning requires long-term forecasting which, in turn requires a stable, mechanistic organisation (Armstrong, 1993: 476). Probably no other sector faces as many violent changes in workload, work mix and methods of managing the process as construction (Hillebrandt and Cannon, 1989). The labour intensive nature of construction work necessitates the need for companies to be responsive to changes in demand (Ball and Wood, 1995). Thus, HRM and HRD are often carried out as reactive processes, (Buckley and Enderwick, 1989), with many construction companies curtailing HRD activities during times of recession (Young, 1990b).

Most large construction companies in the UK have undergone a period of significant organisational change over the last 20 years. They have shed labour and restructured in order to cope with changing technical and managerial demands, fluctuating markets, new procurement routes and contractual procedures (Hillebrandt and Cannon, 1990; Langford *et al*, 1995: 22; Druker *et al*, 1996). Contractors have effectively become managers of the construction process, as opposed to direct labour employers, and now employ more managerial staff as a result (Langford *et al*, 1995; Druker *et al*, 1996). With training of craft operatives largely devolved to the CITB, the main scarce resource for contracting

organisations are skilled professionals, and managers (Kahn, 1995; Hillibrandt and Cannon, 1990). The result has been a shift in emphasis for HRM departments of large organisations, from dealing with directly employed short-term labour, to administering management development and succession programmes.

Contractors have been shown to see external recruitment to such positions as a last resort, as new employees entering organisations take time to be able to work within the organisation's culture (Young, 1988: 107). The need to recruit employees that will fit into the organisation means that informal 'head hunting' methods are usually used. However, such employees do not necessarily provide longevity of service (Sommerville, 1996). Hence, extrinsic rewards have traditionally been used to retain staff to the industry (Cargill, 1996), and employees tend to manage their own development and professional growth (Schirmer, 1994).

The role of HRD in construction

In the past HRD issues have been seen by the industry as an 'expensive luxury' (Winch, 1988; 1994), and there is evidence to show that it continues to be under-utilised. Hancock *et al* (1996) found that, whilst large construction companies generally understood the concepts of HRD, only around half actually practice it. Young (1988) found that 75% of construction companies had no career development policy to allow the individual to compare their subjective career needs with those of the organisation. Only 17% of large construction companies had formal management development policies in 1989 (Mphake, 1989), and only one major contractor had joined the nationally audited Investors in People (IIP) scheme by 1995 (CITB & IIP, 1995). The need to develop awareness of the benefits of training and management development programmes in construction, particularly in terms of improving retention, has been identified by several authors (Mphake, 1988; Forster, 1989; Druker and White, 1996).

The management of careers is an essential element of retaining a work force that has the resilience required in an increasingly turbulent environment for UK businesses (Hirsh and Jackson, 1996). In light of the construction industry's economic revival, Knutt (1997b: 6) investigated the Institute of Personnel Development's (IPD) advice on retaining

employees. They suggested a series of recommendations to promote loyalty and motivation including extended training schemes, performance management, career review systems, promotion of in-house staff, and flexible working arrangements. Management development takes place through both formal and informal processes (Mumford, 1986). Construction is particularly reliant on these informal learning experiences because so much of the industry's work revolves around crisis management, where events cannot be pre-planned (Loosemore, 1996).

Cramer (1993) explored reasons for staff turnover in a major UK engineering firm. He found that career structure was a strong variable in relation to long-term organisational commitment. He concluded that paths should be clear and unambiguous, and that simply increasing salary should be looked upon as a secondary mechanism to improve retention. However, in construction, the lack of defined career development routes, career paths and job titles across different companies, has undermined the occupational status of some professionals, and has led to vague career development routes (Dainty *et al*, 1996). The Construction Industry Standing Conference (CISC) was initiated in 1990, partly to address this issue. They have produced a set of common vocational standards to develop a more unified approach towards qualification structures in the industry (CISC, 1994). These standards offer the potential to develop common standards in the future.

2.4 Summary: The need for an empirical investigation of career development in construction

Effective career development is a key factor determining the retention of professional and managerial staff to organisations. However, the construction industry is fluid and dynamic, and is highly susceptible to cyclical fluctuations in economic demand (see Dorward *et al*, 1997). This makes the applicability of established HRM mechanisms for managing careers questionable. As such, an unstructured and ad-hoc approach to HRM currently prevails in the industry. This has subordinated the HRM function to a reactive process, frequently devolved to operational management. However, career management and management development are fundamental to the effective retention of employees, and the need for their development in the industry will increase as the sector expands into new markets, as its

managerial and professional work force diversifies, and as the demand for construction professionals continues to grow in the post recessional economic climate.

To address the causes of high staff turnover, employers need to understand how careers develop, and the factors which determine this development. This will involve gaining an understanding of career dynamics inherent within existing structures, but also gaining an insight into the cultural and action centred determinants of careers. This requires a focus on the “subjective” careers of employees. In this way, organisations can develop HRM policies which are sympathetic to personal needs, strategies and professional identities, and ensure that employees meet their potential within the scope of the opportunities available within the organisation. However, labour resource planning has been the subject of little empirical investigation to date (Uwakweh and Maloney, 1991). Furthermore, little research has examined the underlying causes of professional and graduate staff turnover in UK firms (Cramer, 1993). Hence, the industry now requires in-depth knowledge of the careers of their employees, in order to develop effective succession management. This requires an empirical investigation of career development to facilitate the development of retention strategies.

The findings from the literature review of HRM and career development in the industry have implications for each of the research objectives identified in Chapter 1. Firstly, to establish the extent of women’s career under-achievement in large construction companies (objective 1), will initially require an understanding of their subjective careers, and their career priorities. Using only objective measures of achievement would be inadequate in establishing the importance of career development to their retention. Secondly, the individual strategies and actions of the informants must be assessed as to their impact on the structural and cultural organisational factors defining career opportunities (objective 2). To exclude the strategic dimension would infer that the actor is passive in the career development process. Thirdly, in order to identify the specific factors originating from both within and outside of the labour market which lead to women’s under-achievement (objective 3), a dual development approach is required which acknowledges that men and women experience different career influences. This is also relevant when attempting to construct a theory of women’s career development (objective 4), which should not focus

on, or place women within, male career models. Finally, in order to develop initiatives to address the factors emerging from the study which lead to women's under-achievement (objective 5), an HRM framework is required which is sympathetic to the unique environment and labour market within which the industry operates. Softer aspects of HRM offer this potential, as they are suited to decentralised line management structures operating under short-term pressures, which are key characteristics of the construction project environment.

CHAPTER 3: WOMEN IN PAID WORK

This chapter examines the position of women in the labour market, and critically appraises the theoretical explanations of why they dominate the low-pay, low-status sectors of employment, and why they under-achieve relative to men. It goes on to explore how these factors impact on women's careers, and explores the role of organisational level analyses in addressing these issues. Finally, barriers to women's careers in traditionally male dominated science and engineering sectors are established, in order to identify any transferable theoretical explanations of women's under-achievement. These act as a starting point for the investigation of women's careers in the construction industry.

3.1 The Position of Women in the Labour Market

Women now comprise a significant proportion of the UK labour force, and seem set to increase their representation in the future (Steele, 1992; Carter, 1990). Recent figures indicate that three quarters of women are now either in, or available for paid work (Sly, 1993). They represent around 45% of the work force (EOC, 1996). This compares to around a third in the 1950s (White *et al*, 1992). According to the Labour Force Survey (LFS, 1997), there are currently 11.6 million women in paid employment in the UK compared to 14.3m men. Around 12.8m men are in full time employment compared to 6.2m women. Around 4.8 million women work part time compared to 1.2m men. The remainder are in full-time non-permanent employment. A quarter of all women now working full-time hold professional or managerial positions (Hakim, 1996: 208).

According to the most recent projections, women's employment will continue to grow steadily by around 100,000 per year until 2006, whilst men's will remain roughly consistent (LMT, 1997). Women's projected increase represents 80% of the growth in the labour force up to 2000 (Elison, 1994). This rise in women's employment has been attributed to a number of factors including: de-skilling of what were historically seen as 'male' jobs; demographic factors including life expectancy and having fewer children; a

restructuring of psychological expectations towards self identity; and the need for a second income through economic necessity (Goffee & Scase, 1985).

Women's employment grew particularly rapidly through the 1980's and they began to enter traditionally male dominated professions in greater numbers (Brannen *et al*, 1994). They made headway in high status careered occupations such as the legal and medical professions, where women now represent around half of those entering associated degree programmes (UCAS, 1995). Women graduating from British universities outnumbered men for the first time in 1991 at 51% of the total (The Rising Tide, 1994; McRae, 1996). A recent survey by the National Council of Women of Great Britain found that 90% of women felt that work and domestic responsibilities could be combined, and three quarters wished to work and succeed in their careers (Bunting, 1995). However, despite women's increasing representation in the labour market, it remains segregated by sex, in that women still tend to work with other women in a narrow band of occupations that rely heavily on part-time workers (Rees 1992; Savage & Witz, 1992; Hakim, 1979). Around 70% of women work in lower level and clerical positions (Hansard Society, 1990). In contrast, men work in highly valued and better rewarded occupations (Crompton and Sanderson, 1990: 32). Women's dominance of part-time work accounts for almost all of the rise in women's employment in the latter half of this century (Hakim, 1993: 102).

3.2 Women's Under-achievement in the Labour Market

Women's under-achievement relative to men can be seen to manifest itself in two ways: through the segregation of women into traditionally female occupational sectors; and through women occupying junior and supporting positions within high status professions. Thus, the labour market is 'gendered', in that men and women tend to work within specific occupations, and at hierarchical levels which conform to the societal expectations of their gender (Cockburn, 1987; Crompton and Sanderson, 1990).

3.2.1 Horizontal segregation

The process by which women have been excluded from what has traditionally been seen as men's work has been termed horizontal segregation (Hotchkiss and Borow, 1996: 299). Most women work in low profile and low paid occupations (Hakim, 1979; Jacobs and Lim, 1992). Recent Equal Opportunities Commission figures (EOC, 1996) show a continued over-representation of women in traditionally female occupations, and those which have become 'feminised' (see Table 3.1). Webb (1989: 146) noted that women dominate nursing, canteen work, secretarial work, and hand sewing machinists work at 90% representation or above. Hence, women's positions in the labour force parallels their unpaid work in the home in this regard (Crompton and Sanderson 1990: 28). Women remain particularly under-represented in the science and engineering professions (Wilson, 1994; White *et al*, 1992; Hakim, 1979).

Selected Industries	Females (Thousands)		Males (Thousands)	
	Full-time	Part-time	Full-time	Part-time
Agriculture, forestry & fishing	32	30	141	13
Energy & water supply	50	13	255	-
Manufacturing	987	284	3195	67
Education	658	585	468	65
Real Estate	578	326	940	69
<i>Construction</i>	<i>88</i>	<i>56</i>	<i>800</i>	<i>15</i>
Distribution, hotels, restaurants	915	1486	1556	365
Transport, storage and communication	241	97	1030	45
Banking, finance & insurance etc.	1010	467	1449	78
Health & Social Work	1034	1010	377	42
All industries and services	5802	4530	10538	803

Table 3.1: Employment by industry Great Britain for 1995 (Original Source: LFS, Spring 1995).

3.2.2 Vertical segregation

Divisions in the labour force are not restricted to horizontal differentiation. Of increasing relevance as women enter the labour market in greater numbers is their apparent under-achievement *within* sectors, known as vertical segregation. That is, that women occupy lower hierarchical positions in comparison to their male colleagues (Hakim, 1979). The higher the hierarchical level in an occupation, the lower the proportion of women (White *et al*, 1992). Vertical segregation is especially prevalent in the professions (Steele, 1992: 279 (see Table 3.2).

Occupational Group	Females	% of group	Males	% of group
Managers & administrators	1325	33	2735	67
Professional	1046	40	1560	60
Associate professional & technical	1132	48	1203	52
Clerical & secretarial	2794	75	920	25
Craft & related	317	10	2817	90
Personal & protective services	1708	66	885	34
Sales	1240	64	700	36
Plant & machine operatives	475	20	1947	80
Other occupations	1078	51	1021	49
All Occupations*	11,132	45	13,812	55
* - including those not stating occupation				

Table 3.2: Employment by occupation Great Britain 1995 (Source: LFS, Spring 1995)

Legislation has been the catalyst behind the increase in the number of women entering previously male dominated professions (Arkins, 1990). However, vertical segregation of women in the labour force has only been partially addressed by the legislative changes made after pressure in the 1960s. Legislative acts for rights for equal pay (Equal Pay Act (1970) amended 1983), maternity leave (Employment Protection Act, 1975) and legislation against sex discrimination (Sex Discrimination Act (1975) amended 1986), were designed to re-define women's position in employment. However, they have largely failed to promote equal access into the main areas of male employment (Yeandle, 1984: 10), or to help women reach senior levels in their occupations and professions (Ledwith and Colgan, 1996: 3). Thus, legislation by itself is not enough to reverse the effects of the historical sexual division of labour (Cockburn, 1985).

The realisation that women were segregated vertically in different sectors, professions and organisations, and the effect that this has the retention of women, has led to empirical studies seeking explanations as to why such occupational segregation exists. These studies have investigated under-achievement through an examination of women's work experiences, and constraints on their careers that lie both within and outside of the labour market. They have provided a theoretical explanatory framework for women's under-achievement in paid work.

3.3 Conceptual Tools to Explain Women's Exclusion and Under-Achievement in Paid Work

Before exploring explanations of occupational segregation that relate to internal labour markets, it is necessary to understand some of the basic sociological tools used to explain social and labour market stratification. These constructs allow social researchers to theorise systems which lead to women's subordination and under-achievement.

3.3.1 Sex, gender and patriarchy

Definitions

Gale (1994) stresses the importance of distinguishing between 'sex' and 'gender', terms which are often used interchangeably. Psychologists have developed precise definitions of the terms (see Unger, 1979; Lips 1988). Sex refers to a person's maleness or femaleness in terms of their physical differences. Gender, however, refers to non-physiological aspects of being a man or a woman: femininity and masculinity. These are the socialised differences between men and women, or the cultural expectations on an individual of a particular society. Thus, gender is socially or culturally constructed, whilst sex is biologically determined.

Feminist researchers contend that biological sex has been used by men as an excuse to oppress women in the past (Harvey and Macdonald, 1993). However, critical approaches to sociology also see gender as one of the principal structures of oppression in society, and gender differentiation as the process that exaggerates the differences between men and women, even where they do not exist (Reskin and Padavic, 1994). However, it is only relatively recently that feminist researchers have addressed the absence of gender theories in sociology (Rees, 1992: 23).

Throughout different cultures, diverging expectations of gender roles exist. Preconceptions of these roles do not follow set patterns or criteria, and do not appear to be based around

any logical physiological factors¹. Gender is an important way of signifying relationships of power (Scott, 1986), and as such is an important conceptual tool when considering reasons for women's vocational under-achievement. The gendering process begins in childhood socialisation. Children in Britain learn to conform to roles which apply to their age, sex and position in society (Butterworth and Weir, 1984), and adults perpetuate these prescribed gender roles². In this way, girls and boys tend to aim towards different careers.

Gender underpins the determinants of career development, as well as labour market participation at a macro level (Cockburn, 1985). Careers are a gendered concept, in that male career patterns are regarded as the norm. Employers and employees construct gendered work environments through organisational practices and by acting on stereotyped assumptions (Reskin and Padavic, 1994: 12; Vogler, 1994; Acker, 1992b). Men have retained the power that comes from controlling technology, and so changing work patterns will not necessarily lead to the dismantling of gender segregation in the work place (Webster, 1996; Ong, 1987, Cockburn, 1983; 1985). Gendered power differences exist within all organisations (Acker, 1990; Kvande and Rasmussen, 1993b).

Patriarchy

Patriarchy is an important conceptual tool in seeking to explain women's under-achievement in paid work (Cockburn, 1991). It refers to a form of social organisation where men have power over women, or any society governed by such a system. The most effective mechanism for the subordination of women is not exclusion from or segregation within the work force, but is in the ideology of the sexual division of labour in the home (Walby, 1986; Hakim, 1996). This is because patriarchal ideology promotes the idea of the sexual division of labour in the family, where women have responsibilities as wives and mothers. The family is used as the key instrument of oppression, and the site of cultural reproduction (Rees, 1992: 31). Research that attempts to segregate studies of paid work from issues of the family become problematic (Knights & Willmott, 1986).

¹ For example, although women's lack of physical strength is cited by many as an explanation for their under-representation in the construction trades, many general labourers in developing countries are women (Wells, 1990), as are half of those employed on building sites in Russia and China (CFSSIC, 1988).

² Will *et al* (1976), for example, found that adults gave a baby dressed in blue and called Adam, trains and other toys associated with the male gender role, but when the same baby was dressed in pink and given a girl's name they gave him dolls and called him "sweet".

Patriarchy also refers to political and organisational interventions in the work place (Walby, 1988). Women entering the labour market are expected to fit into career patterns and systems which tend to be full-time, involve life-time commitment, seek an ordered vertical progression and exhibit high career centrality. As such, patriarchy shifts and adapts to re-formulate the rules of territorial access within organisations (Rees 1992: 11). However, although patriarchal culture is believed to be endemic within all business organisations (Nicolson, 1996: 108), it has also been criticised as an explanatory mechanism for women's workplace subordination (Goldberg, 1993; Acker, 1989). This is because the increase in women's participation and achievement in recent years remains unexplained under patriarchy (Rees, 1992; Crompton and Sanderson, 1990). Thus, patriarchal modes of production need to be examined in conjunction with other explanations (Walby, 1990).

3.3.2 Theoretical explanations for occupational segregation

No single explanation adequately explains women's under-achievement in paid work, and so researchers have put forward a number of different theories which can be seen to lie within and outside of the labour market (Bagilhole, 1994: 30).

Dual labour market theory

Dual labour market theory states that the labour market can effectively be split into two sectors. The first (the primary sector) offers high status jobs with good wages, security, fringe benefits and membership of trade unions. The second (the secondary sector) offers low status jobs with poor promotion prospects, low pay and little security with workers often on short term contracts (Rees, 1992: 30; Bagilhole, 1994). The theory argues that women tend to have access to positions within the secondary sector and thus, the labour market itself acts as a barrier to their vocational achievement.

There have been criticisms levelled at the concept of dualism in labour markets (Walby, 1988). These stem from the theory's undifferentiated treatment of women as a group, and the fact that it does not take into account their role in the home. As such, it fails to

acknowledge that men's and women's positions are gender as well as work determined (Luck, 1991). This static view has been criticised as not reflecting reality (Dex, 1979). Furthermore, it does not explain divisions *within* each sector, as it can not explain women's subordination when they manage to gain access to the primary sector. Accordingly, it is limited in its applicability to the investigation of male dominated sectors and professions, such as those which form the focus of this study.

Dual role theory

In the 1980s researchers found that women were beginning to combine work and family responsibilities (Epstein, 1983; Marshall, 1984). As such, they had dual roles of work and domestic responsibilities, which gave rise to dual role theory. It is an explanation lying outside of the labour market, contending that women's participation in paid work is affected by their domestic responsibilities, which precludes them from male employment patterns (Bagilhole, 1994: 34). Despite recent improvements in the number of women entering paid work, there is evidence to show that substantial gender differences still exist in the household division of labour (Crompton and Harris, 1996). Women still face identity issues in terms of whether they choose work or family oriented life styles (Kram and Hall, 1996).

Women and men tend to want different things from work, that is, they have different career anchors (see 2.1.2). Notably, women tend to want to pursue vocational positions which allow them to spend time with their children (Gallagher, 1990). However, professional and managerial women who have been successful in their careers are unlikely to have had children or to have taken a career break (Cooper and Davidson, 1982; Jagacinski, 1987; Bagilhole, 1992). Thus, domestic responsibilities can be seen to impact heavily on the career mobility of women.

The concept of developing a balance between work and family roles also involves gaining an internal balance between psychological involvement with work and family (Hall, 1990). Hakim (1996) apportioned part of the reason for women's under-achievement as being determined by their role as mothers. She argued that the heterogeneity of women's preferences disadvantages them, in that they have two avenues of upwards movement and

achievement, both through the labour market *and* through marriage. Women's attitudes towards achievement are affected by conflicting cultural messages where they are expected to fulfil their traditional roles, at the same time as participating in the labour market (Spencer and Taylor, 1994). As such, a conflict arises where women feel punished or marginalised for their family roles (Walsh and Cassell, 1995).

Paradoxically, however, there is recent evidence to suggest that women's careers are not determined by their traditional roles alone (Tharenov & Controy, 1994). Jackson and Hirsh (1991) found that the disparity in career progression between men and women came too early on in careers to be simply caused by having children. Moreover, Derr and Jansen (1993: 54) contended that the dynamics of the labour market and global competition would lead to those graduating in 1995 to 1996 to be amongst the first generation able to negotiate a career in which they can balance their personal and professional lives. Hence, attributing women's dual role as a singular factor defining their position in the labour market is simplistic in the context of modern society, because it denies that the labour market itself has any affect. Hence, it is appropriate for researchers to look towards labour market related explanations, in addition to those relating to women's traditional societal roles when explaining women's under-achievement.

Human Capital Theory

Human Capital theorists assume that women's main priority is to raise a family, and that they therefore choose to limit their participation in the labour force (Reskin and Padavic, 1994: 75). They explain women's position in the labour market by the fact that they tend to have lower skills, qualifications and experience, and hence lower human capital value (Walby, 1988). In effect, they contend that women have the free choice to work in occupations that they choose, but select those that have low training and development demands in order that they can focus their attention on their responsibilities in the home (Renzetti and Curran, 1992).

This theory relies upon the notion of a labour market that rewards people in direct proportion to their 'human capital'. This analysis appears simplistic in the context of modern society (Walby, 1986). Modern theorists seek explanations of labour market

segregation that go beyond simply attributing women's position within the family, and beyond the assumptions that people act only as a result of rational assessments of economic needs. Thus, contemporary sociology has rejected human capital theorists' arguments as being tautological (Walby, 1988, 1990; Rees 1992). Similarly, it appears inadequate for explaining women's under-achievement in the construction industry labour market.

Dual systems approaches

Hartmann (1979; 1981) developed a theory of labour market segregation which involves a theoretical synergy between capitalism (an economic system) and patriarchy (a sex-gender system), in which men occupy better paid positions. This approach provides a powerful framework for the analysis of gender segregation at work, because it accommodates the existence of patriarchy in capitalism, as well as other systems. This allows it to be seen as changing and dynamic so that societal change can be taken on board (Rees, 1992: 32). The effect of patriarchal relations is that gender segregation is reproduced, and women are prevented from reaching the senior occupational positions where they would obtain real power. Such labour markets privilege both capital and men (Rees, 1992: 33).

The main criticism of dual systems theory is that patriarchy and capitalism need to remain autonomous and intact or they will not be able to take account of distinct elements relating to one or the other during analysis (Young, I 1981; Vogel, 1984). However, by taking a life-cycle perspective from both within and outside of work, it is possible to take into account both capitalist and patriarchal explanations for women's under-achievement, as well as where the two interact. The potential to provide such an holistic explanation of women's paid work experiences has led to research into horizontal and vertical occupational segregation to move away from concerns over historical trends in employment patterns, to address the causes and consequences of such segregation, and its meaning for women (Hakim, 1996: 214).

3.4 The Role of Organisational Level Analyses in Researching Women's Careers

Contemporary research has focused on seeking explanations for women's under-achievement in paid work which lie within labour markets, and particularly within internal

labour markets (Bagilhole, 1994). In this context, the organisation forms the site of the ordering of gender and power distribution, and the vehicle for the creation of sex segregation in the labour market (Kvande and Rasmussen, 1993a, 1995a, 1995b; Acker, 1990, 1992; Evetts, 1996). In effect, organisations are gendered, because they are shaped by gender processes. Four processes are key to the gendering process in organisations: the gender division of jobs; symbols and images to explain the gender divisions; the interactions that lead to alliances and exclusions; and individual's mental constructs of how they see the gendered structure and appropriate behaviour within it (Acker, 1992).

3.4.1 A paradigm shift in gender research

In response to calls for a systematic theory of gender and organisation to be developed (see Acker, 1992; Mills and Tancred, 1992), the careers of women in organisations and the difficulties that they face in developing them in parity with men, now form a growing area of contemporary social research (see Evetts, 1996; Davidson & Cooper, 1992; White *et al*, 1992; Cockburn, 1991). Specifically, the focus has been on the relationship between gender and power within the organisational setting (Savage and Witz, 1992). Many recent studies have examined barriers in internal labour market settings (Evetts, 1996; Bagilhole, 1994; Rees, 1992; Witz, 1992; Greed, 1991; Crompton and Sanderson, 1990; Walby, 1990). The analysis of the effects that internal labour markets have on occupational segregation, allows an understanding of how formal and informal factors place constraints on women's careers. Hence, researchers have begun to develop a better understanding of women's experiences within the arena in which many of the factors leading to their under-achievement are manifested.

Organisational level analyses have shown that the assumption that people within organisations compete in a free market is simplistic and false, as selection and assessment is dependent on the power relations which underlie gender (Cassell and Walsh, 1993). Thus, instead of focusing on the traits of the individual, this new body of research acknowledges the effect of the work environment as a determinant of women's careers. Women have less formal and informal power in organisations than men, and face obstacles in achieving this power (Kanter, 1977). Even when they achieve powerful positions, they

have their behaviour interpreted by men as being congruent with those in powerless roles (Rifkind and Harper, 1992). Hence, the cultures, policies and processes of organisations directly and indirectly affect the ways in which employees develop their careers (Ashburner, 1994). This changing focus of research has resulted in the consideration of cultural, as well as structural career determinants in the organisational setting (Evetts, 1996: 33; Crompton, 1993). This approach is highly applicable to the investigation of women's careers in construction companies.

3.4.2 The role of the organisation in determining women's career dynamics: an investigative model for conducting an organisation level analysis

A follow-up to the Hansard Society report (see 1.1) was carried out to establish if predicted changes in women's employment had begun to come to fruition (McRae, 1996; Table 3.3). Most of the organisational factors had developed as a consequence of the need for women to conform to male life-cycle patterns. However, the determinants of women's occupational behaviour differ from men's (Wilson, 1995: 26; Perun and Beilby, 1981), and so male models do not necessarily reflect women's career needs (Swarbrick, 1994).

Organisational Barriers	% Affected
Inflexible working arrangements	15
Recruitment practices	19
Male work cultures	10
Long hours culture	10
Lack of role models and mentors	10
Traditional Roles	
Balancing work/family lives	32
Taking career breaks	14
Lack of mobility	7
Attitudinal Barriers	
Prejudice of male colleagues	20
No lead from men at the top	3
Outdated Attitudes	18
Under-valuation of women's management styles	10
Women's own limitations (lack of confidence etc.)	29

Table 3.3: Obstacles to women achieving positions of influence (McRae, 1996).

Only by combining empirical findings related to gender, and those to do with organisation studies, can a true understanding of gender differentiation in organisations be developed (Kvande and Rasmussen, 1993). Kanter (1976; 1977) pioneered this approach in investigating how women's careers were limited by the bureaucratic and structural systems

within a large corporation in the US. Her work provided deep insights into the effect that the organisation of the workplace had upon women's careers, and the role of dominant 'organisational men' in defining women's careers. However, Kanter's work has been criticised as it only considered one organisation, and hence only a single type of organisational structure (Kvande and Rasmussen, 1995a; 1993a). As such, it failed to consider the differential effect of structural frameworks on women's careers. This criticism could be levelled at much of the gender-oriented organisational analyses to date, as central to these studies is the contention that the relationship between power and gender is developed under bureaucratic structures (Witz and Savage, 1992; Ledwith and Colgan, 1996).

Accordingly, the most appropriate paradigm for the investigation of gender in organisations appears to be the dual development approach (see 2.1.2). This centres around the exploration of the relationship between power and gender and recognises the specific struggles which define gender configurations in an organisational context (see Ledwith and Colgan, 1996). By comparing women's careers under different organisational typologies, and taking into account the dual systems of capitalism and patriarchy to address the entire life-cycle, a more complete impression of the influences on women's careers can be developed.

3.5 Determinants of Women's Careers in Managerial and Professional Positions

Particular problems relate to the retention of women managers and professionals in organisations (Steele, 1989). One explanation for this is that women cannot develop their careers in parity with men. A range of gender specific determinants have been found to influence women's careers which are explored below.

3.5.1 Personal and behavioural determinants of women's careers

Ambition, ability, education and social class cannot be ignored when attempting to establish reasons for an individual's career progression rate and dynamics. For example,

successful women tend to be well educated, from higher social classes, demonstrate high ability, and have a strong 'locus of control', a drive and ambition towards achieving career success (White *et al*, 1992). Successful women have been shown to be more committed to their careers than men (Powell *et al*, 1985). Any comparative analysis of careers must consider the individual's disposition and career motivation, so that their actions and strategies can be taken into account.

3.5.2 Societal, professional and organisational determinants of women's careers

Determinants of women's professional and managerial careers are numerous and complex. They range from reasons related to their societal status, to sex discrimination, and even assessments of their physical attractiveness made by their superiors (Frieze *et al*, 1991). However, three major themes explaining women's under-achievement emerge from the literature: the family; the exclusionary and discriminatory mechanisms used by men; and the impact of the realities of choices that women have to make about their labour force participation (Rees, 1992). Hence, explanations need to embrace both internal and external labour market factors, as well as factors outside of women's working lives. Women's under-achievement in organisations can best be understood at a practical level by viewing factors inside and outside of the labour market simultaneously, and as being interrelated and entwined. These factors leading to women's under-achievement may be structurally or culturally defined.

3.5.3 Culturally determined factors influencing women's careers

The organisation can be seen as a cultural system that simultaneously promotes competition and co-operation. Members co-operate to carry out tasks, whilst competing for limited career openings (Kvande and Rasmussen, 1994). Thus, they form arenas for the power and interests of their members to be manifested (Mintzberg, 1983). Gender is fundamental to the culture of organisations, as has been shown in well known studies within other sectors (see Morgan and Knights, 1990; Colgan and Ledwith, 1996). Itzin (1995) characterised gender cultures as being hierarchical; patriarchal, sex-segregated; sexually divided; sex-stereotyped, sex-discriminatory, sexualised, sexist, misogynist;

resistant to change; and with gendered power structures. The combination of these features forms a workplace where masculinity forms a key element of corporate culture (Hofstede, 1984). In attempting to define the prevailing organisational cultures under which women are subordinated in local government, Maddock and Parkin (1994) developed the conceptual typology shown in Table 3.4.

Name of Culture	Key Features of Workplace Environment
The Gentlemen's Club	Women are seen as home makers, men go to work. Most women cannot challenge it and so accept such attitudes.
The Barrack Yard	In hierarchical structures (such as military organisations) with many layers of management. A bullying culture where sub-ordinates are ignored. Women and part-timers work in junior posts find it difficult to progress
The locker room	An exclusionary culture where sexual references are made to confirm male heterosexuality. White male bonding through sport and sexual innuendo is rife. Women with power are treated the same as junior women.
The gender blind	This makes no reference to an employees home-life or personal circumstances, thereby assuming a level playing field for all employees
The Smart Macho	Economic efficiency is sought at the expense of personal need. Those who cannot work long hours and sacrifice family lives do not achieve.
The paying lip service	Men think they are not sexist, are well versed in feminism and define themselves as an equal opportunities (EO) employer. However, they do nothing to promote women or minorities.
The women as gate-keepers	Resistance to women managers comes from other women employees with different career/family orientations.

Table 3.4: Organisational Gender Cultures (Maddock and Parkin, 1994)

These organisational cultures can be seen to adversely affect women's careers in different ways. Male dominated sectors are likely to exhibit the more obstructive of these cultures, which actively seek to restrict women's participation, or to confine them to junior levels. The promotional achievements of women have been well researched in different organisations (see Davidson and Cooper, 1992). These studies have indicated that women are excluded from access to professional and organisational career ladders which contributes to a vicious circle of cultural barriers, where their isolation and visibility within male organisational cultures prevents them from seeking positions at the top of the organisation (Newman, 1995, Fig 3.1).

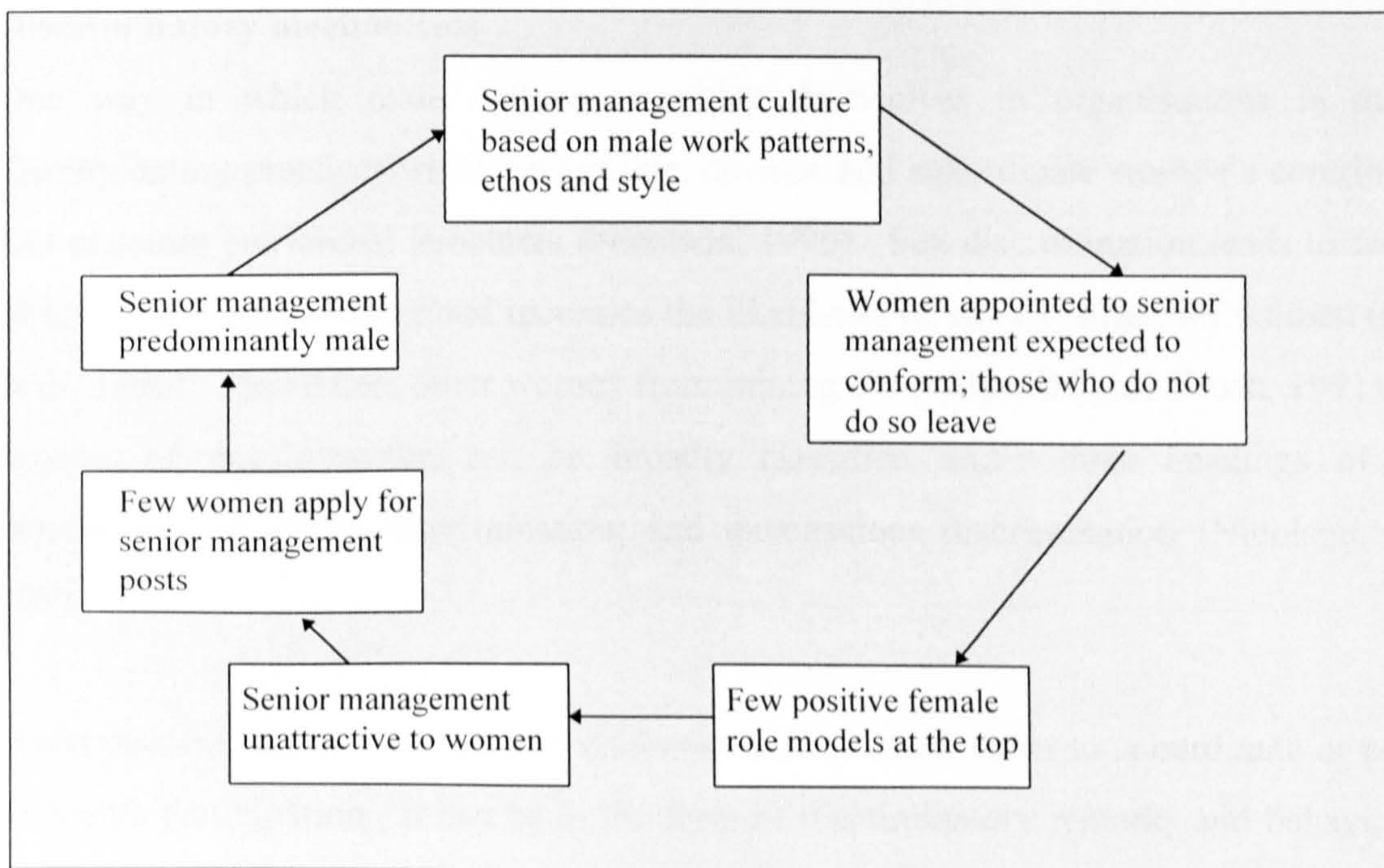


Fig 3.1: The vicious circle of cultural barriers (Newman, 1995)

Women are prevented from progressing their careers in parity with men by the cultural environments that they encounter (see Davidson and Cooper, 1992; Chi-Chang, 1992). Men have stereotyped views of women's careers and commitment (Cahoon, 1991). Thus, only when women form a higher proportion of a particular occupational group within an organisation, is the level of discrimination likely to decline. Kanter (1977b) predicted that at around 30%, under represented groups tend not to act as a group apart within an organisational setting. When this 'critical mass' is reached, then the stigma of deviance is removed (Morgan, 1992). However, other research has shown the effect of critical mass to be mediated by the culture of an organisation (Burke and McKeen, 1996). This is because the workplace culture can be defined by a small number of men who have power or control over the work environment who can marginalise women's participation (Rasmussen & Hapnes, 1991). Women themselves tend to circumscribe their achievements by reference to their sex (Bissert, 1979). This may stem from childhood socialisation, where the success of boys is attributed to personal ability, and failures attributed to bad luck (Dweck, 1980). A possible explanation for women's apparent inability to affect men's behaviour, is that attitudes are nothing to do with their numerical minority status, but relate to the perception that women are a 'social minority' (Zimmer, 1988).

Discriminatory mechanisms

One way in which male cultures manifest themselves in organisations is through discriminatory practices which undermine, devalue and subordinate women's contribution, and maintain patriarchal structures (Nicolson, 1996). Sex discrimination leads to feelings of low power and prestige and increases the likelihood of work conflict for women (Gutek *et al*, 1996). This deters other women from joining the profession (see Brush, 1991). The process of discrimination can be broadly classified under three headings of overt discrimination; covert discrimination; and unconscious discrimination (Nicolson, 1996: 103).

Overt discrimination is blatant and deliberate action which seeks to subordinate or prevent women's participation. It can be in the form of discriminatory remarks and behaviour, or be manifested in promotional and other policy decisions made in which women are ignored or subordinated in relation to their male peers. Women have been found to face different levels of obstruction at different stages in their careers. Schner & Reitman (1994; 1995) found that women in their mid-career stages reported lower incomes, lower career satisfaction, felt less appreciated and had worse relationships with their superiors. They appeared to experience more resistance, the further up the organisation, and the more experience they gained within their profession. Women who act forcefully and competitively attract additional criticism (Hemming, 1995), or even have their femininity questioned (Kolb and Coolidge, 1991).

Men find it hard not to sexualise with women in a male dominated work environments (Carter and Kirkup, 1990b). As such, probably the most serious form of overt discrimination is sexual harassment, which occurs in around three quarters of British work places (Labour Research Department, 1987). It is the most extreme mechanism for subordinating women and excluding them from male work cultures (Husbands, 1992). Around half of women managers have experienced sexual harassment (Cooper and Davidson, 1982). However, the precise form of sexual intrusion is immaterial, as some women become distressed by low level harassment, whilst others put up with serious

sexual assault (Stanko, 1988). However, most large companies do not recognise such bullying as a problem in their organisations (Hall, 1994).

Covert discrimination operates as part of the structural fabric of the organisation, and so remains hidden within its work practices. It is not as blatant or obvious as overt discrimination, but the effects of can be more serious (Walsh and Cassell, 1995). One of the ways in which covert discrimination is manifested within organisations is through the concept of the 'glass ceiling'. This is an invisible barrier of prejudicial or male oriented attitudes which prevent women from following a comparable career path to men. It is maintained through male based working practices and lack of support structures, and is prevalent in gendered work environments (Flanders, 1994; Symons, 1992). It effectively forms a hierarchical level within an organisation (or profession) through which most women are unable to be promoted. The glass ceiling has been blamed for the high number of women that leave engineering (Owen, 1993). Glass ceilings exist even where women have made headway in a particular sector or occupation (Davidson and Cooper, 1992).

Unconscious discrimination is subtle and non-deliberate, but it has a tangible effect on career development. An example is what has been termed 'the old boy network'. These informal groups can be found within organisations and share career enhancing information amongst themselves. These groups typically hold the power in organisations, and by their very nature exclude women (Parker and Fagenson, 1994; Itzen, 1995: 47). Burke and McKeen (1994) suggested that women may simply not be aware of such informal networks, and may prefer to communicate with others of their own sex. However, membership is required for rapid development.

Gender stereotypes and gender construction processes are not constant or homogenous, but are contingent upon many factors (Alvesson and Billing, 1992). Thus, in coping with the three types of discriminatory barriers, women have to combine the management of private and company relationships which are continually changing (Walsh and Cassell, 1995). This is potentially effort consuming for women trying to develop their careers in male dominated workplaces.

3.5.4 Structurally determined factors influencing women's careers

Organisational structures are important in the way that they define the network of power relations in which groups manoeuvre for advancement (Robinson and McIlwee, 1989). Kvande and Rasmussen (1990; 1992; 1993a; and 1994) carried out extensive research into the way that organisational structure affects careers. They characterised organisation structures into two broad types, static hierarchies (characterised by specialisation, centralised decision making, division of tasks and vertical communication) and dynamic networks (characterised by flexibility, horizontal communication structures and group decision making). They argued that whilst both types of organisation remain gendered, in engineering companies operating in unstable markets, the static hierarchy preserves homo-social reproduction at management levels. The dynamic network, however, uses the resources of the employees to provide greater degrees of opportunity for men and women (Kvande and Rasmussen, 1994).

Women have been shown to prefer 'adaptive' organisations as opposed to those with hierarchical structures, because they allow more flexibility in combining demanding work schedules and out of work responsibilities (Steele, 1989). However, in contrast, Robinson and McIlwee (1989) found that large, stable and defined bureaucratic structures actually offered more opportunity for women in engineering organisations, as the power of engineers was restricted by bureaucracy. Thus, the role of structure remains unclear in terms of its effect on women's careers. Kanter's (1989) more recent work on organisations with flattening hierarchies offers a compromise in that gender still played a part in career opportunities, as men were still unlikely to accept women in positions of authority. Thus, these organisations remained gendered.

Women can be seen to be oppressed by the systems designed to facilitate staff development. One such mechanism is performance appraisal systems (PAS). Whereas those using clear criteria help women to achieve equitable career development (Owen, 1993; Hirsh and Jackson, 1993), stereotyping and other biases of those carrying out appraisals can lead to differential evaluation standards (Arvey *et al*, 1996). Thomas (1992) found that words used to describe men and women in appraisals were often different.

Furthermore, men with equal performance ratings to their female counterparts were more likely to be offered training and promotional opportunities (IMS, 1992).

Another structural factor particularly relevant to women's careers is the changing nature of roles in technical fields as they rise within organisational hierarchies (see also 2.4.4). The further that an individual is promoted, the more management biased their position is likely to be, and the less likely they are to perform tasks related to their profession. Engineers and construction professionals lose a sense of professional identity by such promotions (Finniston, 1980). Evetts (1994) found that some women actively avoided management on this basis, which leads to an apparent segregation in gender configurations within organisations.

3.6 Women's Careers in Male Dominated Sectors

Science, engineering and technological (SET) occupations remain demonstrably male (The Rising Tide, 1994). According to Court and Moralee (1995: 11), women account for only 12% of SET professionals. Men are given more encouragement to pursue engineering qualifications (Hackett *et al*, 1992), and the women that do enter the industry remain proportionately over-represented at junior levels (see Hansard Society, 1990; Davis, 1994). This is despite them entering such occupations with better qualifications than their male peers (Scase and Goffee, 1990). Women's career development in SET sectors has some parallels with the construction industry, and so previous research in these areas may offer potential explanations of their under-achievement.

3.6.1 Barriers to women's participation in SET professions

Carter and Kirkup (1990b) found that being accepted into their work environment presented problems for women engineers, because the accepted professional identity in engineering was to be a white male. Aggression, competitiveness and hierarchical leadership form the institutionalised traits of engineering (Carter & Kirkup, 1990a). The result is that minority individuals were seen as being representative of their gender - as 'token' employees rather than as individuals. Tokens are treated with prejudice and with

negative stereotypes, are more conspicuous, and likely to be the subject of ridicule and discrimination (Renzetti & Curran, 1992; Kanter, 1977). Tokenism also leads to what Kanter termed 'boundary heightening', where the workers of the dominant gender exaggerate the differences between them and the 'token' employees. Hence, to have one or two token females in an organisation does little to change the status quo, even where appointments are made at a senior level (Ross, 1991).

Women engineers often find themselves excluded from informal networks for which membership is essential for career enhancement. As a result, they become even more peripheral to the organisation's culture. Paradoxically, where men change their behaviour in order not to offend women, this merely emphasises their status as intruders to the male work place, and they are seen as adversely affecting the natural culture of the work environment (Reskin and Padevic, 1994: 140). Hence, neither paternalistic or macho cultures reward women in SET professions (Walsh and Cassell, 1995).

For women to perform effectively in non-traditional roles, they must form good relationships with their male colleagues (Stewart, 1989). However, women in SET occupations experience difficulties in forming such relationships (DiTomaso *et al*, 1993). Women have been shown to be undermined by their male colleagues, and had to continually have to prove their proficiency in the work place (Morrison and Von Glinlow, 1990; Carter and Kirkup, 1990a). However, the most significant barrier to successful careers for women engineers relate to work family conflict (Morgan, 1992). Women in non-traditional occupations must make significant sacrifices in furtherance of their careers (O'Connell *et al* 1987; Jagacinski, 1987; Hirsh and Jackson, 1993). However, they are still more likely to become dissatisfied with the lack of opportunities for advancement (Stewart, 1989), and to have lower self-confidence than men (Bailyn, 1987; Court and Moralee, 1995; Toohey and Whittaker, 1993). The inevitable result is that women's occupational mobility away from management positions is greater than men's (Shenhav, 1992).

3.6.2 The role of the organisation in shaping women's organisational development in SET occupations

Challenge, recognition and support define the career success of women in SET occupations (Morrison, 1992). However, women have been shown to be disadvantaged under each of these criteria by their workplace environments (Burke and McKeen, 1994). They are not afforded challenges and developmental opportunities over the course of their careers (McCall *et al*, 1988) and receive less in the way of promotions, salary and responsibility than men (Morrison and Von Glinow, 1990). In addition, most organisations employing women in SET professions are not equipped for flexible working, and offer little or no provision for part-time work (Devine, 1992).

Robinson and McIlwee (1991) found the engineering workplace to be an arena of power relationships, where individuals and groups pursued and maintained self-serving occupational cultures through which they navigated their careers. Engineering culture recognises the behaviours and orientations consistent with the male gender role (Robinson and McIlwee, 1989). To be accepted as an engineer it is important to look like, talk like and act like an engineer, which necessitates their exhibition of masculine traits. Few things are more tied in to the male gender role than mechanical activities, and so a fascination with discussing these issues was also found to be an integral part of the culture of engineering. Because the work culture is concerned with conformity, women advance more slowly than men despite being as technically competent. Thus, it is women's membership, not their competence, that is the issue. Men become less tolerant of women the further they rise, who they then viewed as competitors (Kvande and Rasmussen, 1993a). As such, men are receptive to women who speak of themselves in a tentative, self-depreciating manner (see Dell, 1992).

Robinson and McIlwee's findings show that women are equipped for becoming engineers through the education system, but not for actually being engineers in the workplace. Men are not better engineers, but are better at *appearing* to be engineers in a male-defined way. Considering that the construction industry exhibits greater male domination than any other

occupational sector (see 4.2.1), it seems logical to assume that women are likely to face greater barriers than in other engineering professions.

3.7 Summary: The role of an organisational level analysis in exploring women's careers and retention in construction

Historically, women have tended to gain access to a range of occupations that offer lower pay and prospects, but which have allowed them to combine their socially defined obligations of child care and domestic responsibilities. However, women now enter what were seen as exclusively male sectors, and researchers have responded by exploring their organisational careers, in order to establish the internal factors which affect women's working lives and career development. Accordingly, this chapter has charted a changing emphasis in sociological research, from studies that have examined women in paid work focusing on external influences, to those that have focused on constraints that lie within internal labour markets and organisations. Dual systems approaches have allowed researchers to take account of patriarchy and capitalism in the workplace. This offers an holistic way of examining, and providing explanations for, women's career under-achievement.

The findings from the literature on women in paid work have implications for the investigation of the research objectives developed in Chapter 1. Firstly, in establishing the extent of women's career achievement in large construction companies (objective 1), the next logical step for research into occupational segregation is to move away from concerns over historical trends in women's employment patterns, to address the causes and consequences of such segregation, and its *meaning* for women. Whereas previous research on the labour market dealt with behaviour which was relatively easy to investigate, contemporary approaches focus on the attitudes, motivations, preferences and plans of women. This requires an understanding of *why* people behave in the way that they do, which necessitates an ethnographic research approach.

Studies in other male dominated sectors with parallels to construction have shown that women are often seen as token employees, which leads to their social exclusion.

Moreover, organisations do not take account of women's particular needs, and so they are expected to conform to male models of development. Accordingly, there is also a need to explore how these obstacles apply to construction, and what additional factors militate against women's equal participation in the most male dominated of all sectors. To address objectives 2 and 3, and establish the structural, cultural and strategic factors affecting men's and women's careers, requires an understanding of simultaneous and cumulative effect of factors which lie outside, as well as inside the labour market. Women's dual roles of work and domestic responsibilities are an important factor lying outside of the labour market. Successful women may exhibit traits of male or androgynous behaviour in pursuance of a successful career in sacrificing their family lives. This demands that the career perspective of the individual also be identified, if the relative effect of external labour market factors are to be understood. Moreover, whilst removing gender as a determinant of opportunity within organisations will benefit career focused women, for those seeking to combine a successful career with a family, consideration must be given to removing structural obstacles by moving away from traditional male models of development altogether. This has implications for any HRM initiatives aimed at creating quality of opportunity for women (objective 5).

Thus, to explore women's careers, it is first necessary to establish: *what* the obstacles to women's career progression are; at what conceptual *level* these barriers exist (societal, sectoral or organisational); and which are *specific* to particular types of organisation. Only then can the impact of gender as a determinant of career dynamics be understood, and the retention of women be improved. The literature points towards a dual systems approach as being the most appropriate for addressing objective 4, and developing a theory of women's career development in construction organisations. This is because it allows factors stemming from gender, and from the organisation to be combined, and views the labour market as dynamic and as changing with societal trends.

CHAPTER 4: WOMEN AND MEN IN THE CONSTRUCTION INDUSTRY LABOUR MARKET

Through a review of socio-economic data from previous research on women in construction, this chapter develops a quantitative contextualisation of women's current position in the construction industry labour market. Initially, women's historical position in the industry's labour market is established, and reasons for their under-representation explained. The business case for attracting more women to the sector, and steps that have been taken to address the need to attract more women are then appraised. Next, women's relative achievement in construction and the potential causes of vertical segregation within the sector are discussed. The lack of empirical explanations for women's internal labour market position suggests a failure of previous research in addressing women's under-achievement, and high occupational mobility. Set against this background, the chapter is concluded by discussing the need for a study to empirically investigate the determinants of women's careers.

4.1 The Historical Exclusion of Women from the Construction Professions

Throughout their development in the nineteenth century, the engineering professions and unions adhered to a policy of deliberately excluding women (Drake, 1984). Census data indicates that in 1871, there were only 171 women builders out of a total of 23,300 (0.75%), and of 5,697 architects, only 5 were women (Powell, 1983). During the first world war, the total number of women employed in construction and engineering increased, with almost all of them employed to directly replace men called up to serve in the armed forces (Drake, 1984). Although most returned to traditional occupations following the end of the war, by 1939 there were 15,700 women employed in the building industry compared to 1.2 million men (Powell, 1983).

Since World War II, there has been a steady increase in the number of women entering the industry in professional positions (Garner and McRandal, 1995). This has been boosted by

targeted initiatives such as the Women Into Science and Engineering (WISE) campaign, which has promoted science and engineering careers for women (see Shillito, 1992; Searle, 1984). However, until recently, the industry had done little to facilitate women's entry to construction. This has maintained a situation where women have been excluded or could not participate equally in the professions (Melvin, 1997). Hence, the low number of women in construction in the 1990s, is set against an historical backdrop of low representation and deliberate exclusion by the industry and its institutions.

4.2 The Current Position of Women in the Construction Industry Labour Market

Presenting an accurate statistical summary of female representation within construction occupations and professions is difficult, as much of the available data are contradictory. There is no central organisation to pool and analyse data from panel surveys, and little longitudinal data exist. Hence, historical comparisons have to be based upon snapshots of a particular period, which will have been affected by the prevailing economic climate at that time. Most of the recent work examining women's representation in the professions used the data available from professional institutions (see Gale, 1991a). However, this approach fails to consider those who are working in professional positions but have not joined such a body. Furthermore, although institutions hold data on those unemployed in the industry from the numbers claiming reduced subscription charges, only around half of those eligible are believed to take up such discounts (Ball, 1993). It is difficult, therefore, to establish the exact representation of women and other minority groups. Accordingly, the following analysis has been taken from a variety of sources published over the last 10 years. These include the professional bodies, the OPCS, the LFS and UCAS student admission data. This increases the reliability of the figures, and by considering women's representation over a longer period, this approach takes account of the effect of the boom-slump cycle on the industry's HR requirements.

4.2.1 Evidence of horizontal segregation

Construction has the lowest female representation of all major industries and service sectors in the UK (EOC 1996; Gale 1991a). Just under 10% of the industry's work force

are women (Court & Moralee, 1995). However, figures based on census data from 1981 show that 6.7 per cent of the full-time construction work force were women (EOC, 1990). In 1992 women formed 8.2% of the total construction industry work force (Sommerville *et al*, 1993). Thus, women's representation in the industry has risen significantly over the last 15 years. The IER (1995) predicted that women's employment will increase some 24% from 1993 to 2001, compared with 12% in all other industries and services.

Professional and management positions

In 1995, of over 324,000 members of professional institutions which are affiliated to the Construction Industry Council (CIC), only 8,965 (3.94%) women were fully qualified construction professionals, and 9,478 (9.78%) were students (CIC, 1995). Overall, women represent only 5.72% of the professions, with the majority working in architecture, landscape architecture, interior design or town planning. If these design, planning and support professions are removed from the analysis then only 1.45% of qualified professionals, likely to work in site based positions, are women. However, in common with the trends noted above, recent figures represent a considerable improvement in recent years, showing an increase from 5.18% in Jan 1994 to 5.72% in July 1995 (CIC, 1994, 1995). This increase is reflected across almost all of the professional bodies in recent years. Table 4.1 shows a comparison with 1994 figures.

Professional Body	Total No. of Members	Women as % of members	+ or - since Jan 1994
ICE	79,756	3.7	+ 0.5%
RICS (QS)	33,495	5.0	-
CIOB	33,212	2.0	+ 0.2%
RIBA	32,082	9.9	+ 2.9%
IStructE	24,095	4.1	+ 0.2%
RTPI	17,800	22.6	+ 0.1%
CIBSE	15,357	1.8	- 0.1%
IoP	12,795	0.6	+ 0.3%
RICS (BS)	10,313	6.2	+ 0.1%
BIAT (ICE)	8,395	4.9	-
Average for all CIC affiliated bodies		5.7	+0.5%

Table 4.1: Female membership of major construction industry professional bodies (Source: CIC, 1995)

Although the CIC have not updated these figures, Greed (1997) recently carried out an independent survey of the professional bodies (Table 4.2). Her figures show that female

membership of most professional bodies has remained constant over this period, with some having fallen over the past two years.

Body	Student Members		Full Members			Total Membership		% of Sector		
	Total	Female %	Total	Female %	Total	Female %				
RTPI	2196	957	43%	13689	3025	22	17337	3927	23%	6
RICS	8193	1267	15.5%	71865	4886	7	92772	8062	8.7%	35
IStructE	4358	586	13.4%	10114	137	1.3	21636	951	4.4%	5
ICE	8353	978	11.7%	53721	1841	3.5	79480	3425	4.3%	26
CIOB	9859	620	6.2%	10244	94	0.9	33143	903	2.7%	5
ASI	-	-	-	-	-	-	5046	130	2.5%	2
RIBA	3500	*	31%	22670	1819	8	32,200	*	12%	11
ABE	327	34	10.4%	2292	39	1.7	4577	104	2.3%	2
CIBSE	2196	116	5.28	6275	66	1.05	15264	319	2%	3
Totals				Approx Total for All			300000	18000	6%	2
				191500	12000	6%				

Table 4.2: Membership of construction professions 1996 (Greed, 1997). *RIBA figures are approximate owing to new format of data being released; RICS figures are totals are different to previous figures due to revisions in the bodies categories

Thus, although women have now gained a measure of visibility within the RTPI (see also Greed, 1994; 1995b), and other construction related professions such as landscape architecture, housing and environmental health (see Booth, 1996), they remain seriously under-represented in all of the built environment professions which have direct involvement with the construction process. Moreover, it appears that some of the increase in women's representation gained over the past few years has been recently eroded. Greed's figures suggest that women may have left the industry or professions, or that the numbers entering construction may have recently fallen. Considering the year-on-year increases in the number of women entering the industry up to this point, the former explanation appears more plausible.

4.3 Empirical Explanations for women's Under-Representation

The poor image of construction, its male dominated nature, childhood socialisation, a lack of role models and knowledge, poor careers advice, gender-biased recruitment literature, peer pressure and poor educational experiences have all been recently cited as militating against women's entry to the industry (Wall, 1997; Bronzini *et al*, 1995; Gale, 1994; Dainty and Geens, 1993; Sommerville *et al*, 1993; Johnson *et al*, 1992; Coles, 1992; Gale and Skitmore, 1990). Other obstacles for women include informal recruitment (NAS,

1994; EOC, 1990); obstacles to late entry through a lack of training opportunities (EOC, 1990); high levels of mobility and low flexibility in working hours (Spencer and Podmore, 1987; EOC, 1990); construction education acting as a gate keeper to an all-male industry (Srivastava, 1996; Gale, 1992); and the inherent demands of construction work for women with family and domestic responsibilities (Foley, 1987; Morgan, 1992). These are explored below.

Career choice: the image of the industry

Construction has one of the worst public images of all industries, being synonymous with high cost, low quality and chaotic working practices (Ball, 1988), and associated with a dirty and dangerous work environment (Harris, 1988a; 1989). As such, there is a widely held perception that career opportunities within the industry are also poor (Baldry, 1997). This has been shown to be a significant influence on women's low representation (Gale, 1991a; Sommerville *et al*, 1993; Greed, 1990b; Jennings *et al*, 1992; Court and Moralee, 1995; Lowe and Byrne, 1993; Srivastava, 1992). A survey by the CITB (1988) showed that many women believed that if they chose a construction career, they would not be treated as equals or would face harassment from their work colleagues. Most women view the industry as a male dominated, threatening environment, with an ingrained masculine culture characterised by conflict and crisis (Gale, 1992). Women also perceive the industry to have inadequate facilities and poor training (see Sommerville *et al*, 1993). In a survey of school girls, only 17% felt that the industry was suitable for women (EOC, 1990).

Skitmore (1991) found that women perceived the industry as comprising of small companies held together through authoritarian rule. Such an impression contributed to it having an occupational status to that of a cottage industry (Gale, 1989; Gale and Skitmore, 1990). Gale (1991a) suggested that women considering their career choice tend to seek 'comfort zones', occupational environments in which they feel accepted. As such they avoid professional cultures which they find unpleasant (see also Byrne, 1992). An internal status is also attributed to construction professions (Faulkner and Day, 1986). This may explain why women avoid particular professions within the sector such as construction management and civil engineering. This poor image is not a UK phenomenon. The USA jobs almanac ranked construction 248th out of 250 industrial sectors (Krantz, 1988).

Commonly held perceptions of low wages and a poor educational system have restricted the wider entry of school leavers (Federle *et al*, 1993).

Women are unlikely to be attracted in significant numbers until construction careers are perceived as a natural vocational choice for women to pursue. This is only likely to occur through women being visibly successful in the industry. Currently, however, the industry is a long way off the 'critical mass' required to promote such a change (see Morgan, 1992; Lantz, 1982; Kanter, 1977; Connolly & Porter, 1978). Moreover, as was discussed in 3.5.3, even a significant increase in the number of women may not change the underlying culture of the industry.

Women's educational experiences

Higher education forms the interface between career choice and working in the construction industry (Srivastava and Fryer, 1991). Srivastava (1992; 1996) found that a tension existed between the equal opportunities policies set out by the higher education institutions, and how it was translated in practice by lecturers. Women studying the built environment were found to be severely disadvantaged through a 'hidden curriculum' of rituals which lead to an isolating atmosphere (see Ahrentzen and Groat, 1992; Srivastava, 1992; 1992b). Teaching staff did not overtly dissuade or discriminate against women in the classroom, rather they were covertly discouraged from joining the industry by the attitudes that they confronted, and from a lack of female role models to act as mentors and advocates of careers in the industry (Srivastava, 1992).

Kirk-Walker and Isaiah (1996) found that under three quarters of women on undergraduate courses planned to remain in the industry after graduation¹. Women studying on male dominated engineering courses have also been shown not to achieve as well as where numbers of men and women are equal (Daniels, 1993), and to find the experience intimidating (Johnson *et al*, 1992). Thus, higher education is believed to act as a 'gate keeper' to a male industry. This helps to reinforce stereotyped values and attitudes (Gale, 1992), and to maintain existing sub-cultures (Greed, 1991).

¹ There is other evidence that indicates difficulties for women making the transition to paid work in the industry. For example, in 1989, although 40% of applications for BIAT were from women, only 2% eventually qualified and joined the profession (Netherwood, 1989).

Barriers to women entering employment

There is a large number of complex gender determined factors surrounding entry to employment (Wilkinson, 1993). Construction industry employers have stereotyped perceptions of women's societal roles (Jones, 1994). Employers feel that women are less suited to working in the industry, and that many clients would be unhappy to employ them (Harris, 1988b). Wilkinson (1992b) also found that 20% of employers stated that construction work was 'unsuitable' for women. Greed (1997) attributed this phenomenon to the identification with values of the construction sub-culture. This blocks the entrance of people and ideas that are seen as different and/or unsettling. Employer prejudices in this regard manifest themselves during the recruitment process (Morgan, 1992). Women have been found to be asked about their personal lives in interviews, such as whether they planned to have children in the future (Bolton, 1994). Furthermore, recruitment is often through personal contacts (Druker and White, 1996). This disadvantages women who are less likely to have networks of contacts within the industry.

4.4 The Industry's Attempts to Address Horizontal Segregation

Theories and research on occupational career choice fall into two categories: 'matching' theories, the kinds of people who choose particular occupations; and 'process' theories, the manner in which people come to choose particular occupations (Hall, 1976). The majority of studies on women in construction in the UK have focused upon these aspects of career choice, and particularly initiatives to attract women to the industry (see Henwood, 1996; Searle, 1984; CITB, 1991; Gale, 1994). This section explores the rationale behind the industry's efforts to attract women, and the initiatives that they have used to increase their representation.

4.4.1 The case for Diversification of the industry's work force

To exclude half of the population from the design and construction of buildings and structures is socially indefensible. Greed (1995b), for example, argued that women should have more of an input into town planning, so that they could have more control over their own environments. Similarly, buildings can only reflect the needs of women if they have an input into their design and construction. However, in addition to the moral and well rehearsed demographic arguments for employing more women (see Chapter 1), there also is also a strong business case for organisations to employ a more socially representative work force. For example, women tend to: possess better academic qualifications (Scase and Goffee, 1990; Pickles 1992; Grant, 1994); be more self assertive with higher levels of self efficacy (Neville and Schecker, 1988); work more democratically (NCE, 1992); be more self motivated (Garner and McRandal, 1995); and possess higher levels of instrumentality (Jagacinski, 1987).

In terms of construction, Latham (1994) suggested that the industry should pursue policies aimed at increasing the representation of women as part of his calls for improving the industry's efficiency by 30%. Latham (1994: 73) stated that EO should be:

“... vigorously pursued by the industry, with encouragement from government. The CIC, CIEC and CLG should produce co-ordinated action plans to promote equal opportunities within the industry and to widen the recruitment base.”

The resulting working group report argued a detailed business case for attracting more women to construction, and presented evidence to show that increasing their employment would benefit the industry culturally as well as structurally (CIB, 1996). These reports have contributed to a growing number of recent calls from both researchers and practitioners for initiatives to attract more women to the industry (Chevin, 1995; Perreault, 1993; Gale, 1992; Johnson *et al*, 1992; Wilkinson, 1992b; Alexander, 1991; Greed, 1991; Fleming, 1988). Diverse work forces are believed to be better informed, and lead to a more adaptable organisation which is closer to customers and more responsive to market changes (Coussey and Jackson, 1991). Too much similarity in work force profile is detrimental to long-term growth, and to the ability of organisations to adapt to new markets, technologies, societal shifts and work force expectations (Kossek and Lobel, 1996).

The differences between male and female managers has been a subject of much contention in behavioural and occupational psychology since the early 1970s. Until recently, studies of management effectiveness have been based on male managerial behaviour (Powell, 1988). Thus, masculine traits of managers have become recognised and valued (Wilson, 1995: 3). However, many authors see women as bringing a different set of attributes to the workplace which can lead to improvements in working practices and relationships (Hunt, 1992; Gilligan, 1982; Perreault, 1993; Grant, 1988; Hoy, 1990). The British Institute of Management (1994) predicted that a female management style will be more appropriate in the next millennium. They cited female attributes such as team working, consensus management, negotiation skills, interpersonal skills and the ability to manage several projects at the same time as being more suitable for the future needs of industry (see also Helgesen, 1990; Sharma, 1990; Case, 1994). Such skills are a requirement of modern management in construction.

In addition to different managerial qualities, it is likely that women bring new attitudes, perspectives and energy to the construction workplace (Greed, 1991). One such contention is that women may offer attitudes which are less conflictual than men's. Gale (1992) suggested that if the culture of the industry 'feminized', then conflict could be reduced. Greed (1991) also contended that women in construction are easier to deal with, more straight forward and direct in their business approach. Conflict management is such an integral part of the management process (see Miller, 1991), that organisational cultures may be positively influenced by women as agents of change (Newman, 1993).

4.4.2 Initiatives taken to address women's under-representation

A lack of knowledge was found by Gale (1990a) to be the most important factor why school children were not attracted to the industry. Accordingly, improving women's awareness of opportunities available in the industry is widely acknowledged as the most effective way of attracting them to it. Targeted recruitment literature (see CITB, 1991), insight courses (see Gale, 1991a; 1994; NCE, 1995) and other initiatives such as the 'take

your daughter to work day' (see New Builder, 1995), have been shown to be effective short-term measures in attracting women to the industry.

Probably the best known initiative to attract women into SET occupations was the Women In Science and Engineering (WISE) initiative, launched in 1984 by the Engineering Council (Shillito, 1992; Searle, 1984). This aimed to give school girls an insight into engineering professions through a fleet of buses equipped with careers advisory material and experiential learning equipment. WISE had positive initial effects but, the rate of increase of women entering engineering occupations has since slowed down (Garner and McRandal, 1995; Henwood, 1996). Many other groups have set up schemes to attract women to construction professions, such as Women As Role Models (WARM), the Women In Construction Alliance (WICA), Women and Manual Trades (WAMT) (who keep a data base of women trades-people for female clients to use), Women In Design and Construction (WIDC) and Women's Education in Building (WEB). The CITB have also been proactive in EO, and have set targets for female representation on their courses (CITB, 1996). They initiated a new EO policy in 1994 which gave detailed grievance procedures and information on what constituted discrimination and harassment (CITB, 1994).

4.4.3 Resultant recent trends in women's representation in the industry

The efforts of the industry to attract more women have resulted in virtually constant year-on-year increases in the entrance of women (see 4.2.1). Women's representation has increased over the decade to 1994 by 14%, whilst men's have declined by 7% over the same period (Court and Moralee, 1995: 13). Of greatest significance, however, has been the recent increase of the number of women entering construction higher education. In 1996, women represented 18% of the undergraduates on built environment related courses (Kirk-Walker and Isaiah, 1996). This represents a 3% increase from 1994/5. University entrance data over a 10 year period (Table 4.3) shows that women's representation was proportionally higher on degree courses than those for full *and* student membership of the professional institutions.

Session	Female students as a percentage of all students reading:				
	All Subjects	Architecture	Building	Business Studies	Civil Eng.
1985/86	42	26	7	47	8
1986/87	42	24	9	46	5
1987/88	44	25	7	48	9
1988/89	47	24	10	50	13
1989/90	46	23	11	50	12
1990/91	46	20	8	50	13
1991/92	49	22	9	49	12
1992/93	49	20	10	49	11
1993/94	49	35	12	46	14
1994/95	50	32	11	49	14
1995/96	51	33	11	50	13.5

Table 4.3: Female students reading built environment subjects (Sources - Langford *et al* (1995: 165) after PCAS (1987, 88, 89, 90, 91); PCAS (92, 93); UCAS, (94, 95, 96).

If these trends continue, and if university entrance figures are translated into the practice environment, then women's representation may increase in the future. However, it has been suggested that rather than develop their careers in the industry, women move away from construction to other areas such as law, accountancy and media studies (Greed, 1997). Moreover, women's career choices appear narrowly focused. Their representation on architecture courses (33%; Table 4.3), and in the town planning profession (22.6%; Table 4.2) indicate that professions removed from the physical aspects of construction are the most popular for women. Such opportunities are rare in contracting organisations. Thus, there is need for women to be seen to be successful in other areas of the industry, in order that they be attracted to them in the future (see 3.5.3).

4.5 Evidence of Vertical Segregation

The increasing numbers of women in the built environment professions are believed to be neither evenly distributed by profession, nor proportionately represented at the middle and senior levels (Booth, 1996; New Builder, 1995). Women have only entered the industry in significant numbers in recent years, and so it is unsurprising that there are apparent signs of vertical segregation (see Stone, 1992). However, the most recent census data indicated that women were concentrated in clerical and secretarial positions, or other positions not directly involved with the construction process (Table 4.4). Men, however, occupy craft, operative and professional positions (Court and Moralee, 1995; Table 4.4).

	Distribution of men %	Distribution of women %	Women's share of total %
Managers and administrators	9.3	15.4	14.0
Professional Occupations	2.9	1.1	3.4
Associate Prof. & Technical	2.9	2.6	8.0
Clerical & Secretarial	1.1	63.0	84.5
Craft & Related	61.2	4.8	0.8
Personal & Protective service	0.2	0.6	22.3
Sales	0.8	4.7	36.7
Plant & Machine Operatives	9.9	1.8	1.8
Other occupations	11.0	5.6	4.8
TOTAL	100.0	100.0	9.0

Table 4.4: Employment in construction by occupation and sex: 1991
(Source: Court and Moralee, 1995)

A recent study of contractors and specialist sub-contractors conducted by the Department of the Environment and BSRIA (1995), showed that a quarter of women covered by the survey were described as directors/owners of construction companies. However, they contended that these women were likely to be based at home with responsibility for taking calls and dealing with enquiries. Similarly, Table 4.4 shows that women comprise 14% of specialist managers, but only 5.72% of the professions. This may be because women tend to fill managerial positions not directly related to the construction process, such as in personnel, finance and business development. If these positions are ignored, it can be seen that women generally occupy only the junior support positions in construction organisations.

The construction professions also show signs of vertical segregation. Women's membership of the surveying body RICS, for example, can be seen to be skewed towards the student/probationer end of the profession (Andrews and Jackson, 1992; Greed, 1992). The largest and oldest of all the professional bodies, the Institution of Civil Engineers, exemplify this gender stratification. Despite the sustained increase in their representation

over the last ten years, there were only two fellows and 356 corporate members out of a total female membership of 2,985 in 1995 (ICE, 1995). Figures are not available for contracting as a distinct sub-sector of the industry. However, Chevin (1995) commented on the rarity of finding female contracts managers and directors. She contended that women either experience problems in career development or that they drop out before having time to develop their careers and reach senior levels. A potential consequence of vertical segregation is that there are likely to be few senior female role models to attract other women in the future (see Fig 3.1).

4.6 Possible Explanations for Women's Under-Achievement

It has been suggested that the image of the industry, as male dominated and resentful of women's participation, merely reflects the realities of working life within it (Alexander, 1991). Within the workplace culture, women are not promoted as often or in as great numbers as men (Webb, 1989), and do not have their careers taken seriously (Perreault, 1993). As such, the construction workplace has been described as amongst the most chauvinistic in Britain (Hanson, 1995). Greed (1991) carried out in-depth interviews with women surveyors to establish the effect of the prevailing sub-culture on their careers. She described the problems that women faced as relating to interpersonal relationships, organisational structures and the ethos of the profession (Greed, 1991). These barriers can be broadly divided under two headings: structural factors - the physical nature of construction work, the industry's working practices and the way in which it is structured; and cultural factors - the way in which attitudes and stereotyped assumptions work against women's careers.

Structural barriers to women's careers in construction

Several aspects defining the industry and its working practices have the potential to work against women's careers. Construction work is well known for involving travel to geographically diverse locations, long hours and high levels of stress (Djebarni, 1996). Employers place great importance on the flexibility of their employees, who are expected to balance their work and family commitments without organisational assistance (EOC, 1990; Foley, 1987). Thus, construction companies do not accommodate child care

facilities, flexible working hours or career break programmes, and part-time work is almost non-existent (Kirk-Walker, 1994). Accordingly, women find that they have to choose whether to have a career *or* a family (see Wilkinson, 1992c; Toohey and Whittaker, 1993). Women that do take time out of the industry to have children are severely disadvantaged in terms of career progression (Stone, 1992).

Although difficulties for women are unlikely to be legislated away (Bird, 1997), legislation does exist that outlaws discrimination, and those in breach can face statutory penalties (see 3.2.2). Construction companies have recently been warned in the trade press that courts are becoming tougher on companies that have not dealt effectively with sex discrimination (Edwards, 1995). However, many contractors do not even keep records of how many women they employ (Chevin, 1995). A recent survey showed that although construction companies claim to be “Equal Opportunities Employers”, their interpretation of this statement differed greatly (CIB, 1996). Construction employers exhibited a ‘minimalist’ approach to EO policy, defined as a base level commitment to its principles with little effort towards its practical implementation (see Jewson and Mason, 1993). A female quantity surveyor, who recently won a legal claim against a major contractor, claimed that most contractors only have an equal opportunities to get on local authority tender lists (Building, 1995). Contractors’ attitudes in this regard are reflected in their membership of Opportunity 2000, the campaign set up by the government to promote the quantity and quality of women’s workplace participation into the next century (see Itzin, 1995b: 142). This initiative has not been embraced by the industry, with only two contractors having joined to date.

Cultural determinants of women’s careers in construction

In common with the engineering sector (see 3.6.1) construction is believed to present a culture resentful of, and unacceptable to women. For example, the industry is competitive, hierarchical and conflictual, which women find alien and detrimental to teamwork (Jones, 1994). Competing one-to-one with male peers increases the likelihood of sexual discrimination (Bakos, 1992a). Perreault (1993) found that women professionals were not treated seriously by men and experienced prejudice in the site environment. Over 25% of

men interviewed in a survey by Yates (1992) felt that women were less capable and only likely to succeed through luck or as a result of their minority status.

Women in construction have taken up anomalous positions to compete with men on their own terms, and so their successes and failures are particularly visible within the work place. Whilst for some women this facilitates their career progression because their achievements are likely to be noticed (Davis, 1994; Schott 1990), others are put under additional pressure in terms of their workloads and performance expectations (Lowe and Byrne, 1993). The result of these attitudes is that women feel threatened by their male colleagues (Bakos, 1992). Khazanet (1996) blames this visibility for them seeking lateral opportunities away from main-stream construction work. Accounts of discriminatory practices against women have also become increasingly evident in the trade press (Chevin, 1995; Searle, 1984). In a recent survey on job satisfaction in construction, over half of the female respondents had experienced sexism (Ford, 1997). Lowe and Byrne (1993) found that 48% of women CIOB members complained of being discriminated against, with most feeling that discrimination was endemic in the industry. Court and Moralee (1995) also found that half of the women in their survey had experienced harassment, and 13% had left as a direct result. Women have faced worse discrimination during the recession, where they have been overlooked for professional posts (Wheal, 1993; Jones, 1994; Hall, 1994). Moreover, of increasing relevance considering the globalisation of the industry, is that women who have worked overseas have experienced difficulties in trying to integrate into different work cultures (see McCuen, 1991).

Overall, the literature gives an impression of the industry's culture as forming an exclusionary work environment for women (see Jones, 1994). Women have to learn to be resilient in putting up with jokes at their expense (Willing, 1996). Work related discussions often take place on the sports field or in other places from which women are excluded (Greed, 1991). Women are believed to have to change or compromise their own ethics or emulate the male approach to fit into the culture (Gale, 1992; Carter and Kirkup, 1992; Willing, 1996). Thus, whilst female targeted recruitment campaigns have started to show a positive effect on women's representation (Shillito, 1992; Searle, 1984), retaining their long-term participation will require cultural change.

4.7 Previous Initiatives to Address Women's Under-Achievement

Although the WISE campaign brought women in engineering to the public's attention, it failed to consider those already working in these fields (Wilkinson, 1992a). Support networks allow women in different organisations to share experiences and find out about new opportunities. An example is Women in Property which was set up by the RICS and now has over 400 members who provide a networking service for women (Mulhearn, 1992). Younger professionals get to meet successful and experienced role models at regular meetings and find out about opportunities in different companies. The CIOB have also set up the Women In Building Consultancy Committee (WIBCC) in 1990 as a forum for discussion of perceived and real barriers for women in the industry (Lowe and Byrne, 1993). Similar initiatives exist in the RIBA. However, whilst there have been several significant empirical studies into the lack of women entering the UK construction industry in professional positions, knowledge of women's career experiences within organisations remains largely anecdotal. As such, the literature review yielded no accounts of the development of initiatives aimed at supporting women working in the industry, which were based on empirical knowledge of the influences on their careers. Furthermore, none have focused on women's careers at an organisational level.

4.8 Summary: The Need for Effective Strategies to Retain Women to Large Construction Companies

Clearly, the competitiveness of the industry will be adversely affected if the benefits that women bring to the professions remains under-valued (Khazanet, 1996). Thus, as the employee profile of the construction work force changes and more women are attracted, so the industry must adapt its employment practices in order to retain them.

4.8.1 The need for effective retention initiatives for women

Currently, the industry is dominated by men, but the skills crisis is likely to impel employers to consider the employment of women (Hall, R, 1990; Building, 1996b). The demographic imperative to widen the industry's recruitment base is not restricted to the UK. The EEO (1992) showed that the problem was equally spread throughout Europe (Sommerville *et al*, 1993). Furthermore, concerns have been expressed for many years in the USA over skills shortages in their industry (Yates, 1992; Bakos, 1992; Emrich, 1991; Russell, 1991; Jones, 1990; Reuss and Vogel, 1989). As such, it is generally accepted that women represent the single greatest potential source of labour to meet the industry's future needs (Foley, 1987; Russell, 1991; Erion, 1992; Federle *et al*, 1993). This chapter has shown that women's under-representation in the UK has started to be addressed, with year-on-year increases in their entry to construction degree courses. However, despite these increases, there has been a recent reduction in women's membership of professional bodies, and so women appear to be leaving the industry at the early stages of their careers (Bakos and Hritz, 1991; Vetter, 1989).

A lack of career opportunities has been shown to be a principal reason as to why women managers leave organisations in other sectors (Davidson and Cooper, 1992; Brett and Stroh, 1994). The exact level of vertical segregation in construction is unclear from the literature (Langford *et al*, 1995). However, women have been found to under-achieve relative to men in other sectors where they represent a greater proportion of the work force, and where EO employment practices are far more developed than in construction (see Bagilhole, 1995, Carter and Kirkup, 1990; Davies and Rosser, 1986; King, 1994; Evetts, 1994b). Thus, it seems reasonable to assume that women are likely to under-achieve in the most male dominated of all major industrial sectors.

Fundamental changes to the current work environment and attitudes will be necessary if women are to continue to be attracted and retained in the future (Federle *et al*, 1993; NAS, 1994). However, an increase in the number of women in an organisation will not necessarily bring about cultural change (Gale and Cartwright, 1995). Gale (1994: 270) asserted that the industry is gendered with a 'male' culture. This benefits patriarchal

society, but not the industry in terms of working practices, process or product. Patriarchal systems divert and resist attempts to introduce change (Cockburn, 1991; Marshall, 1984). Thus, to create change and retain women, such barriers must first be broken down.

4.8.2 The inadequacy of previous research in addressing problems in women's career development

An in-depth understanding of women's careers in comparison to men's could explain the specific barriers to parity of progression that women face. This understanding will allow effective solutions to be developed to overcome these additional barriers, and hence, improve women's retention to the sector. However, research to date has not addressed the problems that women face in the industry. The HRM literature, for example, focuses almost exclusively on a generic view of employees, which excludes gender as part of the analysis. Whilst there are some notable exceptions (Scase and Goffee, 1990; Greenhaus and Callanhan, 1994), this sanitised view of employee relations assumes equal treatment and opportunities for all 'human resources' within the organisation (Steele, 1992). Most careers research has not taken account of the increasing presence of women in the work force, as most was carried out before significant changes in the labour market had occurred (Arthur, 1992). The effectiveness of HRM strategies for women's careers will depend upon the organisation's attitude towards women. If organisational motives for employing women are opportunistic, and only to circumvent labour shortages, then any gains made by the employment of women are likely to be short-lived (Steele, 1992: 292). Thus, the key issue in promoting female participation in male dominated fields should be to ensure that women are not restricted by glass ceilings (Grant, 1994). However, previous research has not addressed the need to find explanations for women's under-achievement as a potential cause of high staff turnover in the industry.

Literature from the social sciences, whilst extensively investigating women's careers in engineering (Carter and Kirkup, 1990; Robinson and McIllwe, 1989; Kvande and Rasmussen, 1993; Evetts, 1996) has failed to specifically consider women's careers in the construction industry. This may be because of an historical lack of women to investigate. Accordingly, virtually all recent research into gender issues in the industry comes from the

construction management field. This research has generally sought explanations as to why women do not enter the industry, and not what affects their careers within it. An exception was the work of Greed (1991), which was carried out from broad feminist perspective. Her study on women in the surveying profession forms an exemplary investigation where the problems for women of trying to comply with male oriented sub-cultures were addressed. However, this study focused on the profession as the key determinant of women's careers, did not focus on organisational level issues, and did not directly compare women's careers to men's.

Overall, the literature shows that empirical research into women in the UK industry to date has addressed the need to attract more women (see Gale, 1994); the need to understand how the education process affects women's entry to the industry (see Srivastava, 1992); the interface between education and paid employment (see Wilkinson, 1993); and the nature of professional sub-cultures and their effect on women's careers (see Greed, 1991). Hence, there remains a need to understand women's career experiences and achievement, in construction organisations in comparison to men's. Fulfilling this aim, whilst simultaneously taking into account women's out of work and occupational careers, will address objectives 1, 2 and 3. Furthermore, from a wider theoretical perspective (objective 4), it will provide an understanding of how patriarchal society is reflected in construction organisations, and how this contributes to the gendering of work within it. Through this knowledge, HRM strategies can be developed which mitigate the barriers that women face, and a strategy developed to improve their long-term retention in the future (objective 5).

CHAPTER 5: RESEARCH DESIGN AND METHODOLOGY

Researching organisational careers, whilst simultaneously attempting to understand the influences that lie outside as well as inside the labour market, pose numerous methodological challenges. In this Chapter the methodology used to explore the propositions and meet the research objectives is explained. Initially, the aims and objectives of the research are restated, and propositions are formulated as a focus for the data collection and analysis. A discourse is provided on the requirements of a research design suited to the analysis of the subjective career, and the rationale behind the use of a primarily qualitative methodology is explained. The approach selected was to compare the career influences and experiences of 'pairs' of male and female informants through the development of career history profiles. This was carried out within a 'Grounded Theory' framework of investigation. Specialist computer software was used to facilitate the analysis of the vast amount of data collected using these methods.

5.1 Introduction: the requirements of the research design

Through a review of the HRM literature (Chapter 2), a need was identified to explore the *subjective* careers of women, through the use of dual development models. These see men and women as having fundamentally different developmental patterns, and allow the inclusion of a wide range of variables which originate from outside of the labour market. The women in work literature (Chapter 3) showed evidence of a recent paradigm shift in research into women's careers, towards an approach focused on constraints that lie *within* internal labour markets and organisations. In particular, dual systems approaches have allowed researchers to take account of patriarchy and capitalism in the workplace, and the structural and cultural mechanisms which militate against women's equal participation. The women in construction literature (Chapter 4) suggested a need to establish how the non-work aspects of women's life-cycles impact on their careers, to establish the effect of the dynamic and unstable labour market that the industry presents. These three requirements necessitate gaining an understanding of *why* people behave in the way that they do, and so require an ethnographic research approach capable of understanding careers

from the individual's perspective. This forms the basis of the research design described in this chapter.

5.2 Formulation of the Research Propositions

By revisiting the original research objectives from Chapter 1, and relating them to existing theory, this section formulates propositions for investigating women's career under-achievement and for developing HRM policy to mitigate these factors. These focus the data collection and analysis for the remainder of the study.

5.2.1 Aim of the research

In Chapter 1, a need was identified to establish the factors that currently lead to women's career under-achievement. Accordingly, the key output of this research is the development of a grounded theory (GT) of women's career development in construction. This should not be seen as a model generally applicable to all women's careers, as the relative effect of each of the obstacles identified will be dependent upon the specific circumstances of the individual. However, by establishing the cultural and structural factors which maintain the present situation, and developing remedial actions to break down barriers which form the components of this theory, a more equitable work environment can be developed which should be of benefit to the majority of women construction professionals.

5.2.2 Research propositions

The need to explore the subjective careers of men and women require data to be collected from the individual's frame of reference. This makes it unlikely that identical issues will emerge from any two informants, and so a flexible data collection approach is required. Thus, a fundamental problem exists with formulating hypotheses, as any modification to them would invalidate the research (Popper, 1992). Simister (1994: 47) argued that propositions are best used in an inductive process of working hypotheses, which interact with the emerging findings from the research. This approach has been adopted for this study, where emerging ideas were tested on later respondents via a cumulatively

developing research instrument. Hence, although the research set out with initial aims and broad objectives developed from the literature, they were amended to reflect the emerging findings of the study. Thus, the propositions became general statements, allowing relationships between variables to be explored, but not definitive statements of what the researcher expected to find from the study. They are provided, merely as a framework upon which the aims and objectives can be fulfilled.

5.2.3 Objective 1

The first objective was *to establish the extent of women's career achievement in large construction companies, in relation to men's*. To date no study has examined levels of vertical segregation within construction organisations, or how women's careers develop in relation to men's. Without such knowledge it is impossible to establish whether women are disadvantaged, or if a lack of career development opportunity contributes to the turnover of women managers and professionals. Previous studies from other sectors, less male dominated than construction, have suggested that women face additional obstacles to their careers in comparison to their male peers. This has been shown to lead to higher levels of female organisational and occupational mobility. These barriers stem from negative and stereotyped attitudes held by men towards women's participation, and problems that women face in combining domestic and family responsibilities with their working lives. These are also likely to have a detrimental effect on women's career progression in construction, particularly because of the demanding and transient nature of construction work. Accordingly, the first proposition of the research is that:

Proposition 1: *Obstacles to women's career progression are more numerous and difficult to overcome than those of men's.*

This proposition is explored by establishing women's hierarchical positions in comparison with their male colleagues at each year of their careers. This indicates the level of vertical segregation within the participating organisations. Through in-depth interviews of matched pairs of employees, career history profiles are developed. By noting the key

influences on the informant's careers, comparative occupational profiles are constructed, which explain any disparity in the informants' development dynamics.

5.2.4 Objective 2

The second objective was *to explore the structural and cultural organisational factors defining career opportunities, and the interaction of the strategies of individuals in dealing with career opportunities and constraints.* Currently, little is known about career development or career dynamics in the construction industry, or the factors that effect developmental rates. Moreover, it is unclear to what extent informal cultural influences affect careers in the industry. By investigating the effect of the workplace environment on the career development of men and women, and the strategies used by individuals in developing their careers, the relative effect of the organisational and industrial cultures and structures can be established. Thus, in investigating this objective, three propositions have been formulated:

Proposition 2: *Men's and women's career progression rates and opportunities are differentially determined by the structure of the industry and its organisations.*

Proposition 3: *Men's and women's career progression rates and opportunities are differentially determined by the culture of the industry and its organisations.*

Proposition 4: *The actions of men and women in response to labour market and non-labour market determinants of careers, reproduce gender configurations within construction organisations.*

By comparing men's and women's career progression in different occupations and professions, and across different organisations, the effect that different structural conditions and policies have on career progression for men and women can be established. The effects of the fragmented nature of the industry, and the transient nature of construction work can also be explored. Furthermore, by investigating the informant's perceptions of the informal factors affecting their careers within their employing organisations, and

establishing the strategies that they use to circumvent barriers to their progression, the differential effect of organisational culture on men's and women's careers should also become apparent. Knowledge of the actions and strategies used by men and women in mitigating the effect of these factors, should add insights into the action centred determinants of men's and women's careers, and of the influences that lie outside of the paid work environment.

5.2.5 Objective 3

The third objective was *to identify the specific factors, originating from both within and outside of the labour market, which lead to women's under-achievement*. Whilst women's careers have been investigated in other sectors, construction is unique as it presents a geographically diverse, unstable and dynamic work environment. This has potentially adverse effects for women developing careers with family commitments and other life-cycle restraints. In addition, women are likely to face resistance to their career achievement from men who have traditionally seen the industry as a male preserve. Research on women's careers in other sectors has suggested that factors affecting women's careers are likely to be different to men's, cultural in origin, and/or manifested in structural aspects of the work place which have developed to be compatible with male career models. The actions of individuals have been shown to reproduce or change such determinants. Hence, investigation of this objective is encompassed within propositions 1, 2, 3 and 4 above.

5.2.6 Objective 4

The fourth objective was *to construct a theory of women's career development in construction organisations, which may act as a basis for further research of women's careers in the future*. Any theory of women's careers in the industry will need to be complex enough to reflect the wide range of influencing variables which affect careers from within and outside of the labour market, as well as from the internal labour market of the organisation. This requires a theory building approach which can explain the reality of the social processes under investigation in the context of where they occur (see 5.2.4

below). This objective will be addressed through the research design in the remainder of this chapter, and its development will be encompassed within the investigation of propositions 1, 2, 3 and 4 above, and proposition 5 below.

5.2.7 Objective 5

The final objective was *to suggest HRM initiatives to address the factors emerging from the study which lead to women's under-achievement*. Modern management succession and career management policies can help to retain employees by providing them with career development commensurate with their personal abilities and aspirations. In particular, soft HRM strategies have been identified as offering the potential to improve opportunities for women. Such policies can be used to break down barriers to inequitable career development within organisations, through the development of formal organisational processes, and by manipulating the organisational culture to provide a working environment more accepting of non-traditional groups. Any framework of initiatives must be developed in response to the barriers that women face in their specific organisational context. Accordingly, the final proposition is that:

Proposition 5: *Opportunities for women in construction companies can be improved through HRM policies which provide a more equitable working environment for women.*

By using comparative career history data, and applying best HRM practice from other professions and industries that have been more successful than construction in attracting and retaining women, practicable HRM policies can be developed which promote an equitable working environment. The validity of such proposals can be tested through questionnaire surveys of the original informants and input from HRM representatives from the participating organisations. The final recommendations should provide a strategic HRD framework capable of being incorporated into wider organisational HRM and EO policies.

5.3 The Identification of an Appropriate Research Approach

No study has been identified which has explored the career experiences of women in the UK construction industry from which a successful methodology could be drawn. Furthermore, only one study of note was found on career development in the sector (Young, 1988). Previous methodologies used to investigate gender issues in construction have shown a propensity towards the use of surveys or interviews within a quantitative analytical framework as the primary data collection method, or the use of action research in attempting to change the attitudes of women towards the industry. These have been supported by only a limited amount of qualitative data. The method utilised for this study represents a departure from this approach, in that it uses an interpretivist methodology within an ethnographic framework of investigation. It draws upon studies on women's careers in other sectors which offer appropriate transferable methodologies for investigating careers at an organisational level.

5.3.1 Nature of the phenomenon under investigation

Careers research is founded on the interactionist principals, that the individual is an active agent in defining their own development (Evetts, 1994; 1996). This is because career dynamics are dependent on the complex interaction of individual action, and the structural and cultural factors which define career mobility and progression. The research design needed to take account of these three dimensions, from both organisational and individual perspectives, in a way which did not under or overstate any particular aspect of career influences. Thus, understanding organisational career influences poses several methodological problems. Recently, the weakness of rationalist approaches to social research has led to calls for established qualitative methods to be applied to construction management research, in order that it can meet current challenges within the industry (Seymour *et al*, 1997; Loosemore 1997; Loosemore *et al* 1996; Edum-Fotwe *et al* 1996; Seymour and Rooke, 1995). This debate has highlighted the role of interpretivist and ethnographic approaches from the social sciences in finding meaning in the words and actions used by particular groups.

5.3.2 The interpretivist paradigm

Attempts to provide objective accounts of social reality cannot be achieved using only rationalist methodologies. Such approaches do not take into account the complex nature of organisations and organisational behaviour, which leaves the researcher concerned only with what is un-problematically observable (Harvey and MacDonald, 1993: 58). The experiences of the 'Hawthorne' researchers showed that hypotheses testing in social settings can lead to spurious results. This has led many researchers to advocate ethnographic methods in the study of organisations.

Understanding women's experiences in male-dominated occupations requires the recognition of the socially constructed and heterogeneous nature of vocational roles (see Robinson and McIlwee, 1991). A naturalistic approach places the researcher in a better position to gain such an understanding, as it has as its *prima facie* the need to establish the meaning attributed to such concepts by those taking part in the study (Harvey and MacDonald, 1993). Most research associated with the interpretivist sociological perspective involves the use of qualitative methods (Mason, 1996: 3). British social research has moved away from quantitative methodology as the dominant form of investigation in recent years (Bryman and Burgess, 1994: 1).

Qualitative researchers do not report on studied objects, but on interaction with the objects under investigation (Kirk and Miller, 1986). Accordingly, their research should not be judged on their typicality (Crompton and Sanderson, 1990: 21), but should emphasise the importance of the generation of new ways of seeing rather than the testing of prior theory (Henwood and Pidgeon, 1995). Due to the inherent limitations on the number of cases that can be investigated, interpretivist research should be judged on its validity rather than its representativeness (Mitchell, 1983). However, an in-depth analysis in even a single interview can yield deep insights into the distribution of organisational power (Kelle & Laurie, 1995: 23).

5.3.3 Researching careers in organisations: a cultural perspective

Investigating careers in organisations needs to simultaneously take into account the organisational and wider occupational careers of the informants. However, taking account of inter and intra-organisational career development involves moving through boundaries which are not just hierarchical, but also inclusive and functional (Schein, 1971)¹. Thus, in order to extend the understanding gained from the analysis of groups, it is necessary to recognise the importance of culture in the maintenance of organisational practices (Lansley and Riddick, 1991).

Super (1957: 281) proposed a 'thematic-extrapolative' method of investigating careers, which involves the identification of themes in the individual's life history and the exploration of attitudes and behaviour patterns relating to them. Through this process, influences on development can be extrapolated and future patterns predicted. It is also necessary at each stage to specifically examine both the objective and subjective careers, of the informants, as well as establishing the action dimensions of occupational development (see Evetts, 1992). Accordingly, at each stage of the research, an holistic approach has been taken, in which career profiles are examined:

- Objectively - in terms of the physical progression dynamics of men's and women's careers (using a career progression analysis - Chapter 6);
- Subjectively - in terms of the informant's perceptions of their own progression, where no prior assumptions about promotion or progress are made, which allows a cultural insight to be gained (using a career determinant analysis - Chapter 7); and
- Strategically - in terms of the needs, abilities and priorities of the individual and the actions taken to reconcile these needs with the opportunities available (using a career action analysis (Chapters 7 and 8).

In the past, there has been an over-emphasis on objective career data (Schein, 1986; Parsons and Hutt, 1981). Isolation of the objective career leads to analytical difficulties as

¹ Construction sites, for example, form complex inter-organisational arenas, where the interests embedded in different knowledge, hierarchies and levels are rarely contested, and so culture must be addressed at the experiential and behavioural levels to be understood (Clegg, 1990).

companies are not necessarily structured along similar skill and knowledge boundaries. This renders any comparisons between different informants' career positions spurious. Furthermore, salary is a poor measure of seniority, as economic factors, geographical location and the negotiation ability of the individual all affect remunerative levels within organisations (Dainty *et al* 1996; Stewart 1976). Thus, it is necessary to explore subjective careers, take into account life-cycle factors, and assess the interaction of these variables in an holistic manner, if careers are to be understood (see Sonnenfelt and Kotter, 1982).

Also of concern, was that traditional career development theories have based their definitions on male life-cycles, which ignore gender as a salient factor (Ashburner, 1994; Guntz, 1989; Super, 1957; Ginzberg *et al*, 1951). However, where values and behaviour patterns within organisations can be defined as masculine, any understanding of the organisation will benefit from the use of a gender perspective (Alvesson and Billing, 1992). Thus, gender should be viewed as an integral element of both the structure *and* the culture of organisations (Kvande and Rasmussen, 1993), and so this perspective has been adopted for the remainder of this study.

5.3.4 Grounded Theory

Construction management researchers have traditionally ignored the centrality of theory to human activity (Harriss, 1998). In this research, however, there was a need to go beyond simply describing what was happening, to develop an understanding of the organisational and social processes that affected the informants' working lives. Grounded theory (GT), was developed by Glaser and Strauss (1967). It is the development of theory which is systematically derived from social research. It is a qualitative methodology, which attempts to discover regularities through the categorisation of elements, and exploration of their connections (Tesch, 1990). It is particularly suited to the study of local interactions and meanings, as related to the social context in which they actually occur (Pidgeon, 1996), and is considered appropriate when there is no existing theory; where theory is too remote or abstract to give guidance (MacPherson *et al*, 1993); or where the research seeks to develop concepts to explain the reality of what is happening (see Johansen, 1996).

GT differs from most empirical research, as the researcher develops theories to explain his/her own observations, which are grounded in the data collected. Thus, the researcher does not impose or test theory developed externally to the specific setting of the phenomena under investigation, but inductively derives theory from the phenomenon that it represents. They become 'grounded' via a systematic procedure of relating the theory back to the original data. Thus, data collection, analysis, and theory stand in a reciprocal relationship with each other (Strauss and Corbin, 1990). A well constructed GT should be faithful to everyday reality and induced from diverse data (it should *fit* that substantive area); should make sense both to those who are studying and those who are practising in the area (*understanding*); be abstract enough to be applicable to a variety of contexts related to that phenomenon (*generality*); and should provide *control* with regards to action toward the phenomenon (Glaser and Strauss, 1967: 237). It is therefore appropriate as a mechanism for developing change within organisations.

The practical application of Grounded Theory

In using the GT approach, the researcher seeks to move from vague inchoate conclusions towards explicit theories (Glaser and Strauss, 1967). The aim is to develop theories that will ultimately be related to others in a cumulative fashion (Strauss & Corbin 1990). Initially, the literature indicated concepts which led to the development of the propositions stated above. Next, the data were collected through interviews with the informants and though a variety of other data collection techniques (see Fig 5.2). The combination of these two steps provide what is known as comprehension (Morse, 1994). Next, the data were assigned codes, or conceptual labels, which effectively place interpretations on them. These concepts were then linked by statements of relationship, to form theories. Thus, the GT methodology guides the researcher along a path from unstructured data, to the generation of descriptive codes, to conceptual understanding and links and finally to a theoretical interpretation of the phenomena under investigation (Pidgeon and Henwood, 1996).

In fulfilling this aim, a well documented set of procedures was used to ensure that 'theoretical sensitivity' was achieved (see Strauss and Corbin, 1990: 41). This is the ability of the researcher to see what is happening and give it meaning, thereby ensuring

that theories remain faithful to the phenomenon under investigation (Johansen, 1996). The elements of the theories were developed through the process of open coding the data (which effectively places subjective interpretations on informant accounts), linking them by statements of relationship, and reconnecting them by making connections between the coded categories (known as axial coding) (see Pandit, 1996).

A strict coding paradigm ensures systematic analysis of the data. Known as the “paradigm model” (Fig 5.1), it promotes systematic thinking about the data, relating them in complex ways, and ensures density and precision in the theory (Strauss and Corbin, 1990: 99). Paradigm models are complex because four consecutive deductive and inductive analytic tasks were performed in an interactive process: hypothetical relating of sub-categories to a category; verification of those hypotheses against actual data; the continued search for the properties of categories and sub categories; and exploring variations in phenomena by comparing the dimensional locations of instances of data. As such, the analysis involved deductively proposing statements, and inductively testing them within the data. This constant interplay between proposing statements and checking their validity makes the developed theory ‘grounded’ (Strauss and Corbin, 1990: 111). When the categories became ‘saturated’ or fully understood, further propositions and links were generated and tested, refined and then re-tested. As this process continued, the interconnections between the developed categories (the paradigm models) and their generality emerged, and were explored. The final linking of these phenomena represents the GT of women’s careers in the industry.

Antecedents to GT research in construction management

Four significant examples of GT studies in construction management research were identified during the literature review. Johansen (1996) used it to investigate the applicability of different planning techniques on construction projects; MacPherson *et al* (1993) used it to investigate strategic processes in design development; Wroe (1986) used it in a longitudinal study which aimed to identify the problems for small construction companies in introducing management information systems; and Loosemore (1996) used it to explore reactions to crises in construction projects. Reflexive comments from these researchers helped to establish the applicability and practical utility of such methods for

this study. In addition, several texts offered in-depth descriptions of the processes involved, particularly in enhancing theoretical sensitivity (see Bryman and Burgess, 1994; Miles and Huberman, 1994; Strauss and Corbin, 1990; Turner, 1981; Glaser, 1978; Glaser and Strauss, 1967).

The experiences of these researchers showed that the time consuming nature of the analysis and theory development, particularly when dealing with large data sets, meant that they did not always use all of the iterative analytical techniques which the method contains (Bryman and Burgess, 1994). Rather, researchers tend to refer to GT as an indication of the desirability of making theory from data (Bryman, 1988; Richards and Richards, 1994). To overcome this problem, the analytical process was facilitated by the use of computer software, specifically developed for GT analysis (see 5.5.3).

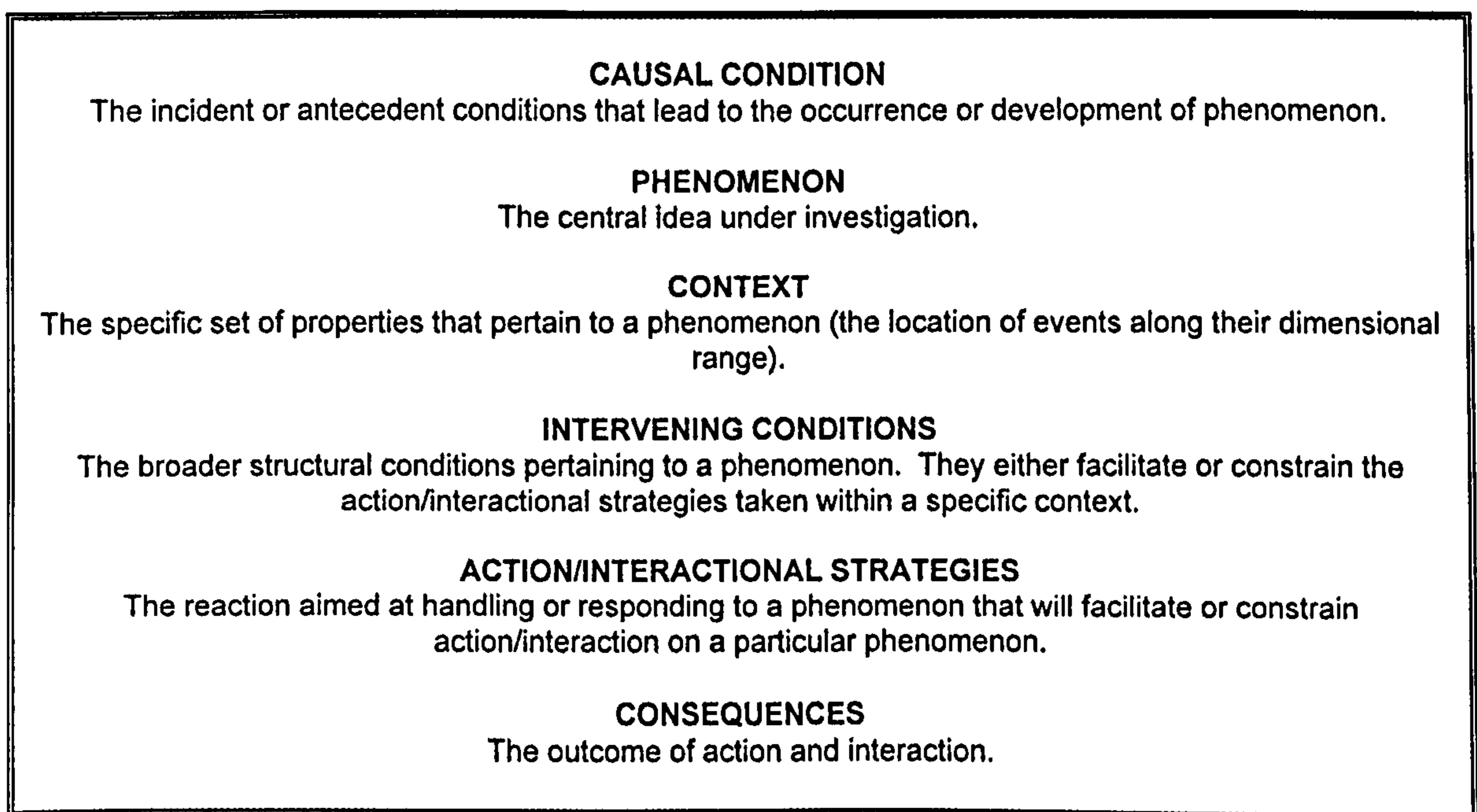


Fig 5.1: The Grounded Theory Paradigm Model (after Strauss and Corbin, 1990: 99).

5.4 Research Design and Data Collection

Having established an epistemological and ontological perspective for the research, a research design was devised which allowed the collection and analysis of data in a manner appropriate to the issues under investigation, which could be completed within the constraints of the project. The main purpose of a research design is that it avoids the

problem of the evidence collected not addressing the questions asked (Yin, 1994: 20). In qualitative research, a workable research design is essential to ensure coherency and rigour during the project (Mason, 1996: 10). Each proposition required a bespoke methodological approach, and so was considered as distinct components of the research design. However, the methods were also designed to complement each other in an integrated manner, in order that an holistic interpretation of the informants' careers could be gained. Table 5.1 summarises where the investigation of each of the five propositions is addressed within the thesis. The research design for each component is discussed in the remainder of this Chapter.

A range of qualitative and quantitative data collection and analysis techniques were combined to develop the final framework of recommendations. The project involved the systematic combination of 13 distinct and yet interrelated data sets. These were: transcribed interview data (see 5.4.2); career maps of position against time constructed by each informant (Appendix C); 'gender related event' diaries (longitudinal data - see 5.4.4); field notes made during ethnographic interviewing; curriculum vitae and other background information collected about each informant (base data); document memos and coding notes taken from the analysis (see 5.5.3); initial and subsequent linked findings from searching the data (5.5.4); information on the operating structure and HR policies of the participating companies; statistical feedback from the respondents and company HR representatives on the recommendations (5.6); information on successful initiatives from bench-marked industries and professions used to enhance the final recommendations (see 9.3.2); survey data from construction companies' EO policies and implementation strategies (9.3.1); a survey of client attitudes towards EO; and data collected in preparation of a set of standardised career development models (see 6.2.1). In total, over one and a half million words of transcribed data were collected, all of which was stored within the chosen analytical software package. The diagrammatic model (Fig 5.2) summarises the stages of data gathering.

	Proposition	Location of Analysis Within Thesis	Summary of analytical techniques used to investigate each proposition
1	Obstacles to women's career progression are more numerous and difficult to overcome than those of men's.	Chapter 6, Appendix B, & Appendix C	A career progression analysis (graphs depicting vertical progression against time developed from informant accounts) is used to establish the comparative progression rates men and women over time. Categorisation of the key career determinants allow their frequency to be established for men and women, and at which career stage they tend to occur.
2	Men's and Women's career progression rates and opportunities are differentially determined by the structure of the industry and its organisations.	Chapter 6, Chapter 7 & Chapter 8	Development patterns emerging from Chapter 6 are explored using in-depth career histories data collected during in-depth ethnographic interviews. The informants were asked to explain the organisational and industrial determinants of their careers from their own frame of reference, and those originating from the structure of the organisations or the industry are extracted from the analysis. Theoretical models of these factors are developed in Chapter 8.
3	Men's and Women's career progression rates and opportunities are differentially determined by the culture of the industry and its organisations.	Chapter 7 & Chapter 8	Issues relating to the culture of the industry and its organisations were extracted from the careers accounts as for proposition 2. They were supplemented by accounts taken from diaries, prepared by a selection of female informants, of their day-to-day experiences which impacted on their careers. Theoretical models of these factors are developed in Chapter 8.
4	The actions of men and women in response to labour market and non-labour market determinants of careers, reproduce gender configurations within construction organisations.	Chapter 7 & Chapter 8	The strategies and actions of individuals in dealing with constraints and opportunities that lie both within and outside of the labour market were extracted from the careers accounts as for propositions 2 and 3, and from the diary data as for proposition 3. The action centred dimension of careers are then incorporated as an integral aspect of the paradigm models during theory development in Chapter 8.
5	Opportunities for women in construction companies can be improved through HR policies which provide a more equitable working environment for women.	Chapter 8 & Chapter 9	Soft HRM initiatives were developed to address each aspect of the grounded theories leading to disparate career progression and retention between men and women. Their potential effectiveness was established through a postal questionnaire survey. The resulting model provides an integrated retention strategy based around the development of an equal opportunities environment.

Table 5.1: Location of where propositions are addressed within the thesis

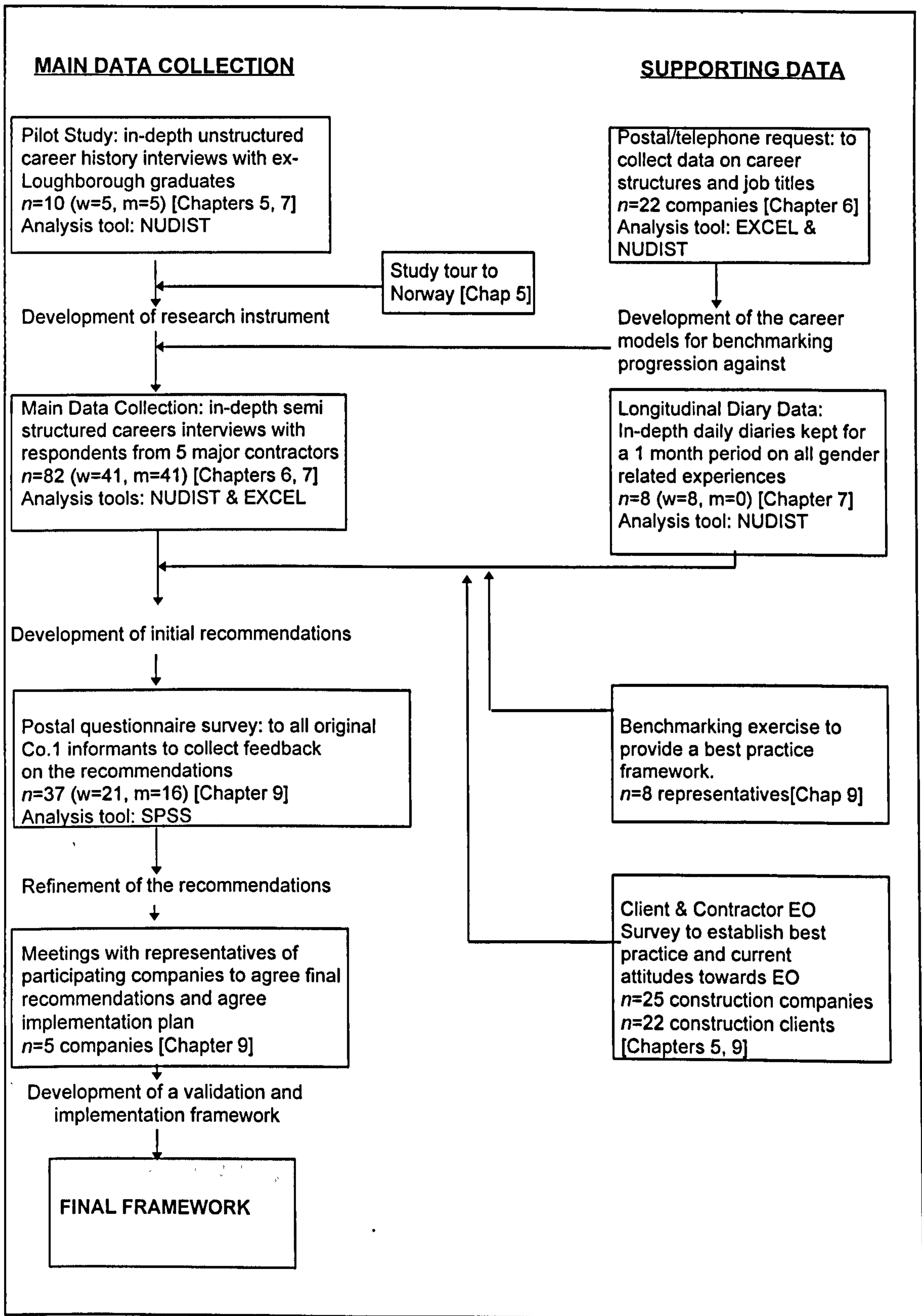


Fig 5.2: Diagrammatic project model: data collection and analysis

5.4.1 Comparative analysis of careers

As was discussed in 1.4, the method of data collection broadly reflects an approach used by Kvande and Rasmussen's (1993). They refined Kanter's (1977) methodology for studying women's careers by interviewing pairs of graduate engineers (one male and one female) who were comparable in a number of key characteristics (age, class of degree and number of years employed by the organisation) in six engineering companies in Norway. Their results gave a wide range of insights into the career development of men and women within the organisations. The matched pairs methodology has also been used successfully, or advocated as an investigative method, in a number of other similar studies. It has been found to be successful for finding the determinants of men's and women's careers, and establishing differences in attitudes and characteristics of women in non-traditional roles (see Hirsh and Jackson, 1993; Toohey and Whittaker, 1993; Robinson & McIlwee, 1989; Bailyn, 1987; Jagacinski, 1987; Newton, 1987).

5.4.2 Interview method

To understand the informant's subjective careers, it was first necessary to understand the way in which they perceived their careers in the context of the other factors that they considered important in their lives (Hall, 1976). This involved gaining an insight into the informant's personal constructs, the way in which they understood the world, and how their career fitted into this picture. Pawson (1996) provided an exemplary discourse on the theoretical implications of interview strategy, and the debate between structured and unstructured approaches. He warns that without steering from the researcher, there is a danger that extracts will be selected from the massive flow of data which will be re-fitted in an unrepresentative framework. However, too much structuring leaves the subject's response entirely defined by the researcher's conceptual system. Hence, semi-structured ethnographic interviews were used, where foreshadowed problems are used to focus the data gathering exercise (Hammersley and Atkinson, 1995; Hakim, 1987: 26).

A loosely structured interview schedule was continually developed and adapted as different findings emerged from the interviews. As such, the questions asked were

specific to each respondent, as they related to their experiences within a broad framework of emerging findings. Questions were not set in a specific order, rather they were structured in a way which developed the conversation (see Burgess, 1984). The length of the interviews was not restricted, with the respondents allowed to talk until the interview reached its natural conclusion, or was terminated because of time restrictions dictated by the informant's work environment. The average interview time was around one hour and 30 minutes, although it was not unusual for the interview to go on for considerably longer. All of the main interviews were carried out in the respondent's natural work environment, but in private such as in offices or site meeting rooms.

By using a semi-structured approach, the informants were encouraged to talk in their own terms, but around subjects defined by the researcher. Where a subject was covered, the researcher noted this without asking the specific question on the check list (see Harvey and MacDonald, 1993: 200). This method is applicable when the subject's knowledge and experiences are meaningful properties of the questions being explored (Mason, 1996: 39). Ethnographic interviews are usually tape recorded to aid analysis, and because note taking involves a degree of interpretation during data collection (Hakim, 1987: 26). Accordingly, a high quality, unobtrusive tape recorder was used with microphones which were attached to the researcher's and interviewee's clothing. Two informants (one man and one woman) declined to be tape recorded, and so additional field notes were taken and written up immediately after the interview. Glaser & Strauss (1967) advised that all field notes and tape recordings be transcribed when using this interview technique in a GT approach. In view of the amount of data to code, a typist was recruited to transcribe the interviews verbatim, and prepare them for coding².

Research instrument

The original interview schedule was developed through a series of pilot interviews which were used to test suitability of the matched pairs methodology and the effectiveness of the career mapping exercise, as well as to collect general data on influences on career progression. Ten interviews were conducted with graduates of Loughborough University

² The analytical technique used involved the categorisation of the textual data within a codification framework. This process is described in 5.5 below.

who graduated two, five, ten and fifteen years previously. Each woman interviewed was asked to select a fellow male graduate from their course whom they felt were a good match in terms of ability and ambition and career outlook on graduation³. One pair was also interviewed from the principal participating organisation to ensure that some organisation-focused data was included in the development of the research instrument. Reasons for women's under-achievement from the literature were then added to these findings to form 'themes' of relevant issues.

Each interview began with a set of direct questions concerning the informant's employment and personal status, as well as their experience and number of previous employers. Next, each informant was asked to sketch a graphical representation of their career, indicating their vertical and lateral mobility, and what they considered to be the principal determinants of their careers. These representations were sketched on graph paper, with the x-axis denoting time, and the y-axis denoting the hierarchical position reached. This was then used as a framework for the remainder of the interview, with the informant being asked to elaborate on particular aspects of their career by the researcher. After the male and female informant of each pair had been interviewed, their career progression graphs were compared, and the key determinants of their careers coded. These gave an overview of key career determining events. Furthermore, by taking averages of the progression dynamics of the informants at each stage, trends in the progression could be identified under various criteria (see 6.3). An example of a career chart is shown in Fig 5.3. The research instrument is shown in Appendix A, and the remainder of the career history graphs in Appendix C.

As new issues emerged from the data, they were noted, and then built into the research instrument to be fed back to future respondents. This approach allowed the findings of the research to be continually tested and validated throughout the data collection phase, and to be developed in a cumulative manner (Kirk and Miller 1986). Validating findings in this way ensures that developing theories stand up to scrutiny during the analysis and prevented problems of over-reliance on certain 'key' informant's data (Glaser and Strauss, 1967).

³ See Bailyn (1987) for the advantages of this procedure.

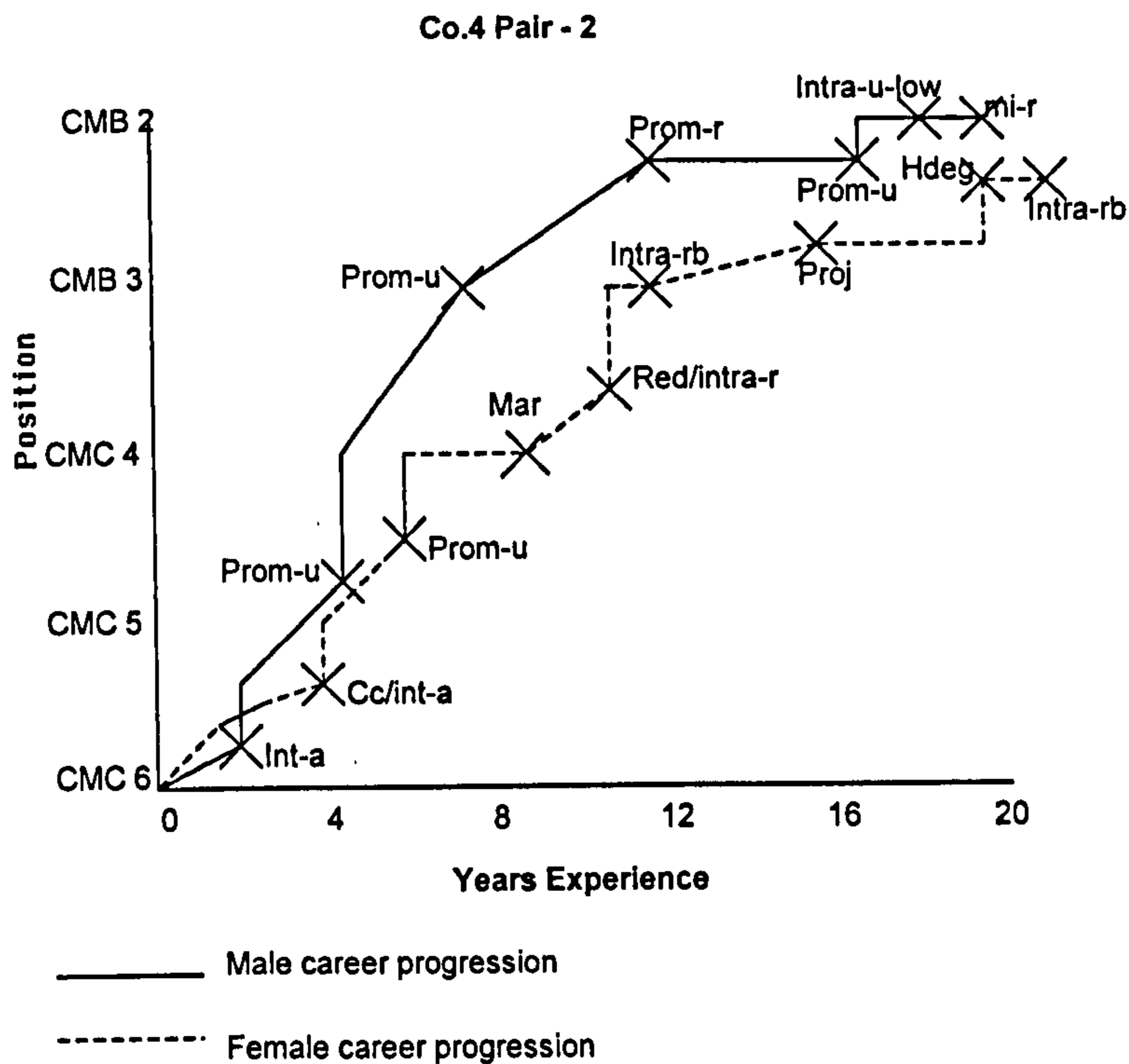


Fig 5.3: Example of a career histories graph showing male and female pairing.

Avoiding sexism or bias during the data collection process is essential (Eichler, 1988). Of particular concern was the potential bias that the researcher's sex (being male) could have on the responses of the female subjects (Padfield and Proctor, 1996). Accordingly, attempts were made to relax the informants and to develop a rapport with informal conversations before the interviews, for example in taking time to look around the subject's project before the interview. The mean interview length for the female informants was significantly longer than for male informants (see Appendix D), which indicates either that the sex of the researcher had little bearing on the amount of data elicited, or that women had more to say on the subject of their careers.

5.4.3 Interview sample selection and research collaboration

The main interview sample was drawn from specific industrial collaborators who agreed to participate in the research. The majority of the informants were drawn from the principal partner to the project, with the remainder being drawn from four other large UK contracting organisations. Large companies were approached to take part in the study as

smaller organisations were unlikely to employ enough women to draw a sample over a stratified range of hierarchical positions. The participating companies differed greatly in terms of organisational and career development structures, operating markets, favoured procurement systems, and organisational cultures, although all were in the top 12 by turnover (Building, 1996c; Table 5.2).

The principal research partner (Co.1) was one of the largest UK contractors by turnover at the time of data collection. Thirty five percent of their sponsored undergraduate students were women, and so it was imperative for them to retain these students after graduation for a period long enough to justify the investment in their training. They agreed to act as full partners to the study, and regular contact was kept with the HR department, and meetings held to develop the research.

Company	Turnover (approx £m)	No. Informants Interviewed	
		Pilot	Main Study
Co.1	1100	2	50
Co.2	900	0	8
Co.3	200	0	10
Co.4	220	0	10
Co.5	700	0	4
Pilot Co.s	50 - 75	8	0
	Total	10	82

Table 5.2: Number of informants interviewed from each company

Co.1 is a major division of the world-wide construction group, a wholly owned subsidiary of a non-construction related organisation. The UK and Eire element of the business employed over 1200 staff, over 900 of which were in managerial and/or professional positions. The company operate throughout the UK through organisationally autonomous divisions employing their own staff, but drawing upon the central resources of the head office. These included a large HRM department, which administered the central personnel, training and development services. A company wide HR policy of staff training, appraisal and development was managed for all of the group companies. The business has diversified in recent years, and the company, through acquisitions and expansion, now offers all forms of contracts and deals with a wide range of project sizes from minor works and refurbishment to major projects.

The data collected from the other companies effectively acted as a control for the Co.1 sample, and ensured the generalizability of the findings, and the wider resonance of any recommendations developed from the data. All of the participating companies were going through a transitional period during the data collection period: Co.1 had recently changed its career structure, with a flatter organisational hierarchy and traditional job titles being replaced by letters to indicate organisational positions; Co.2 had merged with another large company which had involved considerable enlargement, diversification and rationalisation; Co.3 was in the process of being floated by a management buy out team; Co.4 had recently been taken over by large international corporation; and Co.5 had recently been the subject of an attempted take-over by another large organisation. Such changes were indicative of restructuring in the industry which had taken place since the recession. By comparing responses from informants in different companies, the effect of such changes could also be established, both as determinants of progression and retention, and as influences on the structure and sub-cultures of the organisations concerned.

Sampling and case selection

It is inappropriate to discuss 'sampling' in the traditional sense when using GT techniques. Glaser and Strauss (1967) used the term 'theoretical sampling' to represent the process of sampling on the basis of concepts that have proven theoretical relevance to the area of study. Thus, the sample group selected were indicative of categories, to allow them to be conceptually related later on. They represented a broad spread of hierarchical levels, ages and experiences.

Establishing the number of respondents to interview was difficult. Yin (1994) suggested that cases should be included if they have a specific purpose within the enquiry. However, the unique nature of careers would have meant potentially every female construction professional in all of the organisations concerned being interviewed. Glaser and Strauss (1967) offer a practical solution, in that data collection should cease when 'data saturation' takes place, and no new issues emerge from the data. There was a marked reduction in the number of changes that were made to the research instrument after around 70 in-depth interviews had been completed. The remainder of the sample

merely confirmed much of what had already emerged. Thus, it can be assumed that data saturation had been achieved.

Matching of the pairs

The sample was carefully selected from the companies' personnel records with close liaison with representatives from personnel and training departments to ensure a good match for each woman selected, and to ensure a well stratified sample in the control group from the other companies. A hierarchical match between each pair was *not* required as the aim of the research was to establish reasons for any disparity in progression through the informant's careers. Thus, each pair needed to have entered the industry from a comparable starting point. Accordingly, it was agreed with the participating companies that the pairing criteria would be as follows:

- Career path (e.g. quantity surveying, construction management etc.);
- Number of years experience in construction;
- Number of years service to the organisation for which they work; and
- Educational attainment (qualifications).

An initial selection by representatives of the companies involved resulted in three choices of potential male informants to match with each female informant. The final selection was made by the researcher through an examination of the curriculum vitae of those put forward. Geographical location was not considered as an influence in sample selection. Where all of the above criteria were met, the pair of respondents were approached to take part. Three female respondents refused, one being a junior manager in Co.4, and the other two at senior levels from Co.1.

The data collection was carried out over a relatively short period of nine months. This was to ensure that staff were not promoted beyond the level that they occupied during the interview of their matched pair. This also allowed the issues arising from the previous interviews to be kept fresh in the mind of the researcher, so that findings could be cumulatively added to further interviews, thereby validating the findings through the interview process. The diverse locations of the sample group meant that it was impossible

in most cases to interview each pair in order. Accordingly, an initial analysis was carried out during the data gathering period, by reviewing the tape-recording of each interview, along with field notes, and noting any salient issues arising. A separate file was kept on each pair, so that when the other was interviewed, particular issues arising from the previous interview could be included within the instrument for discussion. In this way, issues that were specific to the informants' career stages and personal circumstances were raised and discussed. This ensured the applicability of the research instrument to the sample group⁴.

5.4.4 Methodological concerns with the parallel pairs interviews: the need for further data gathering

Several weaknesses of the matched pairs interviews were identified, which related to a potential over reliance on a single data set. This necessitated the collection of further data to support the study.

Ability and ambition

The ability of the individual is a central variable in any organisational analysis (Barrett, 1992). However, the comparisons of careers failed to consider individual abilities and aspirations of the informants, which could not be accurately assessed from the curriculum vitae supplied by the companies concerned. During personal communication with Professor Rasmussen in 1996, she suggested that an assessment of these two variables could be made by asking each informant to rate their own abilities in relation to their peers'. Accordingly, each informant was asked to assess their ability and ambition in relation to their peers against a five point scale. In addition, the semi-structured approach allowed the in-depth probing of the informant's opinions of their own abilities in relation to the their peers' as part of the interview. These data were combined to make an assessment of the informant's ability and ambition. Whilst neither the ambition or ability rating can be validated as an objective assessment, a subjective measure was considered appropriate considering the personal nature of the majority of the data collected.

⁴ All of the research instruments were broadly based around that shown in Appendix A.

Longitudinal data

The suitability of interviewing as a source of data is an issue of some contention in social sciences literature. Bryman (1992) warned that researchers should be aware of their epistemological shortcomings, particularly because experiences can only be *recounted* in interview situations. Thus, an over-reliance on such data would not have taken account of their disposition at the time of the interview. This was particularly significant considering the economic climate and organisational change that they were experiencing during the data collection period.

To overcome this problem, diaries were used to give first hand accounts of individual's life experiences. They are particularly appropriate for supplementing interview data (Harvey and MacDonald, 1993: 192). Intimate journals were chosen, as they give a deeper understanding of the informants' reactions and opinions of their experiences (Nachmias, 1990). Eight of the original female informants were asked to complete a 'gender related events' diary, a daily account of particular issues that had occurred as a direct or indirect result of their gender. They were asked to define how they spent their working day in their own terms, but to talk principally about interactions with people, and particularly any event which could have had a bearing on the direction of their career. They gave detailed insights into the day-to-day experiences of their work environment, which contextualised some of the issues emerging from the main interviews⁵.

Conformity in career development paths and titles

A final concern was that it was difficult to make cross-company comparisons of positions and career development rates when there was little conformity in job titles or career development paths (Dainty *et al*, 1996). Any comparative analysis of the objective career progression of men and women needed to include reference to their employment outside of their current organisation, where they would almost certainly have had different job titles and career structures.

⁵ Several quotations have been included in chapter 7 from the diary data, and their analysis was included as an integral part of the NUDIST analysis (see 5.5.3). Thus, they have not been presented as a distinct aspect of the analysis, but have been incorporated and used to support the theory development and to ensure the effectiveness of the recommendations in addressing problematic workplace attitudes.

This was addressed through the development of generally applicable career development models (see 6.2.1). These models allowed each construction professional or manager to be placed within a generic eight point scale which spanned all of the companies taking part and allowed an objective comparison of their career progression over time. The informant's own scale on their 'career map' was amended with the 8 point scale at the end of each interview (Dainty *et al*, 1996)⁶.

5.5 Data Analysis

In ethnographic research, the validity of the researcher's interpretation is enhanced by an open acknowledgement of their stand-point with regards to analysis (Mason, 1996: 150). Accordingly, this section explains the analytical processes used to develop theory from the vast amount of relatively unstructured data collected.

5.5.1 Analytical approach

Qualitative data require particular analytical techniques which avoid the problems of researcher bias, data overload or unsubstantiated or erroneous conclusions being drawn (Miles and Huberman, 1994). The GT approach demands an interconnected process of describing what was found; classifying (or coding) it; and connecting the concepts to form explanations of what is occurring in a circular process (see Fig 5.4). This approach is broadly known as codification (Harvey and Macdonald, 1993).

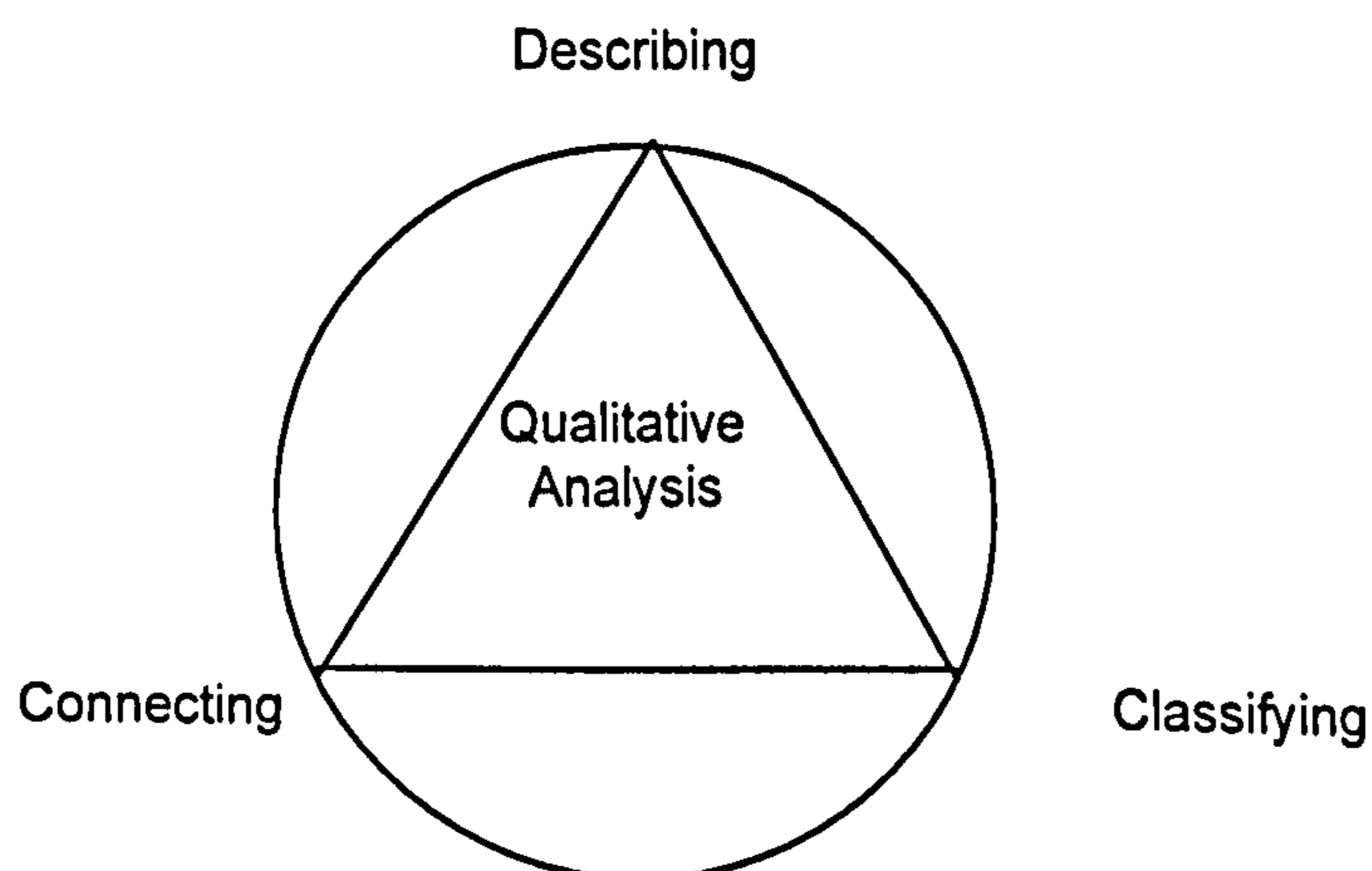


Fig 5.4: Qualitative analysis as a circular process (Dey, 1993: 31)

⁶ The process of developing and validating the career development models is described in-depth in Dainty *et al*, (1996).

Code oriented analyses are particularly suited to data that are predominantly text based; where issues do not appear in an orderly manner in the data; and where the researcher wishes to address the theoretical concerns of the research (Mason, 1996). Accordingly, the data were broken down into chunks, assigned a conceptual label, and then re-joined in new ways. Patterns in the data were explored which represented a reoccurrence of the experiences and attitudes that the subjects had experienced. These pattern codes were inferential, in that they added meaning and explanation to the analysis by grouping the initial codes into emergent themes (see Miles and Huberman, 1994). Table 5.3 summarises these processes in relation to Ritchie and Spencer's (1994) five stages of qualitative analysis.

Ritchie and Spencer's (1994) analytical stages of qualitative data analysis	Location of analytical stage within thesis
Familiarisation: getting immersed in the data to gain an understanding of it	Data collection and transcription, initial coding using NUDIST computer software.
Identification of a thematic framework	Literature review, Chapter 7.1 (Analytical Framework), pilot interviews.
Indexing	Coding using NUDIST computer software.
Charting	Career progression (Chapters 6/Appendix C) and determinants (Chapter 7) analyses.
Mapping and interpretation	GT development (Chapter 8) and development of the recommendations (Chapter 9).

Table 5.3: Location of Ritchie and Spencer's (1994) analytical stages within the thesis.

The main representation of the data is divided between a career progression analysis (Chapter 6) and a career determinant analysis (Chapter 7). The former analyses the informants' career patterns, and the physical dynamics of their career histories. The latter represents the subjective careers of the informants, the way in which they perceived their career in the context of their lives, and how they viewed the constraints and opportunities and managed them (see 5.3.3).

5.5.2 Computer aided analysis

Triangulation, or the mixing of different data sets and analytical techniques in pursuit of the same research aim, increases the probability that the explanations produced will have wider resonance, and will not be limited by the empirical parameters of the study (Mason

1996; Dainty, 1996). However, this also led to an amount of data that was so large, rich and holistic, that it made effective analysis using manual analytical techniques problematic within the available time-frame. The greater the diversity in the type of data collected, the greater the analytical challenges that will emerge (Miles & Huberman, 1994). Some researchers have addressed these issues by applying quantitative analysis techniques to qualitative data, such as content analysis (see Krippendorff, 1980). However, this process is widely accepted as ineffective for exploring most social situations (Prein & Kuckartz, 1995). Computer-aided qualitative analysis, however, offered the potential for increasing sample sizes thereby alleviating the need to trade-off the number of cases investigated with the number of attributes that could be studied (Kelle, 1995; Ragin, 1994). This facilitates the production of confident results (Richards, 1996).

Computer aided methods enhance qualitative research in two ways: by assisting the management of data; and by offering the facility to code and retrieve all data on a particular topic (see Weitzman & Miles, 1995; Kelle, 1995). They free the researcher of mundane organisational and mechanical tasks, and allow more time for interpretative work (Tesch, 1989; Agar 1993; Weaver and Atkinson 1994). A counter argument, however, is that computers can also restrict the diversity of approaches available to qualitative researchers (Dainty *et al*, 1997; Weaver and Atkinson; 1994; Fielding and Lee, 1991). Thus, arbitrarily selecting a software package may force the researcher down a particular analytical route not best suited to the data collected, or lead to an over-reliance on computer aided analysis, which can never replace the intuitive decisions that have to be made by the researcher (Fielding, 1993). Hence, a package was required which was specifically developed for GT analysis, and so matched the needs of the study as opposed to having to fit the analysis into the limitations of the chosen package.

5.5.3 Non-numerical Unstructured Data Indexing, Searching and Theorising (NUDIST)

The decision to use NUDIST⁷ was primarily taken because it was specifically designed for GT techniques (Bryman and Burgess, 1994: 220; Richards and Richards, 1994), and because it allowed the combination of the different data sets, including the facility to include references to data unsuitable for inputting into a computer (QSR, 1996). NUDIST is a 'conceptual network builder', in that it aids the researcher in formulating and representing conceptual schemes through networks of nodes and links (QSR, 1997; Weitzman and Miles, 1995). It incorporates 18 searching operators for investigating links between conceptual labels in the system. The package allowed memos to be created for each document and conceptual labels to be developed. These could in turn be indexed, searched and built back into the system. This is one of several ways in which NUDIST facilitates 'system closure', an essential aspect of GT research where results of searches and analyses are fed back into the analysis rather than being taken out of the system. As such, findings are built up cumulatively, leading to the linking of findings, and the eventual development of explanations which reflect the complex nature of social phenomena. NUDIST's ability to handle off-line data allowed the simultaneous analysis of non-textual data. This was used for incorporating CVs, organisational charts and career history graphs into the analysis.

5.5.4 Using NUDIST to analyse subjective data

As the project develops, NUDIST provides a wider range of tools which can be applied to analyse the data including: code and retrieval; theory development and exploration; text searching and content analysis; and the incorporation of non-textual data into the analysis. These tools are organised within two distinct but interrelated sub-systems: the document system - which contains the actual document being analysed and information about it in the form of memos, which is left intact for the duration of the analysis to allow the original transcripts to be referred to; and the index system, which contains the coded conceptual categories created by the researcher which develop as the data are analysed. This

⁷ NUDIST version 3.0 was used, the latest at the time that the data analysis was carried out.

hierarchical 'tree' structure graphically represents the developing findings and concepts emerging from the data.

Coding using NUDIST

NUDIST facilitates the attachment of codes to sections of data and their retrieval and display (Weitzman and Miles, 1995: 17). However, it also allows connections between the codes to be found, to formulate propositions that imply conceptual structures fitting the data, and to test these propositions to see if they applied to the wider data set. Analysis using NUDIST began with the creation of a bespoke 'index system', a hierarchical 'tree' of issues, where each node contained the coded text assigned by the researcher, and references to non-textual data which are stored outside of the system. Breaking down complex issues into a hierarchical format reduces them into manageable elements at lower levels, thereby facilitating their analysis (see Muya *et al*, 1997). Fig 5.5 shows the NUDIST user interface.

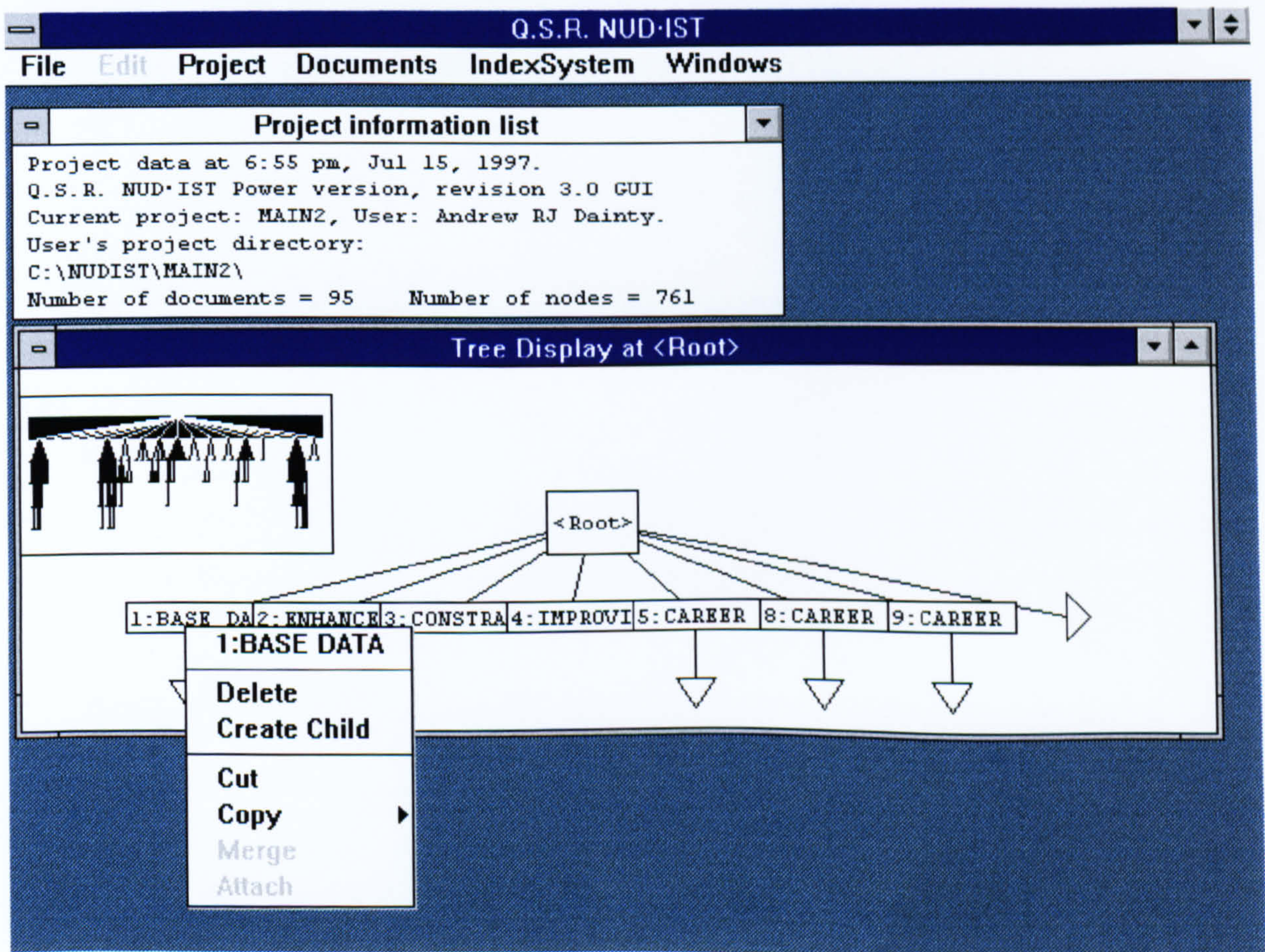


Fig 5.5: Typical screen shot showing NUDIST's Index System.

The nodes formed the storage areas for the conceptually labelled issues emerging from the data to be placed in order. They were subdivided through the hierarchy from general (first order) to specific (lower order) variables. Around half of these nodes were created during the analysis to feed ideas back into the analysis and relate them to other categories, the remainder being created to store emerging themes during the coding process. Each node was given a code known as the 'node address', according to its position within the analytical hierarchy. Sub-issues (known as 'children') were given a numerical node address beginning with their 'parent's' first order address, followed by their corresponding address. Another number was added to each row in the hierarchy. An example of a section of the tree structure is shown in Fig 5.6, with the node addresses shown in brackets.

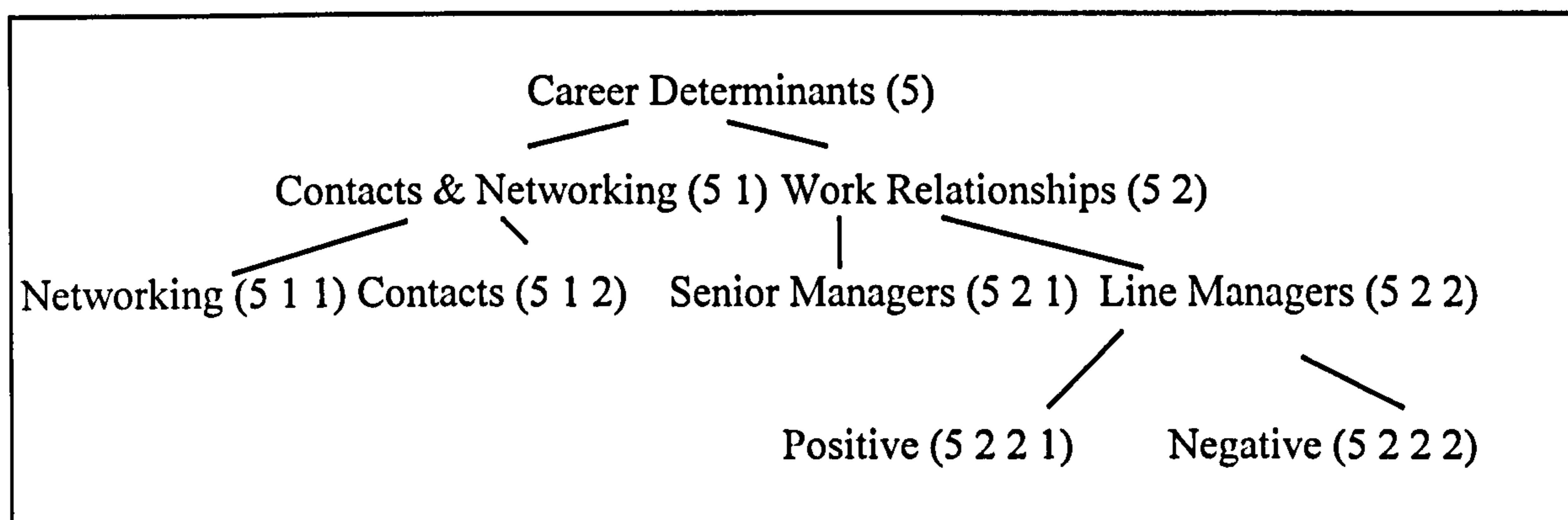


Fig 5.6: Example section of NUDIST analytical tree network and node addresses.

The index system is completely flexible and can be manipulated by cutting, pasting, deleting and merging nodes (and the data that they contain) together. Fig 5.5 shows a section of the 'index system'. The pull down menu (base data) shows the options for manipulating the tree within the index system, which can be adjusted as the issues emerging from the data begin to define the shape of the project. The top left of the screen shows the current project status, showing the number of nodes in the system (conceptual storage areas for coded data). The top left of the tree diagram shows an overview of the entire index system.

Before creating the initial coding framework, a general model of all of the factors affecting career development was developed from general inferences within the data and the literature. This typology was used as a starting point from which to build the initial index system in NUDIST, although it changed considerably over the duration of the coding and

analysis process. The first order nodes (the conceptual labels at the top of the index system) and children (sub-issue nodes) are listed in Appendix E.

More than one code can be applied to each piece of text, and codes may overlap each other. In Fig 5.7 a document (Female 10) is being coded. The highlighted text is a selection that had been chosen to be coded⁸. The researcher is then asked for a node under which to code the text within the index system. If no suitable conceptual label exists then a new one can be created and added to the system. No matter how many different codes are assigned to each document, the original text can be returned to at any time within the document system.

Researchers working with GT methods use the nodes for emerging ideas during the coding process (QSR, 1996: 84). By storing ideas that appear not to fit within the emerging analysis on the edge of the index system, and only incorporating them as connections are indicated in the data, the index system can be developed as more data is inputted into the package. As such, the coding process is part of the analysis, as the interpretations put on emerging issues by the researcher, and the placing of these concepts within the index system, represent a conceptualisation and re-working of the emerging findings of the study.

Although the collection of the data was not made in pairs order, the data were coded in pairs so that responses could be compared under each issue. Accordingly, the coding process effectively became an interactive process of determinant identification and comparison across the case (pair of informants). The diary data was coded into the index system in an identical manner, allowing its analysis to be carried out simultaneously. The coding and subsequent manipulation of the index system resulted in around 300 defined issue nodes which contained the data pertaining to particular issues and career influences.⁹

⁸ Note: this is termed indexing in NUDIST - note the 'Add indexing' bar highlighted on the top right of the screen shot in figure 5.7.

⁹ Figure 5.7 shows 761 nodes, this is because this figure includes the base data. These were the nodes containing the fixed variables against which qualitative cross tabulations were made to look for commonality of responses between different groups, such as the sex, age marital status and employer of the informants. It also includes searching results which were kept within the system for further cross referencing with other coded categories.

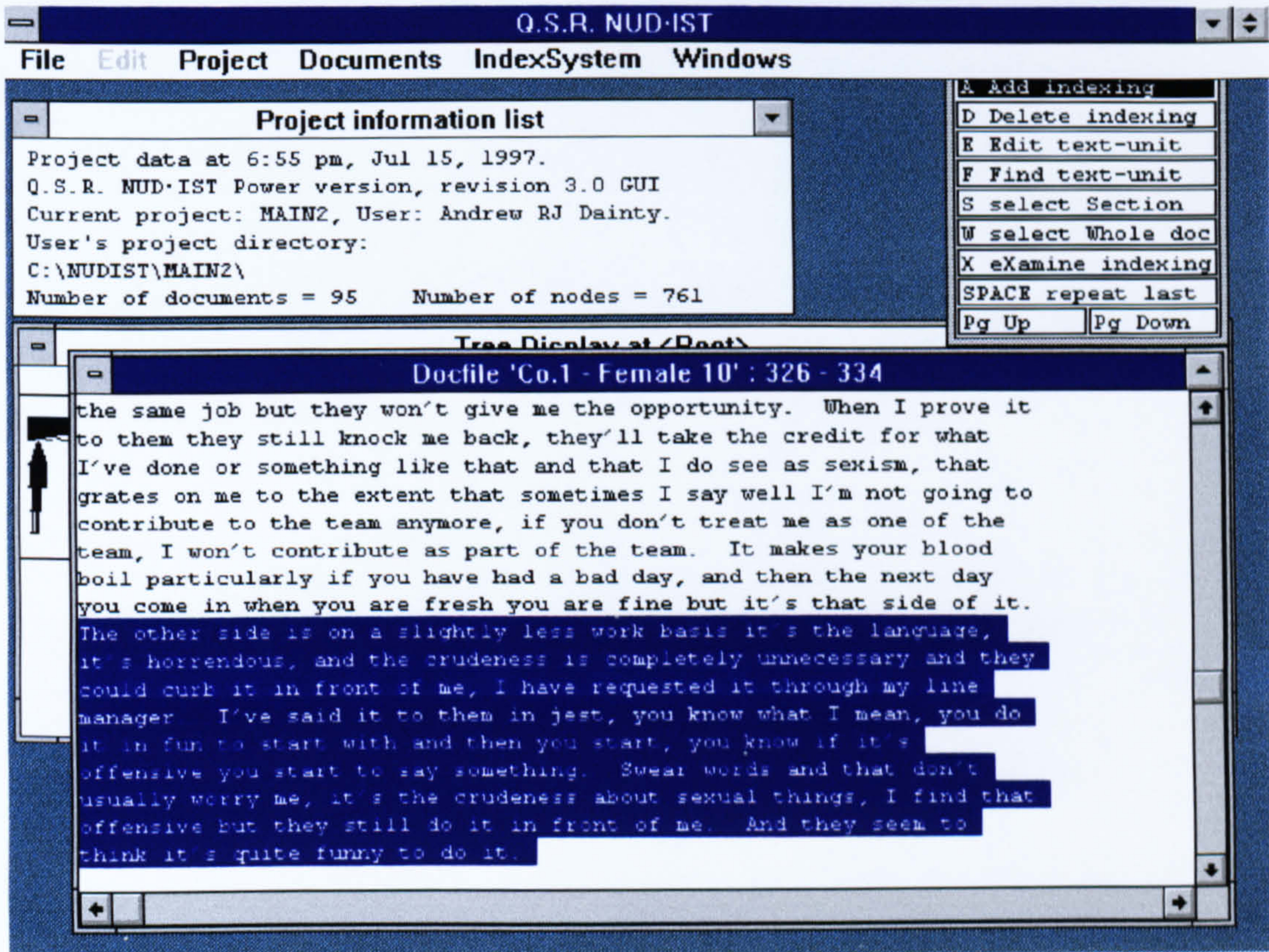


Fig 5.7: Screen shot showing coding process in NUDIST

Memoing and data linking

As theories emerged from the data they were recorded so that they could be subsequently analysed, validated and grounded within the data. NUDIST allowed memos to be attached to the data and to the nodes within the index system, and for them to be operationally linked with the data. Thus, the researcher could move around the ideas derived from the text without having to laboriously go through all of the text to find the memos. This allowed ideas to be continually built upon within the index system.

Search and retrieval

Searching and testing the data is done in two ways: firstly, through text searches using either simple 'string-searches' or sophisticated 'pattern-searches' which look for text matches of patterns of characters; and secondly through 'index system searches', where links between the conceptual labels created in the index system are investigated by the use of Boolean (and, or, not) and other more complex search operators. NUDIST facilitated the exploration of overlaps and text contained within codes, and produced a report of where it found the text and logs of all the searches made for future reference.

Figure 5.8 shows a report after a 'Boolean' intersect (AND) operator was used. In this case NUDIST was asked for the data where a woman had discussed exclusion in the workplace (Women AND Exclusion). NUDIST found 218 text units (lines of data) in 10% of the documents coded which were coded under 'women' and 'exclusion'. All together 0.24% of the total text from women was on exclusion in the workplace. However, the power of the package is not in these limited statistics, but in the way in which only the required data is retrieved from the index system.

Conceptual theory development

Hypothesis testing was carried out using complex searches, or alternatively true/false variables (such as presence or absence of a code). By continually feeding the findings of these searches back into the system, initial findings were systematically verified (or grounded) within the data. The findings were then developed as nodes of their own using NUDIST's 'system closure' capabilities. Such searching in NUDIST is unrestricted, except by the number of nodes that the researcher creates. NUDIST also allowed the construction of qualitative cross-tabulations, where two sets of variables can be automatically cross matched to explore issues for particular groups (for example different age groups against a range of responses). The creation of various sub-trees within the system allowed such findings to be searched independently of the rest of the data. Those yielding limited results were removed from the analysis by simply deleting their index branches. This process promotes rigour and depth of analysis of the interactional content of the data, as opposed to simply describing what was said by informants (Tesch, 1990).

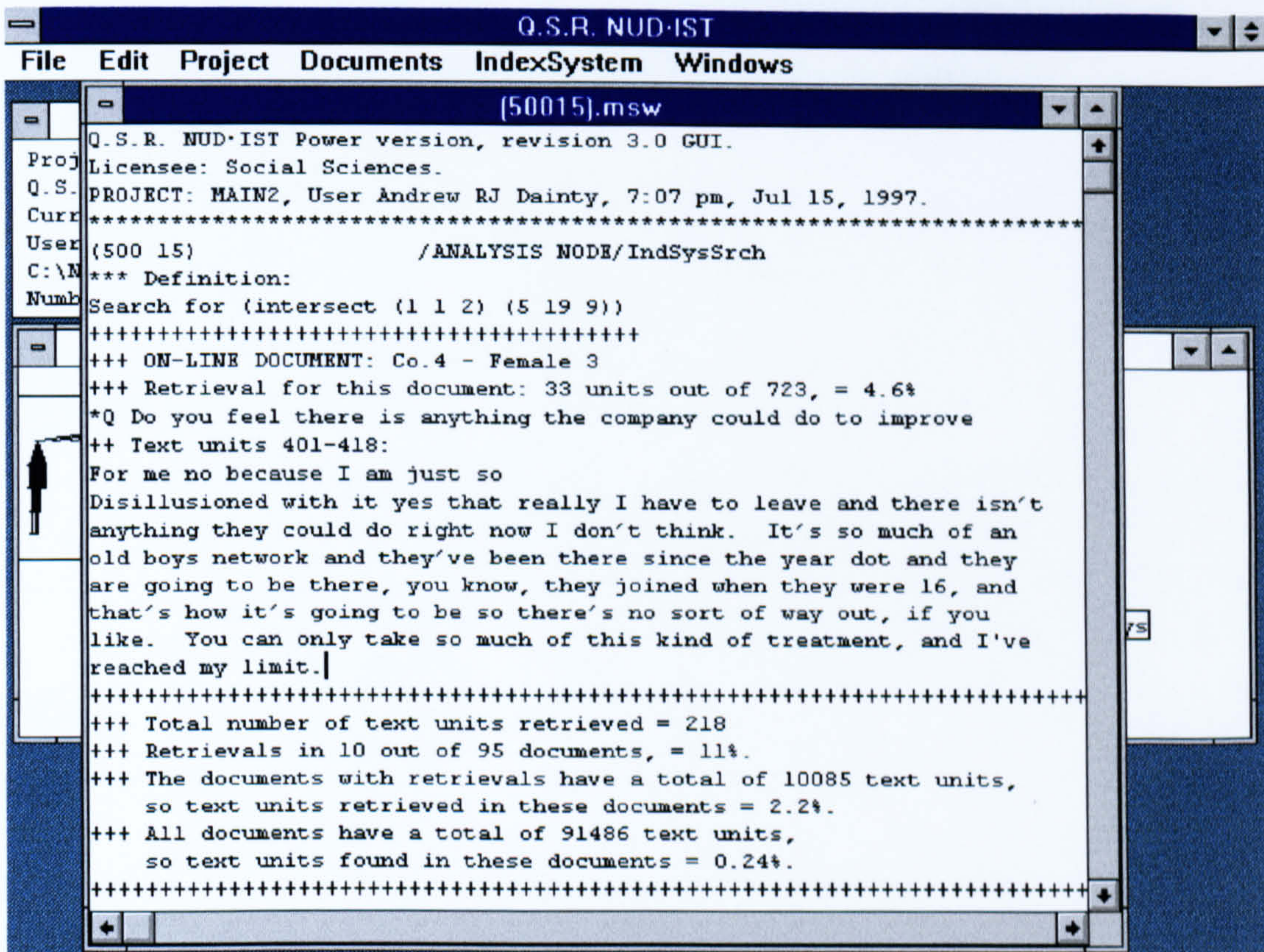


Fig 5.8: Example of a search report in NUDIST

Cumulative theory building technique

Throughout the axial coding process, career determinants were extracted from career accounts, and inserted into the analytical model (see Fig 7.1). From these data, representative quotes were selected, and grouped according to the sub-issue to which they related. Axial coding was further refined by grouping particular sets of responses on a single issue into matrices and other data representation methods (see 5.7). As findings were built up within the different categories, they were then cross-referenced with other findings from the different parts of the analytical model, a process facilitated by NUDIST's index system search (ISS) capabilities. As such, no issue was explored in isolation from the others, rather they were cumulatively combined to develop explanations for the emerging phenomena. To ensure validity, each major theoretical explanation was then related back to several pairs of informants. Anomalies were highlighted, recorded in the form of document memos and attached to the transcripts within NUDIST. Thus, a comprehensive insight into the experiences of the informants, and their personal interaction with the determinants under each category within the model was developed.

The relationship between the emerging career determinants and their effect on career dynamics was established by relating the occurrence of particular variables to the career progression analysis (Chapter 6). NUDIST allowed the qualitative cross-tabulation of particular attitudes of any particular group to be assessed under any issue. This allowed salient issues arising under each of the analytical categories in the framework to be summarised for each career group, and even for individual informants. Cases which appeared to contradict general trends found during the analysis were extracted, along with any relevant antecedent data, and used to build explanatory frameworks of the mediating factors that could potentially avert or promote particular career determining variables. As well as providing insights into the strategic dimensions of informant careers, these also contributed to the final package of recommendations (Chapter 9).

Classification of career history data

Informants from different career stages were likely to offer accounts from different perspectives. Although classical career models can be seen to be inadequate in the context of modern theories (see 2.1.2), a classification was required which grouped careers accounts according to career and life-cycle stages. This was to facilitate the presentation of the data by allowing summaries of responses, and general trends in the career influences of informants from different life-cycle stages to be shown. As such, they provide a convenient way of classifying the data *following* their analyses.

A classification of career stages was adapted from Greenhaus and Callanan's (1994: 102) view of career development. They developed an exploratory model based on Levinson's (1986) four stages of life development. Their model was selected as it allowed for a degree of variance in career patterns between subjects. This was necessary because of the diverse educational, personal and professional backgrounds of the informants. Greenhaus and Callanan's categories equate closely with Armstrong's (1993) career model of expanding, establishing and maturing career stages. A combination of these models was used as a basis for the analysis of the issues within the framework, for which every issue was compared across a range of different age categories, as well as experience groups and gender. Thus, to reflect the relationship between the individual's life-cycle stage and their career stage, the

analytical model effectively represents a chronological ordering of the emerging concepts as shown in Table 5.4. However, the exact positioning of the informants within this framework was dependent upon the informant's own self-assessment of their career stage.

Career stage	Experience	Typical age range in the context of the career histories group
Expanding	0 - 5 years	21 - 26
Establishing	6 - 15 years	27 - 36
Maturing	16 + years	36 +

Table 5.4: Career stage classification system
(Adapted from Armstrong, 1993; and Greenhaus and Callanhan, 1994).

This demarcation allowed a distinction to be made between informants with varying levels of experience, and divided the informants appropriately considering their age and experience profile. This categorisation is referred to throughout the remainder of the analysis.

5.5.5 Analysis of the career progression data

Taking timing and direction of career movement as the two principal components when plotting careers graphically, it is possible to represent the shape of a career (Van Maanen, 1977). This grade-experience profile is known as a career progression diagram (Bennison and Casson, 1984; Bramham, 1988; see Figure 5.3 and Appendix C). The informant's objective career patterns were measured against the career development models, which allowed a comparison of career progression against time for a variety of different career paths (see 5.4.4; 6.2.1). These graphical representations allowed informants from different organisations and in some cases different career paths to be compared so that average career progression rates could be measured. Each informant indicated their position on the overall eight grade hierarchy in comparison to the benchmark career path of construction management.

Although this approach presented career progression data in a precise and stimulating way, trying to gauge an individual's hierarchical position is problematic. This is because if seniority is measured by an employee's position on the organisation chart, the researcher is implicitly assuming an organisational model which equates seniority with wide-ranging responsibility (Guntz, 1989: 22). This definition may not apply to some

organisations, particularly when a person is involved with a specialist function which is on the periphery of the organisational structure. Accordingly, the career progression diagrams were not used in isolation from the qualitative determinants analysis, but were used to gain an overview of any periods of differential progression between the pairs. References to the qualitative explanations of the informants dynamics were made on the graphs, by the addition of a coded determinant at each significant career stage (see Table B-1 in Appendix B for the list of codes).

All of the informants' positions through each year of their careers were entered into a spreadsheet which allowed average progression rates to be established for different groups (sex, employer, career path etc.), and the standard deviations and dynamics patterns to be explored. This gave an indication of each individual's progression against the norm for their particular group. Thus, by plotting the informant's current positions against time, it was possible to establish which informants were high and low achievers in comparison with the rest of the sample. Although the ordinal scale of career progression meant that progression trend lines could not be generated through linear regression, this process did allow simple visual trends in their progression to be established. An example of a scatter graph showing progression against experience with a number of informant pairs highlighted is shown in Fig 5.9.

Developing an overview of the key defining issues in the career development of the informants, and at what stages these issues typically tended to take effect, allowed the developed initiatives to be targeted at the stages most likely to bring beneficial change for women's careers. Hence, the major career determinants were categorised and grouped under a generic descriptor, and then compared with the rest of the informants to see in which career stage they had a positive or negative effect on career progression or retention (see 6.5.1)¹⁰. By plotting these determinants graphically, an overview of the key issues for men and women was developed for in-depth exploration during the NUDIST analysis.

¹⁰ An overview of the key determinants of the informants careers summarised from the career histories graphs (Appendix C) is provided in Appendix B.

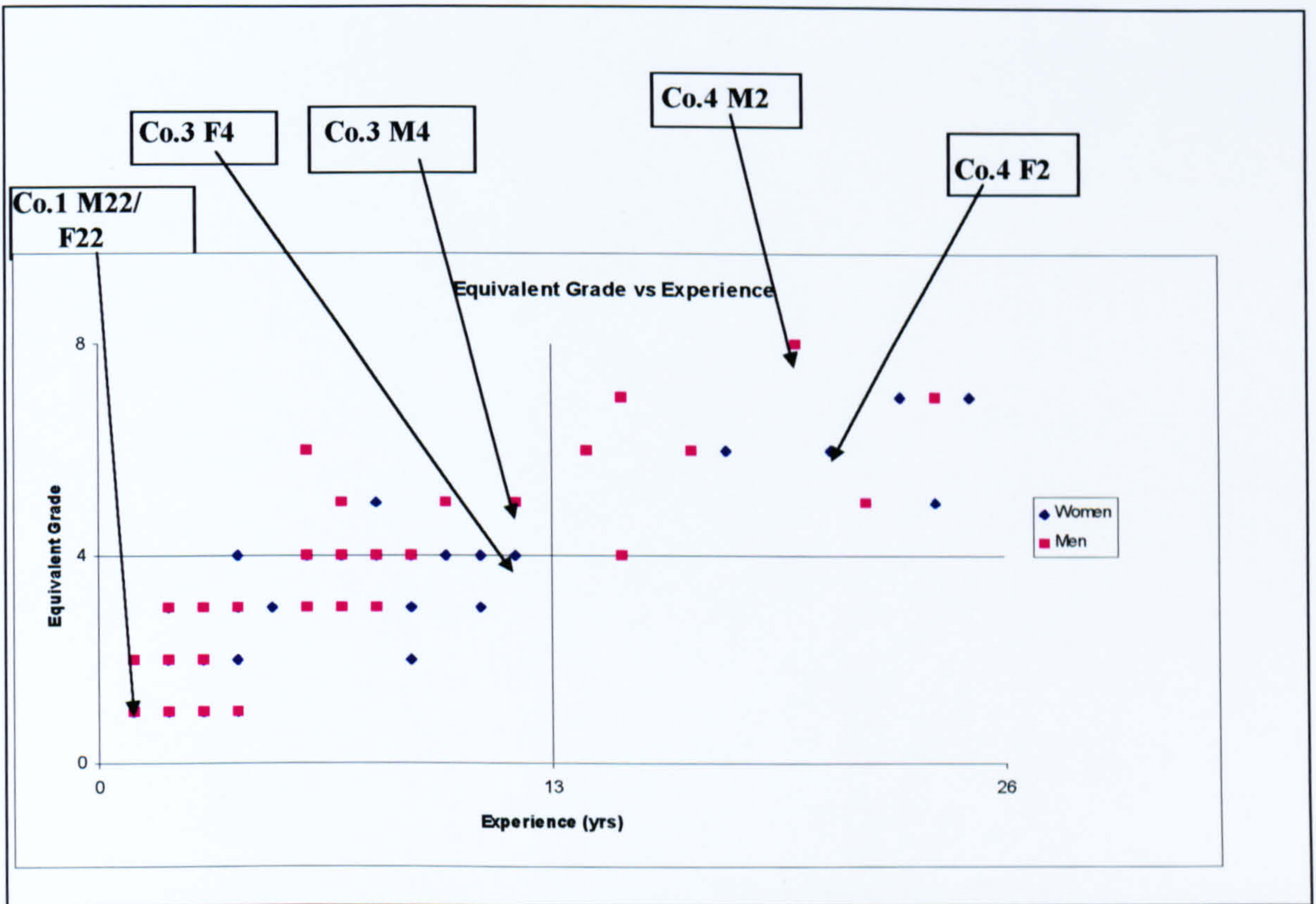


Fig 5.9: Example of a scatter graph showing positions of a selection of pairs at different career stages.

5.6 Quantitative Data Collection and Analysis

A limited amount of quantitative data was collected as part of the study for collecting feedback on the recommendations put forward as a result of the qualitative analysis. An ordinal five point Likert scale was used to collect the respondents' opinions on the recommendations (see Likert, 1932). This type of survey promotes uni-dimensionality, in that all of the items measure the same thing on a simple scale of 1 to 5 (Oppenheim, 1992: 195). They are particularly effective for a rough ordering of people with regards to a particular attitude, as opposed to being able to make assertions on the equality of underlying attitudinal differences (Oppenheim, 1992: 200).

The limitations of postal questionnaires were carefully considered when it was decided in which way the data should be collected (see Moser & Kalton, 1977: 260). The questionnaire was kept to a minimum length, with additional explanatory sheets to use

only if the subject felt they required them¹¹. The informants were given space to add their own ideas on implementation or improvement of the guide-lines. The questions did not require spontaneous answers, and were likely to elicit a high return rate because they were being sent to the original informants (see Belson, 1981: 389). Because the survey was only intended to measure the potential effectiveness of recommendations against the other recommendations put forward, validity and reliability were assured.

The findings of the questionnaire were analysed using the Statistical Package for the Social Sciences (SPSS) to run a range of simple descriptive non-parametric tests on the responses. This established which of recommendations were likely to be the most effective in retaining the informants to the companies taking part, and any significant differences in men's and women's opinions. These data were used to develop recommendations which were acceptable to both men and women (Chapter 9).

5.7 Data Reduction and Representation

For both the career progression and career determinant analyses, a major problem existed in representing the data in such a way that made it intelligible to a third party, and at the same time did not lose the deep insights which qualitative research promotes (see Simister, 1994, 1993; Miles and Huberman, 1994). GT methods in particular produce findings which are very difficult to condense (Sims, 1987: 107). To overcome this problem, descriptive excerpts from the interviews were used to convey the deep insights gained (Hakim, 1987: 34). Furthermore, charts were used to speed up the contextualisation of the large sections of text from which they are derived (Mason, 1994: 99). Miles and Huberman (1994) suggested that the preparation of such representational tools is part of an iterative cyclical process where the researcher shuttles between data collection, reduction, display and conclusion drawing/verification. NUDIST facilitated this through its 'vector' and 'matrix' searching operators, where qualitative cross-tabulations of issues could be constructed, and then transformed into matrix formats to summarise general trends for different informant groupings.

¹¹ The postal questionnaire together with supplementary information sent to the informants is shown in Appendix F.

5.8 Preparatory Work

Some preparatory work was carried out at the outset of the project which has not been included in the main body of the analysis. However, this research contributed to the overall findings and interpretations made during the research, and so is discussed below.

5.8.1 Collection of vertical segregation data

An original objective of the research was to collect vertical representation data from large construction companies in order that the extent of women's under-achievement could be statistically verified. However, the response to a pilot study (a stratified random sample of 50 of the largest 500 contractors by turnover) was very poor, and subsequent work in establishing how the response rate could be increased, indicated that the survey was unlikely to elicit the required data. Detailed discussions with representatives from contractors' personnel departments and some of the non-responding companies indicated that such a survey would be unlikely to elicit a large enough response, because of the detail of the data required and the difficulty in establishing the number of men and women working in fragmented divisions. Accordingly, an assessment of women's progression was made by establishing their positions in the participating organisations. Whilst this is not representative of the entire industry, these companies represented five of the largest 12 contractors by turnover, and so women's representation within these companies can be seen as broadly representative of those working for the larger companies.

5.8.2 Study trip to Norway

As was discussed in 5.4.1, the study on which the methodology for this research was modelled was carried out in Norway by Kvande and Rasmussen (1993). Accordingly, meetings were arranged with the Norwegian academics so that the methodology could be refined to ensure maximum benefit from the data collection and analysis process. Professor Rasmussen and her colleagues detailed several aspects of their research which had important implications for the research design:

- Lateral internal career mobility by experienced informants makes it difficult to track progression accurately. Thus, the focus of the study should be on the subjective career;
- The extent to which women must fit into male models of career development emerged as highly significant from their study, and so should be thoroughly examined;
- It is important to establish who the respondents benchmark their own careers against, and who they treat as role models within their organisation. This will contribute towards an assessment of their ambition;
- Those interviewed are the women who had developed successful careers or found appropriate coping strategies to stay working in such a male environment. Thus, particular attention should be given to the accounts of women that have worked for several companies, or that have changed career path because of their experiences in the industry, as these women may have not coped well in the past;
- In the Norwegian study, ability was assumed to be roughly equal for all of the respondents because very high academic standards are required by universities. Clearly, this assumption cannot be made when applying this methodology to the UK construction industry, where the informants are more likely to come from a wider range of academic and social backgrounds. Thus, care must be taken to carefully match the informants in terms of their academic achievements.

5.9 Summary

By focusing on addressing the research propositions which were derived from the aims and objectives of the study, a methodology has been developed which allows an in-depth understanding to be gained of both the physical progression characteristics of the informant's careers (the objective career), and individual perspectives on this progression (the subjective career). This allows an insight to be gained into how career development affects the retention of construction professionals, and allows the exploration of the structural, cultural and action centred determinants of careers. Moreover, the research design facilitates the effective comparison of men's and women's careers, between subjects from similar academic and contextual backgrounds when entering the industry. This

addresses the first proposition, which seeks to identify the differential nature of barriers confronting men and women developing careers in the industry.

Attempts to provide objective accounts of social reality cannot be achieved using only rationalist methodologies, as they do not take into account the complex nature of organisational behaviour. The need to gain an insight into the interrelated dimensions of structure, culture and action necessitated the use of a qualitative methodology. Accordingly, an established procedure was selected which has been used successfully to explore women's careers in engineering. It has been enhanced by the addition of the analysis of the objective career, by breaking down the methodology into two distinct but interrelated parts. The initial progression analysis offers a simplified impression of the progression of the informants, which allows the existence of any disparity in vertical career patterns between men and women to be established. The determinant analysis, along with the addition of longitudinal data, and several other data sets, then enriches the progression analysis, to provide meaning and an understanding of the behaviour that leads to the progression dynamics identified. By comparing men's and women's careers across a variety of different organisations, the effect of different organisational structures and cultures can also be assessed as to their effect in career development patterns. Furthermore, the actions of individuals in addressing constraints on their careers can also be identified, along with their interaction with internal and external labour market career influences. This addresses the second, third and fourth propositions, and promotes the development of a comprehensive theory of women's career progression in construction organisations.

The GT approach allows relevant issues to emerge freely from the data, the developing theories being grounded in the empirical data collected. Thus, recommendations have been developed in *direct* response to the issues emerging from the study. These have been supported by quantitative feedback on the potential effectiveness of the recommendations, from which they have been adjusted to incorporate informant opinion on their likely effectiveness. This approach addresses the fifth proposition, in that appropriate HRM policies can be developed to mitigate the factors emerging as having caused women's career under-achievement and high occupational mobility.

The remaining five chapters present the findings, analysis, discussion, recommendations and conclusions of the research. The combination of a career progression analysis (Chapter 6) and career determinant analysis (Chapter 7) provide an examination of both the objective and subjective careers of the informants. By exploring the interrelationships between the findings via an appropriate analytical framework, the subsequent GT development (Chapter 8) distils the findings, and ensures that they address the research propositions. Soft HRM solutions to address the issues leading to women's career under achievement are then developed (Chapter 9). Finally, the research is concluded and issues warranting further investigation are discussed (Chapter 10).

CHAPTER 6: CAREER PROGRESSION ANALYSIS

This chapter explores the informant's career progression dynamics within the formal structures of their organisations. Known as a progression analysis, this preliminary investigation of the informants' careers presents an overview of the physical trends in their dynamics. It establishes any disparity between men's and women's vertical progression, and highlights potential causal variables which define these trends. These incorporate a range of personal and work related contextual factors, and include those imposed by the subjects, and well as those defined by the their employers. This highlights areas which warrant in-depth exploration within the qualitative data (Chapter 7).

6.1 Interview Sample and Respondents

Ethnographic research relies upon a suitable sample of participants from which to elicit data to explain the phenomena under investigation. This section explores the nature and compatibility of the sample of paired informants, who were chosen to be broadly representative of a wide spread of professionals across the organisations.

6.1.1 Pairing procedure

The effectiveness of the methodology was dependent upon selecting respondents who formed good matches to their opposite sex pairings. As was discussed in the 5.4.3, the main interview sample was selected from the principal research partner (Co.1), with a smaller control sample taken from four other large companies. Every professional female employee within Co.1 was approached, along with a random stratified sample from the other companies. Although information from application forms and CVs held by the companies facilitated the matching process, in many cases it was not possible to assess the exact compatibility of the pair until the interview had taken place. Accordingly, a post-hoc analysis of the sample was carried out to establish the quality of the matching of the pairs and any trends in their career dynamics. This examined the quality of match for each pair

under the original pairing criteria (career path, educational attainment, years service to their present employer and years experience).

6.1.2 Profile of the interview sample

For the purpose of representation, the respondent group has been treated as a single data set delineated by sex, except where there was cause to examine differences between employees from different organisations, career stages or designations, in which case this is indicated on the graphs and charts.

Age

Most of the women had entered the industry relatively recently, which was reflected in their low mean age of 28 years, and median age of 29 years. Informants aged under 28 years accounted for around 50% of the sample. An exception was Co.3, whose female age profile was higher than for the other companies. In all cases, good age matches were made between the male and female pairs, with almost all being born within one calendar year of each other. The age profile of the sample is shown in Figure 6.1.

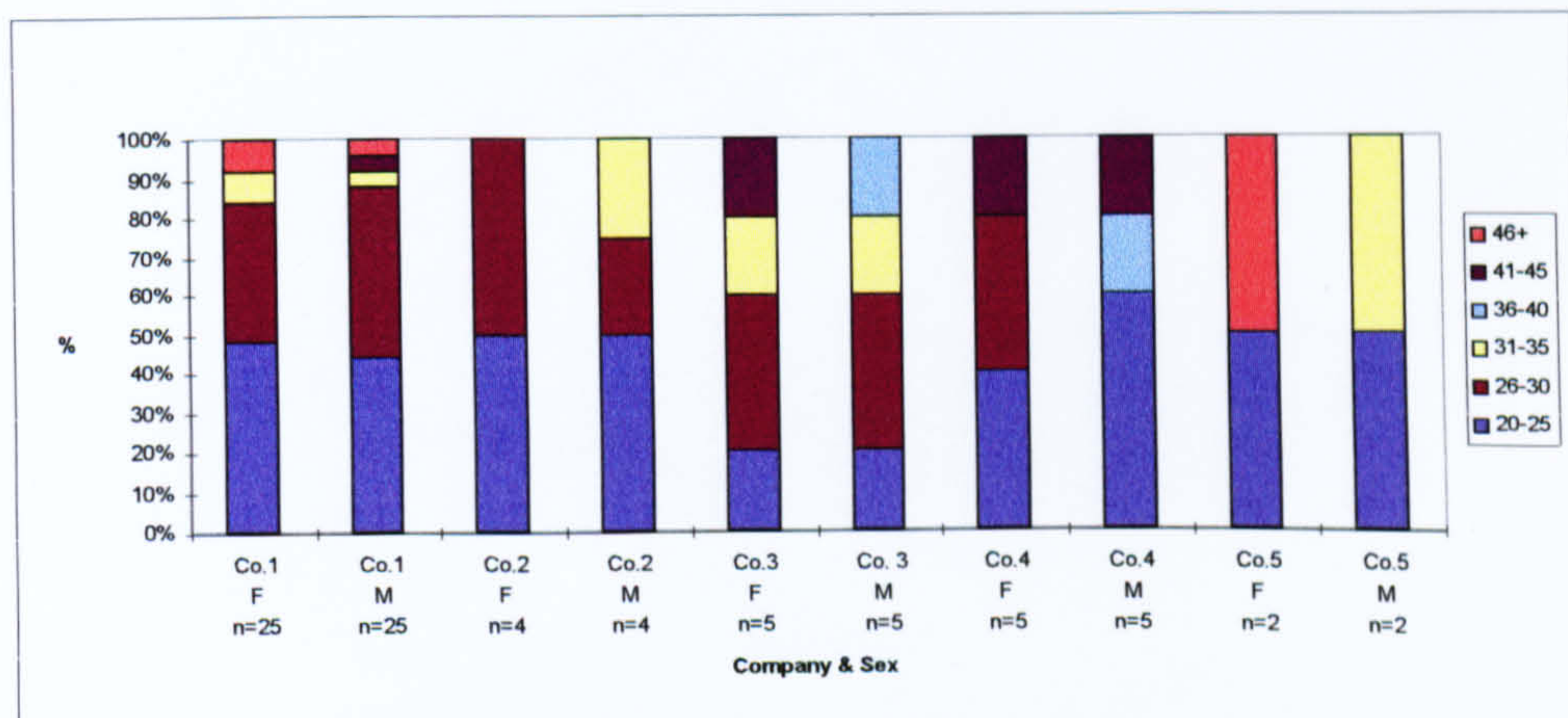


Fig 6.1: Age of informants as % of sample from each organisation by sex.

Experience

Around half of those interviewed were in their early (expanding) career stage. This was because the majority of the informants were graduates, and so were older relative to their experience. The average post-graduate experience for men and women was 7.4 years. The length of experience of the informants from each company was generally similar (Fig 6.2), with the exception of Co.5 from which only four informants were drawn. Co.5 informants

were all office based design personnel, whose inclusion was to allow the careers of design professionals to be investigated as part of the study.

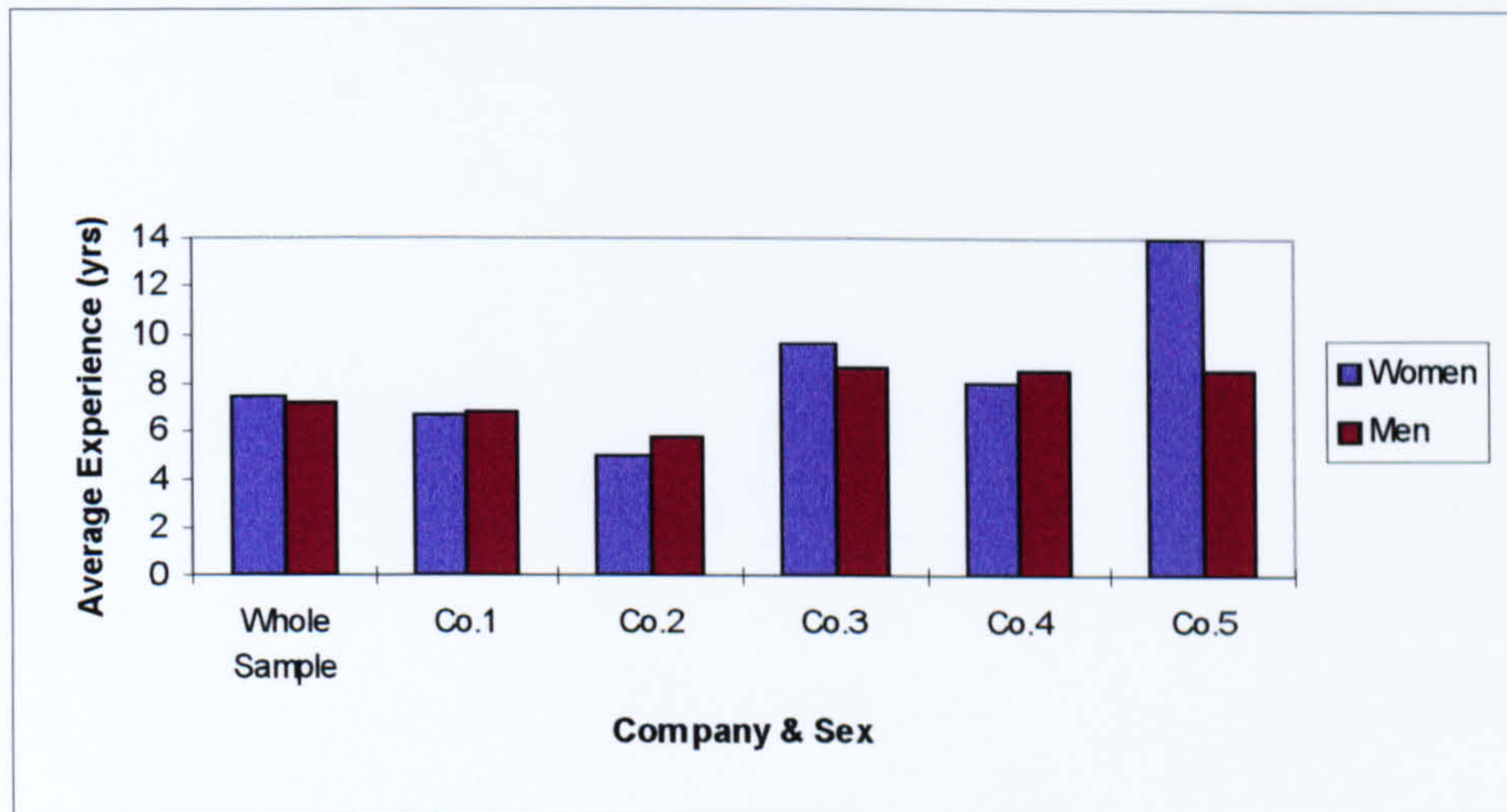


Fig 6.2: Average experience of informants by sex and employer.

Table 6.1 shows the number of informants from each career group by company. The profile of the sample is indicative of the majority of women having entered the industry within the past few years.

Sex	Employer	n	Career Stage		
			Expand (0-5 yrs)	Establish (6-15yrs)	Mature (16+ yrs)
Men	Co.1	25	11	9	5
	Co.2	4	2	2	0
	Co.3	5	1	3	1
	Co.4	5	2	0	3
	Co.5	2	1	0	1
Women	Co.1	25	12	8	5
	Co.2	4	2	2	0
	Co.3	5	1	2	2
	Co.4	5	2	1	2
	Co.5	2	1	0	1

Table 6.1: Career stages of informants

Hierarchical position

The hierarchical positions of each of the informants were measured against an eight point notional career scale (see 6.2.2). The average position for women against this scale was 3.24, and for men 3.6. Figure 6.3 shows a disparity between men and women in terms of hierarchical position within Co.1, Co.3 and Co.4, where the women can be seen to have had slower overall progression. The compatibility of the pairs in terms of age and experience

means that this disparity cannot be attributed to differences between the men and women in the length of time that they had worked in the industry. Only the informants drawn from Co.2 showed no signs of hierarchical differentiation between men and women.

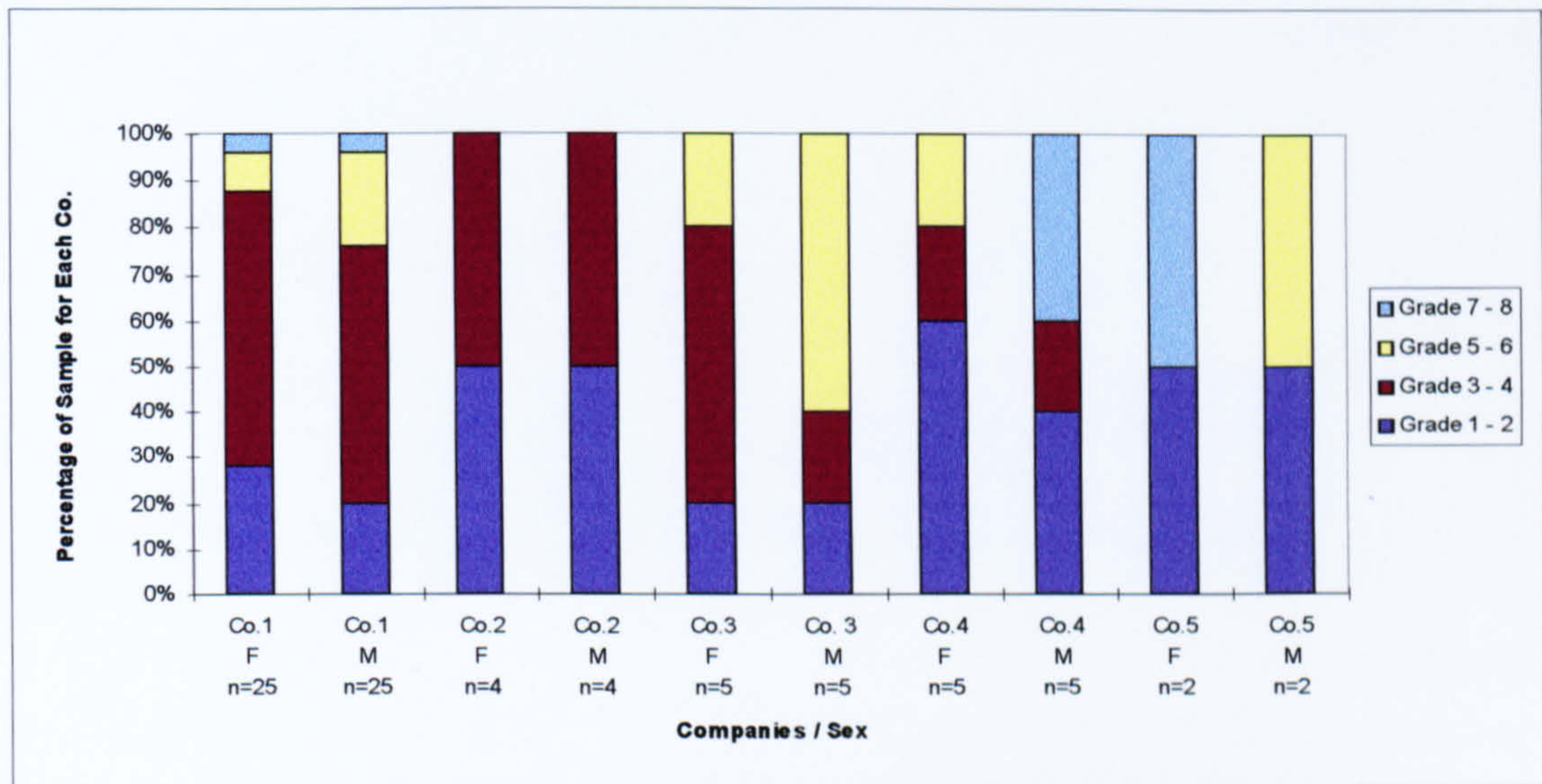


Fig 6.3: Hierarchical positions of sample by company and sex.

Source of the interview data

Despite the number of expanding stage informants interviewed, the mature and establishing groups provided a disproportionate share of the interview data. However, this is unsurprising as these groups had more career experience to discuss during the interviews (Fig 6.4).

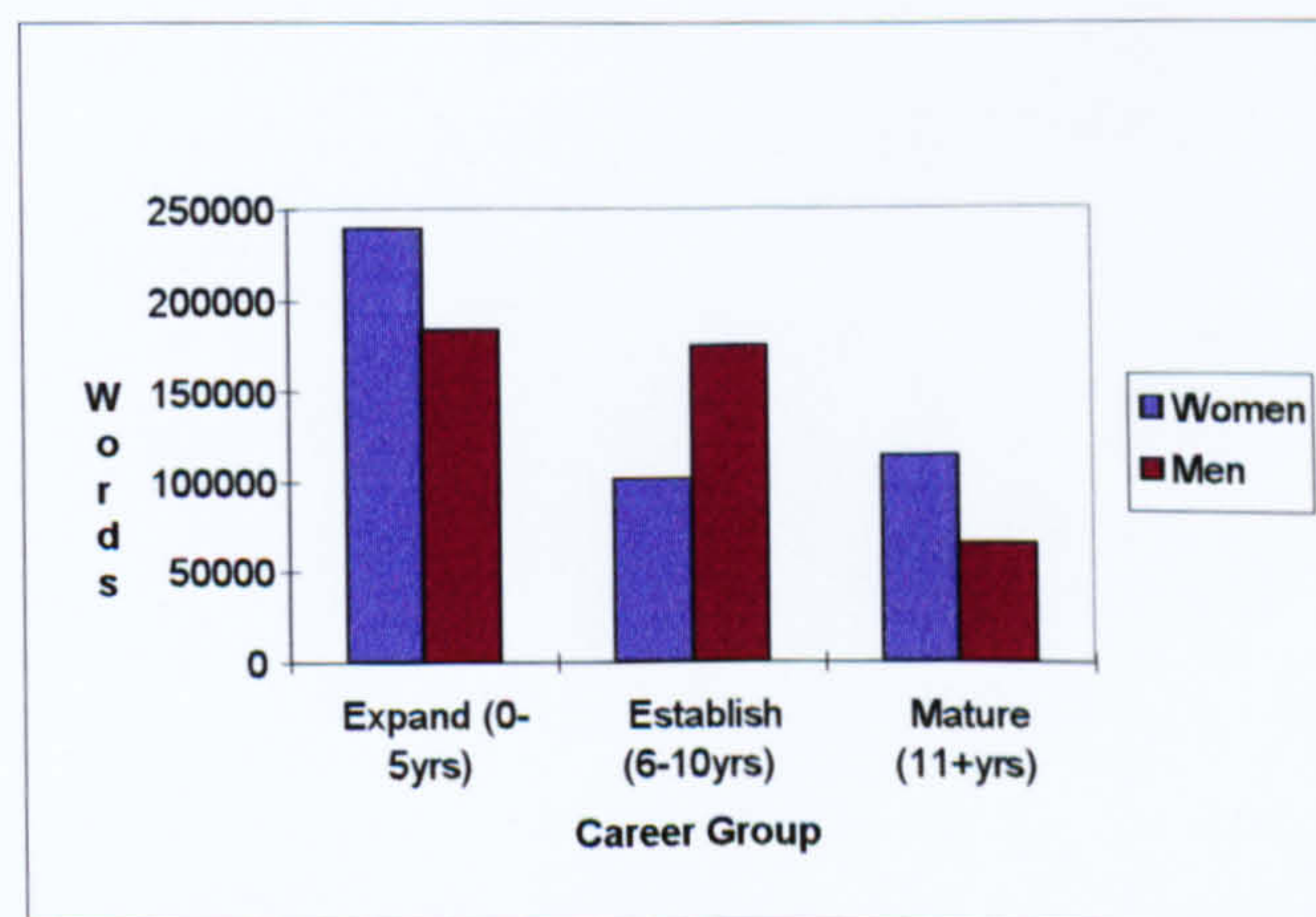


Fig 6.4: Amount of data from each career group by sex

An approximately equal amount of data was collected from male and female informants, with a marked similarity between the interview lengths of each pair of informants (see Appendix D).

Work location and geographical stability

The informant's work locations at the time of the interviews were geographically diverse. Around 65% of men worked on site compared to 56% of women. The remainder worked in office based positions, with 24% of women and 20% of men working in their employer's head office, and 20% of women and 15% of men working in a regional or divisional office. In terms of divisional allocation, 46% of women were based in regional divisions, compared to 71% of the men. Thus, whilst comparatively more men worked on site, they were also more likely to have secured geographical stability. As such, they were more likely to have site based experience, but less likely to have the personal upheaval of an unstable location.

Marital/personal status

Men were less likely than women to be married, but were more likely to have a long-term partner¹ (Fig 6.5). Figure 6.6 shows that in the national divisions², 50% of women remained unmarried compared to 17% of men. However, in the regional divisions, only 16% of women were unmarried, compared to 45% of male informants. This suggests a relationship between divisional placement and the personal status of the employees, as men were more likely to maintain relationships when based in national divisions. Around 48% of site based women were unmarried compared to 44% of men, and 22% of office based women remained unmarried compared to 21% of men. This indicates that office based employees were more likely to maintain long-term relationships.

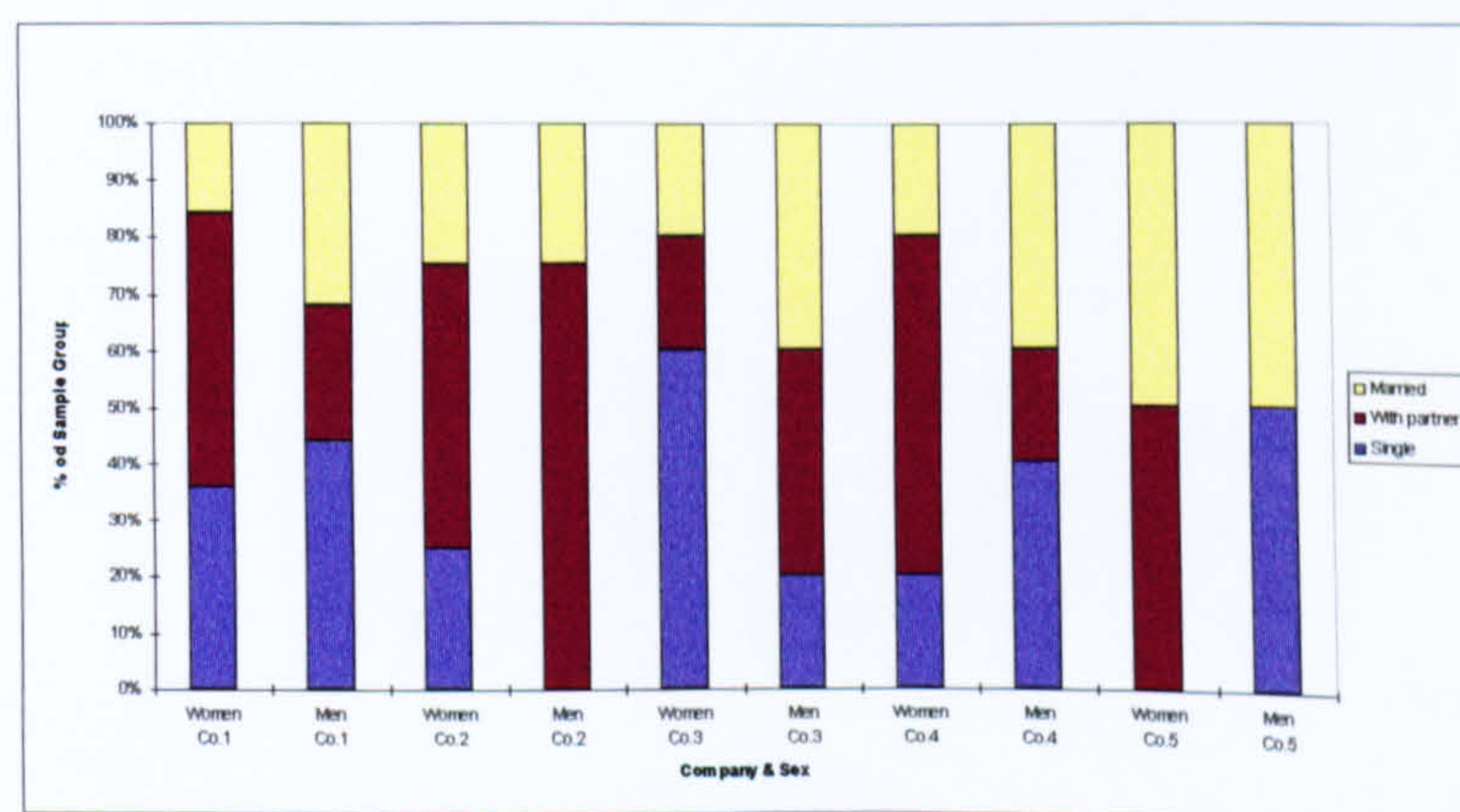


Fig 6.5: Personal status of informants by employer and sex.

¹ A 'Partner' was defined as a long standing relationship, or one where the informant was cohabiting.

² Those in national divisions were deemed to be those based in diverse and unstable geographical locations. Those in regional divisions were likely to work within a defined geographical location which allowed them to live at home.

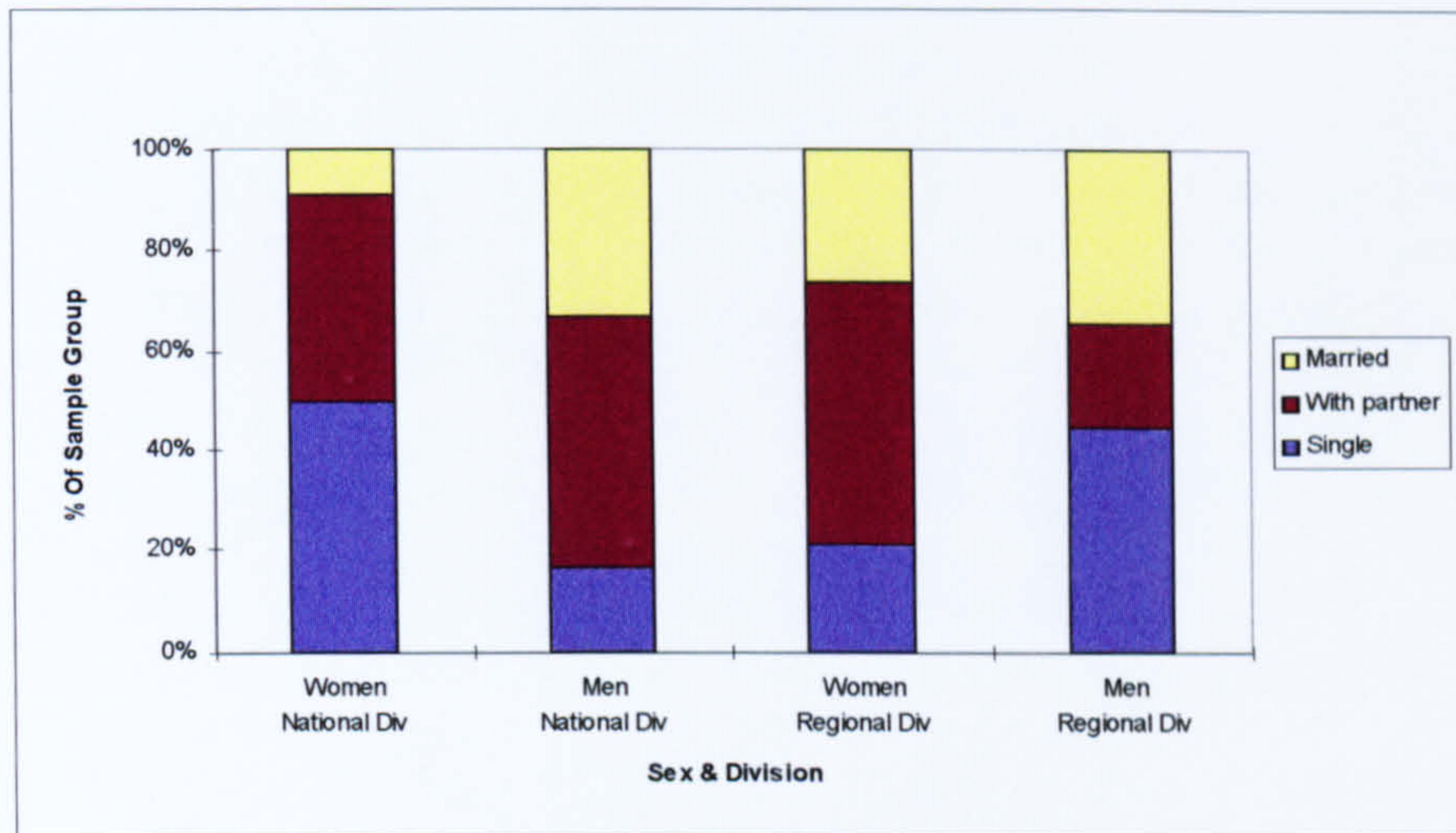


Fig 6.6: Status of informants by operating division

Only two women (5%) had a child, compared to 25% of men. Neither of these women had more than one child, whereas 15% of men had two or more children. Both men and women with children were equally divided between office and site based positions.

Career Path

The distribution of the informants by designation is shown in Fig 6.7. Quantity surveying was the most popular career choice for women (39%). However, a large proportion of women were also employed in supporting functions which were not site based roles. A third of the women interviewed were in positions not directly related to the construction function.

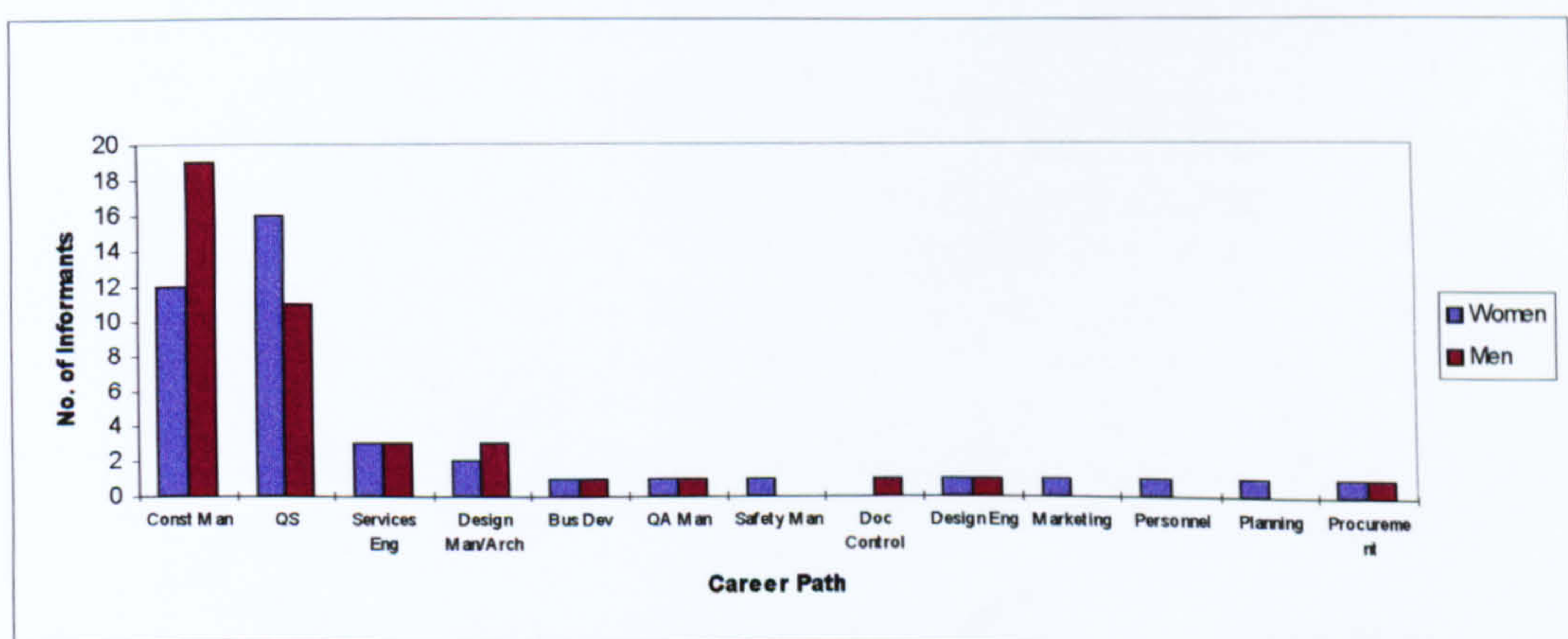


Fig 6.7: Designation of informants by sex

Although the careful pairing of the informants in terms of experience and educational background meant that in some cases different career paths had to be selected, most of the informants had entered their organisation with a choice of professional roles. Thus, women

are more likely to select commercial and/or support roles or to move to them later in their careers.

Qualifications

Every informant had a minimum of an HND/C, with almost all having a first degree in a construction related discipline (Fig 6.8). Only two companies provided the opportunity to work towards post-graduate qualifications. Co.1 women were more likely to have taken up this opportunity than any other group. In terms of academic ability, the standard of the employees was high, with most having achieved an upper second or first class honours degree. There was no significant disparity in academic achievement between men and women (Fig 6.9). The high achievements of women in Co.5 are accounted for by there only being two informants from this organisation.

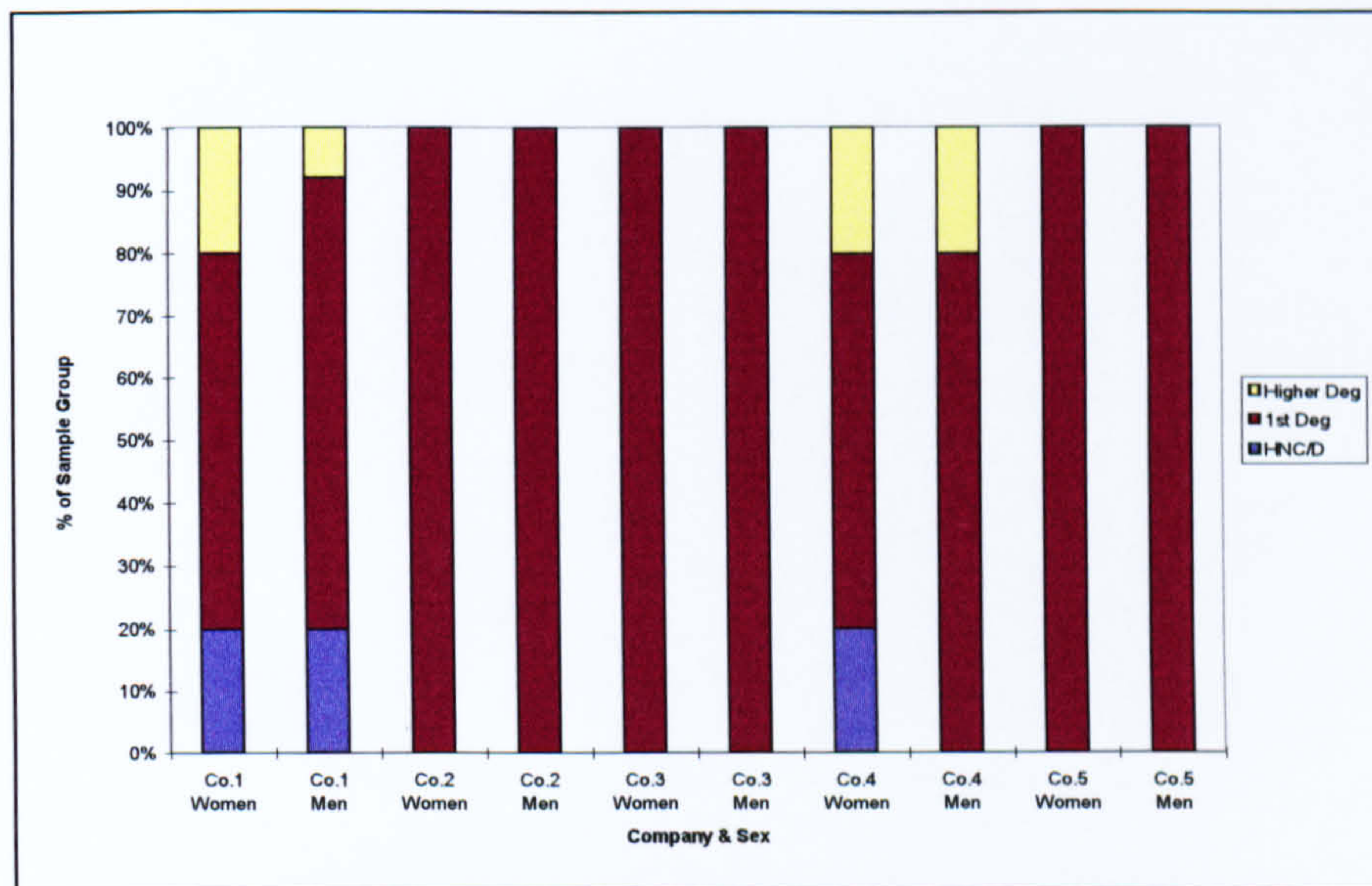


Fig 6.8: Highest academic qualification by sex and employer.

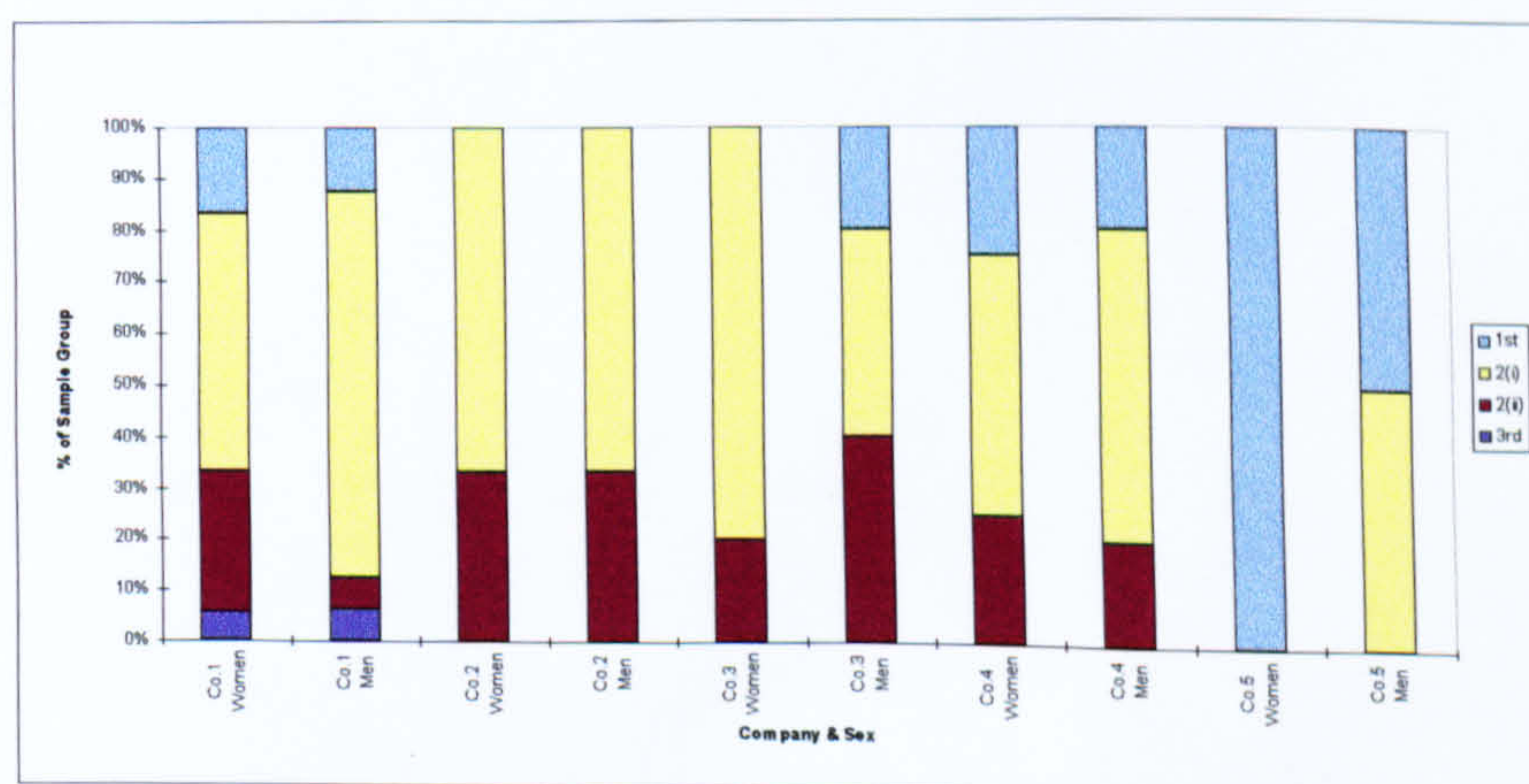


Fig 6.9: Academic achievement by sex and employer.

Although a number of the informants were working *towards* professional qualifications, particularly those in the ‘establishing’ career group, comparatively few were professionally qualified. This was surprising considering the average age and experience of the sample. Overall, women were more likely to be professionally qualified, or working towards professional qualifications than men (Fig 6.10).

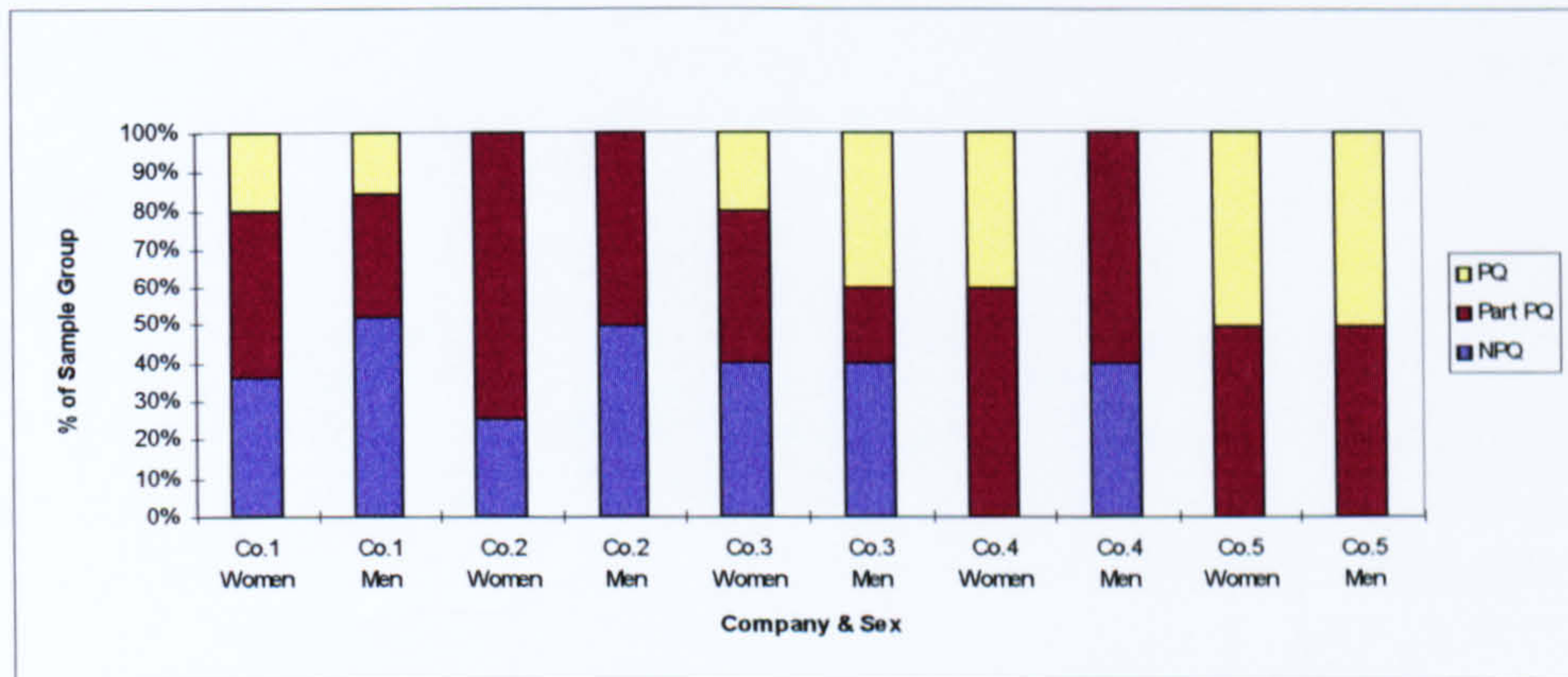


Fig 6.10: Professional qualifications held by the informants by company

(PQ = Professionally qualified; Part PQ = Part professionally qualified; NPQ = Not professionally qualified)

Length of service and number of previous employers

The average length of service for women was 4.8 years, compared to 4.95 years for men (see Fig 6.11). Employees of Co.1 and Co.2 generally had a shorter length of service with their present employer than those working for the other companies. However, this may reflect the younger interview sample being drawn from these companies.

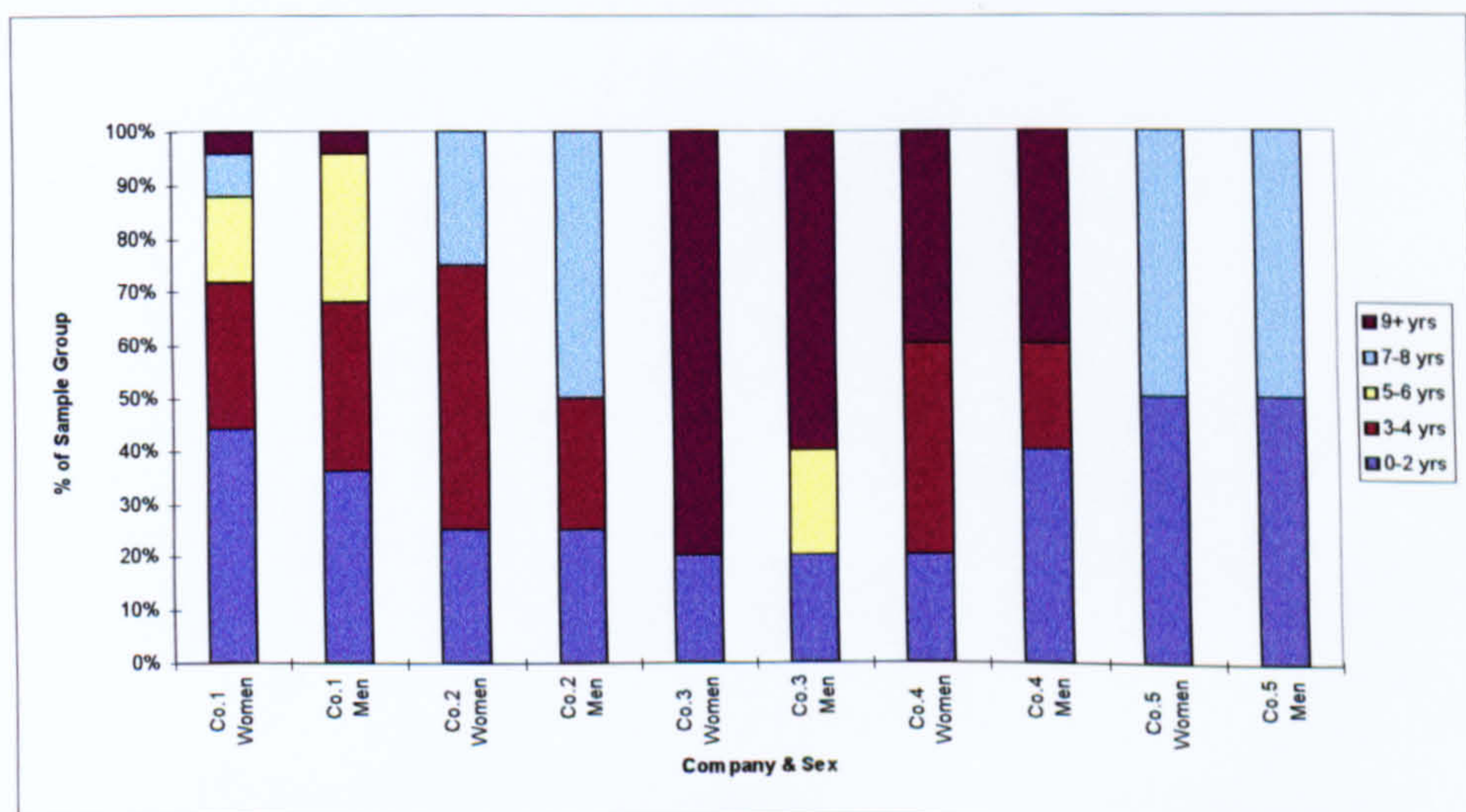


Fig 6.11: Length of service to current employer: by sex, employer and experience

Fig 6.12 shows that the maturing stage informants had markedly longer service with their employer. This indicates that retention problems are more likely to be related to younger

graduate employees, and particularly those in their establishing career stage. Furthermore, women in the establishing stage can be seen to exhibit either long *or* short service to their organisation in comparison to men.

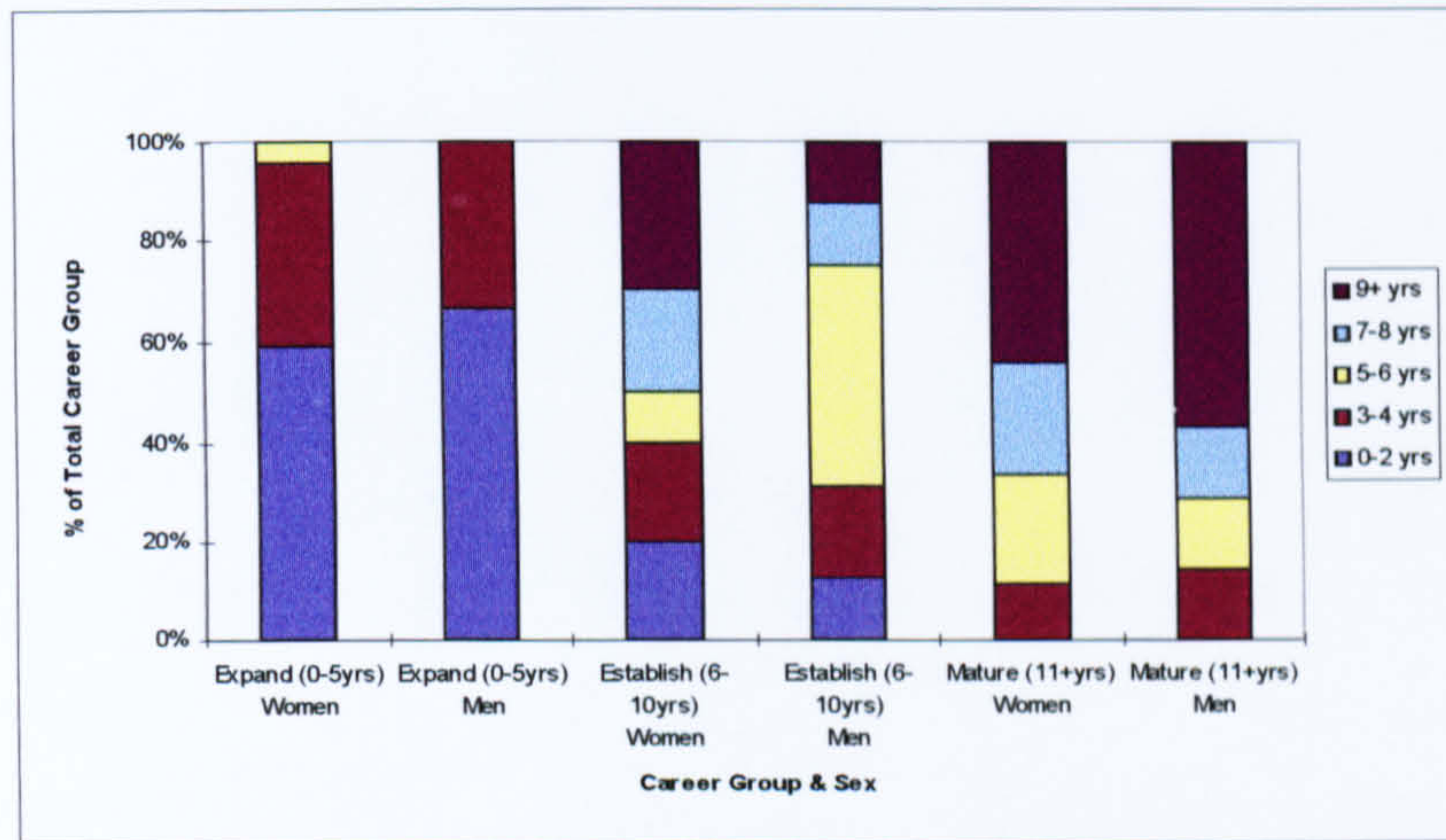


Fig 6.12: Length of service to current employer by career stage.

Very few informants had spent their entire career with a single organisation. Fig 6.13 shows that women were more likely to change employer than men in later career stages. On average, men had 0.95 previous employers, compared to 1.25 for women. Thus, women exhibited greater inter-company mobility than men.

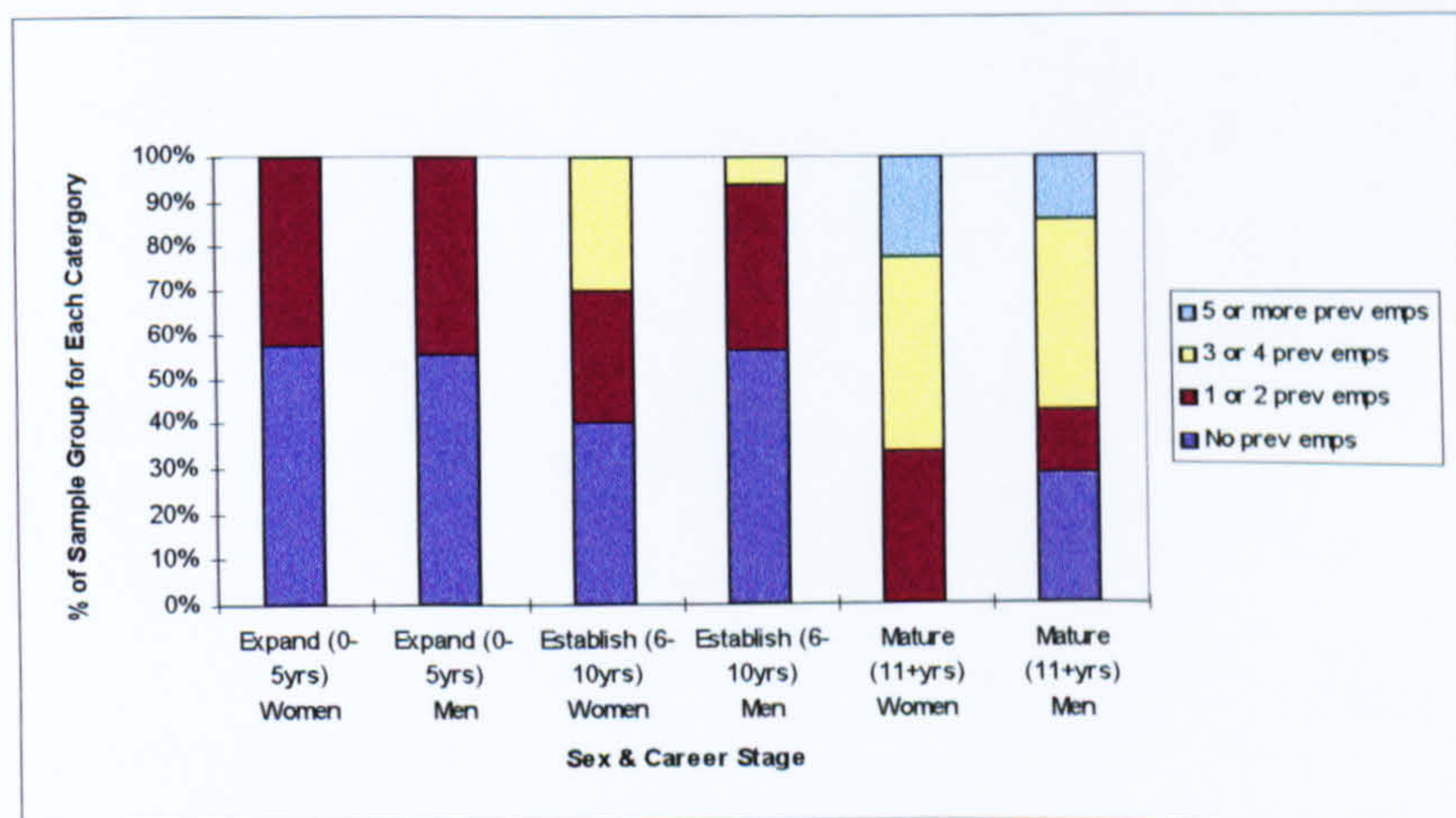


Fig 6.13: Number of previous employers by career stage

Perceived Ambition and Ability of Informants

As was discussed in 5.4.4, the informants were asked to indicate their own ability and ambition, relative to their peer's, against a five point scale. These assessments allowed any general trends in the informants' own perceptions of their ability to be compared with other's from different companies, career paths or at different career stages. The scale was defined as is shown in Table 6.2.

Level	Ambition	Ability
1	Low level ambition - content with current position.	Low ability - not competent enough to justify current position.
2	Content to remain in current position with possible limited promotional opportunities in the future.	Ability lower than peers in comparable roles within the organisation.
3	Satisfied to follow standard career progression rate within company.	Ability commensurate with current post.
4	Unhappy in current position, seeking a promotion in the near future.	Ability higher than that required in current position.
5	High level ambition - promotion is principal career priority.	High level ability - capable of senior management position in future.

Table 6.2: Ambition and ability scales

Ability

Most informants saw their own ability as being comparable with that of their peers, or felt that they had above average ability in comparison with their career group (Fig 6.14). Men perceived their ability (average = 3.73) as being slightly higher than women's (average = 3.68).

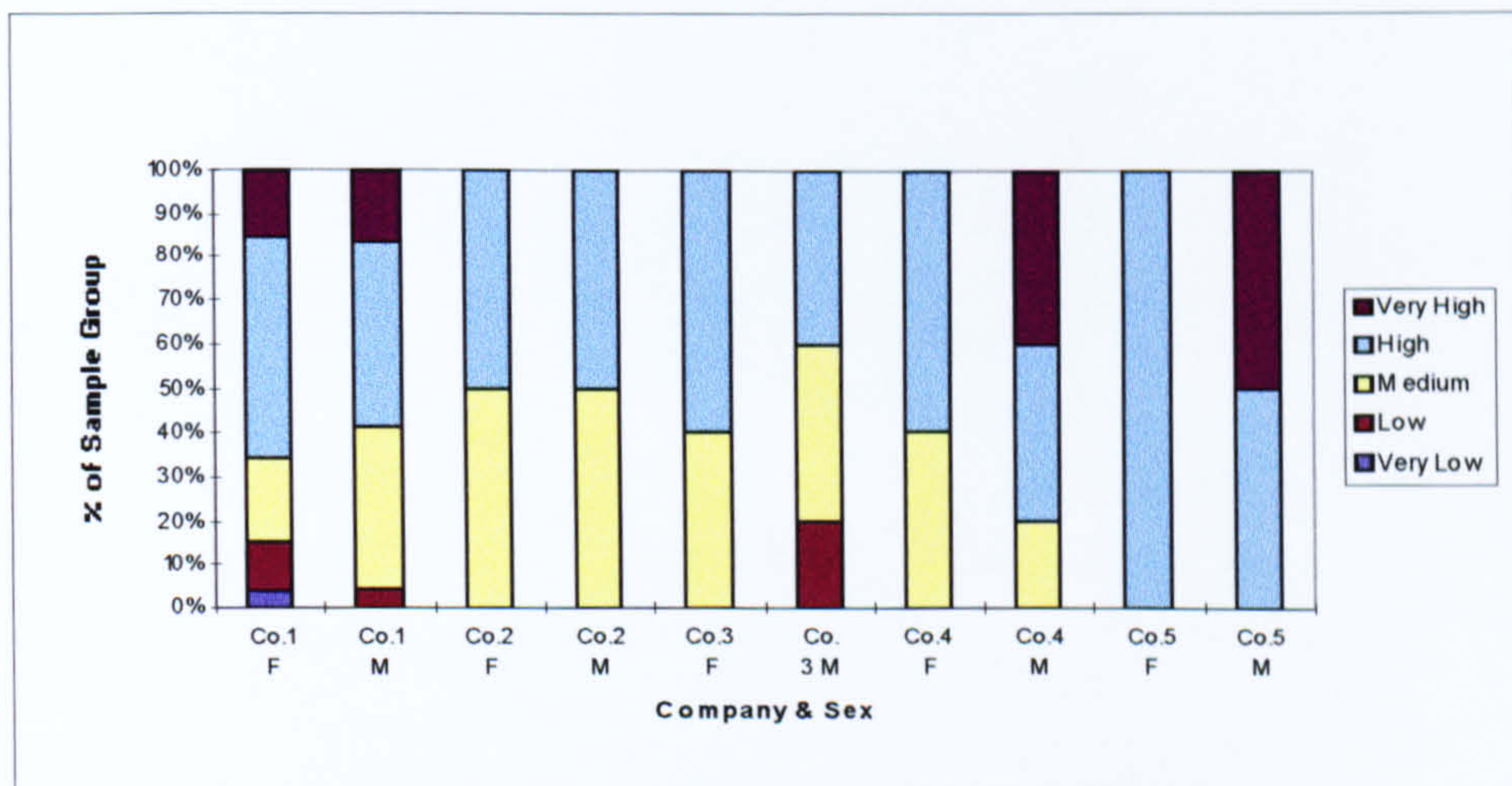


Fig 6.14: Informant self-perception of ability

Comparing the perceived ability levels of men and women across the other variables in the analysis, revealed that those in the regional divisions generally felt that they had higher ability levels than their colleagues in the national divisions. Co.1 employees generally exhibited higher ability scores than employees from the other companies. No informants felt that they had low ability in the expanding career stage (Fig 6.15). Thus, self perception of ability could be seen to decline with experience, especially for women.

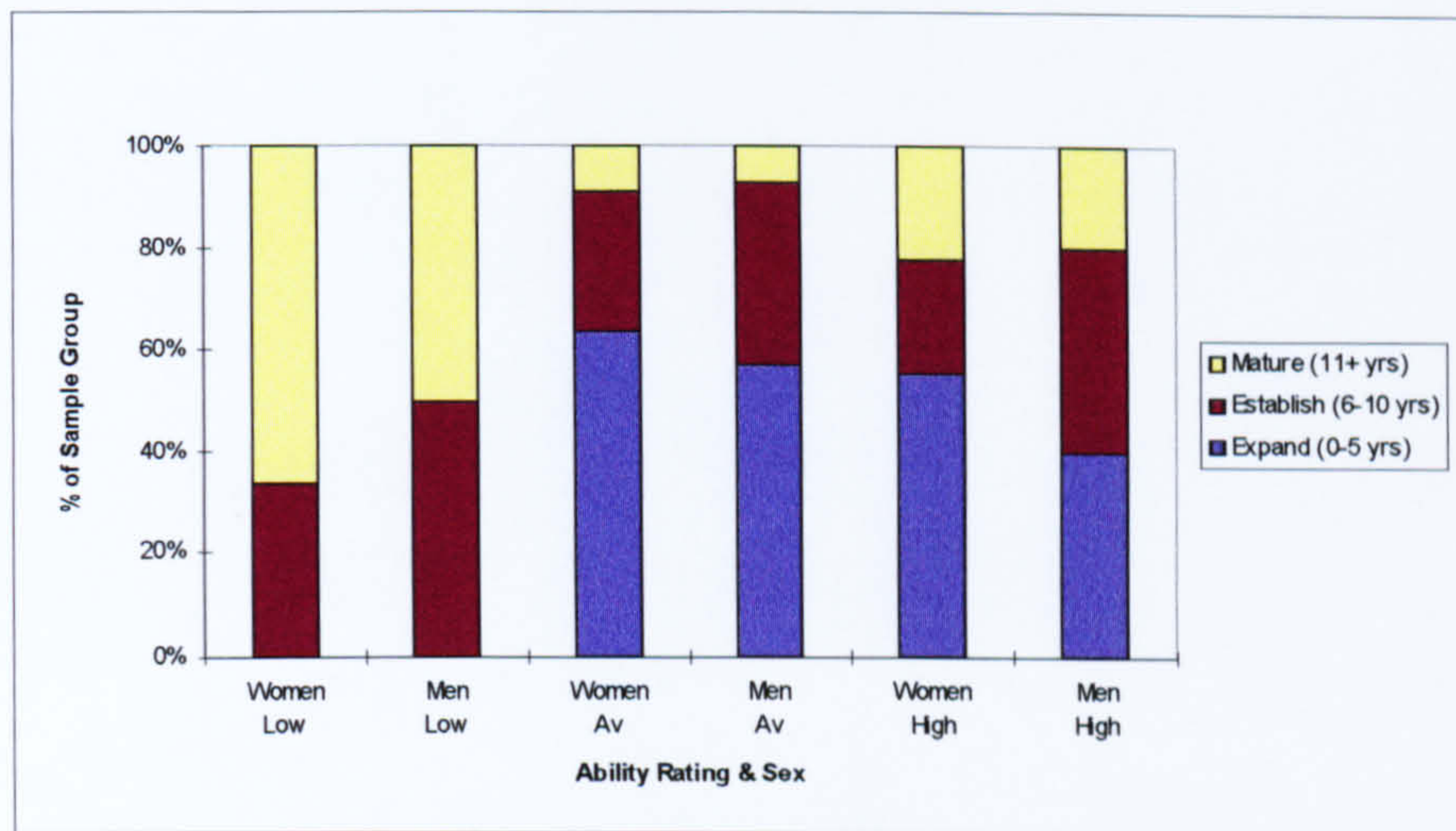


Fig 6.15: Self-perception of ability by career stage

Ambition

There was a greater disparity between men and women with regards to their perceived ambition ratings. On average, women ranked themselves as having an ambition score of 3.3. This compares to 3.7 for men (Fig 6.16).

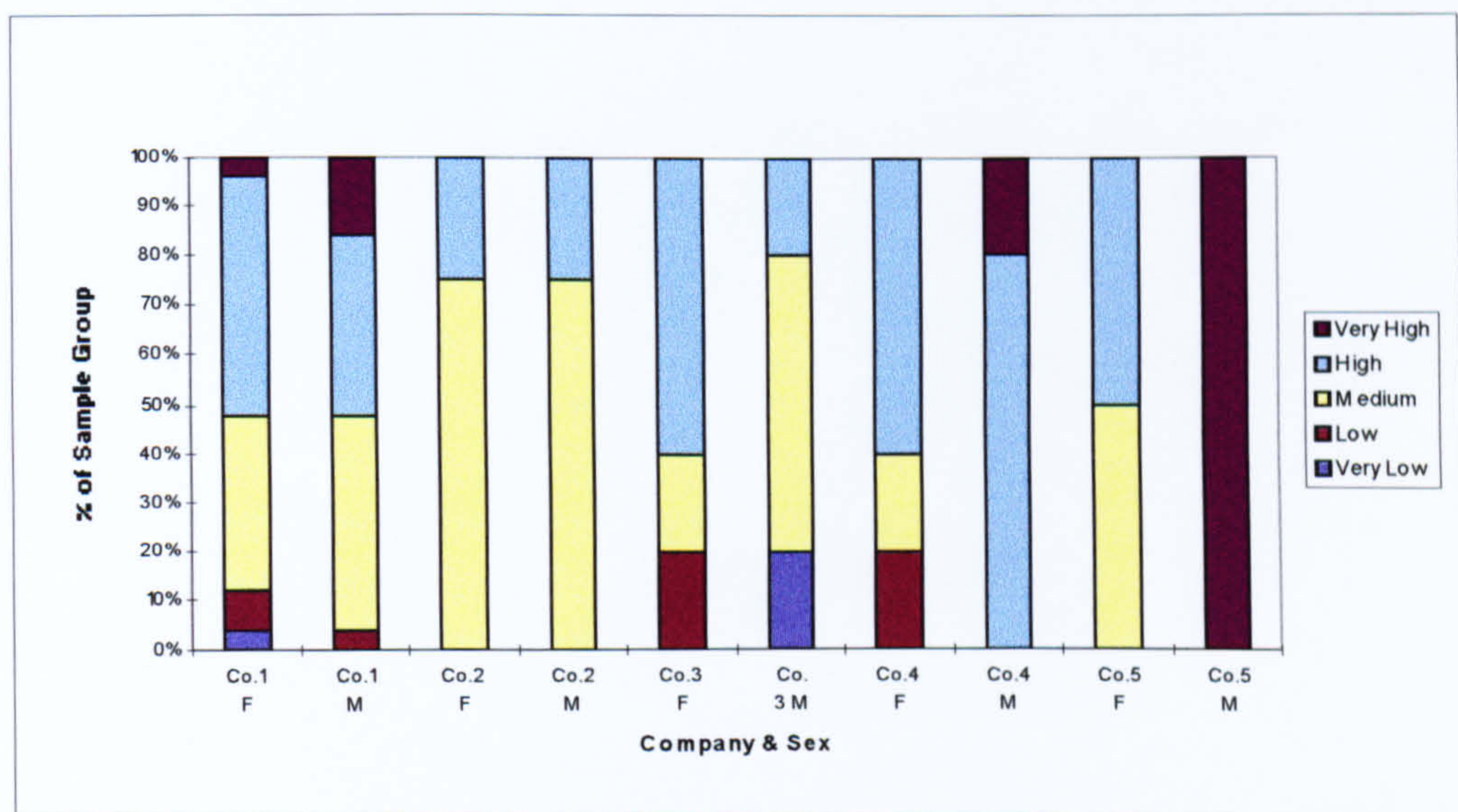


Fig 6.16: Informant self-perception of ambition

In common with ability, women's ambition decreased with experience. Figure 6.17 indicates that proportionally more women described themselves as having low ambition who had over 10 years experience. Thus, the cumulative experiences of women may lead to a change in aspirations.

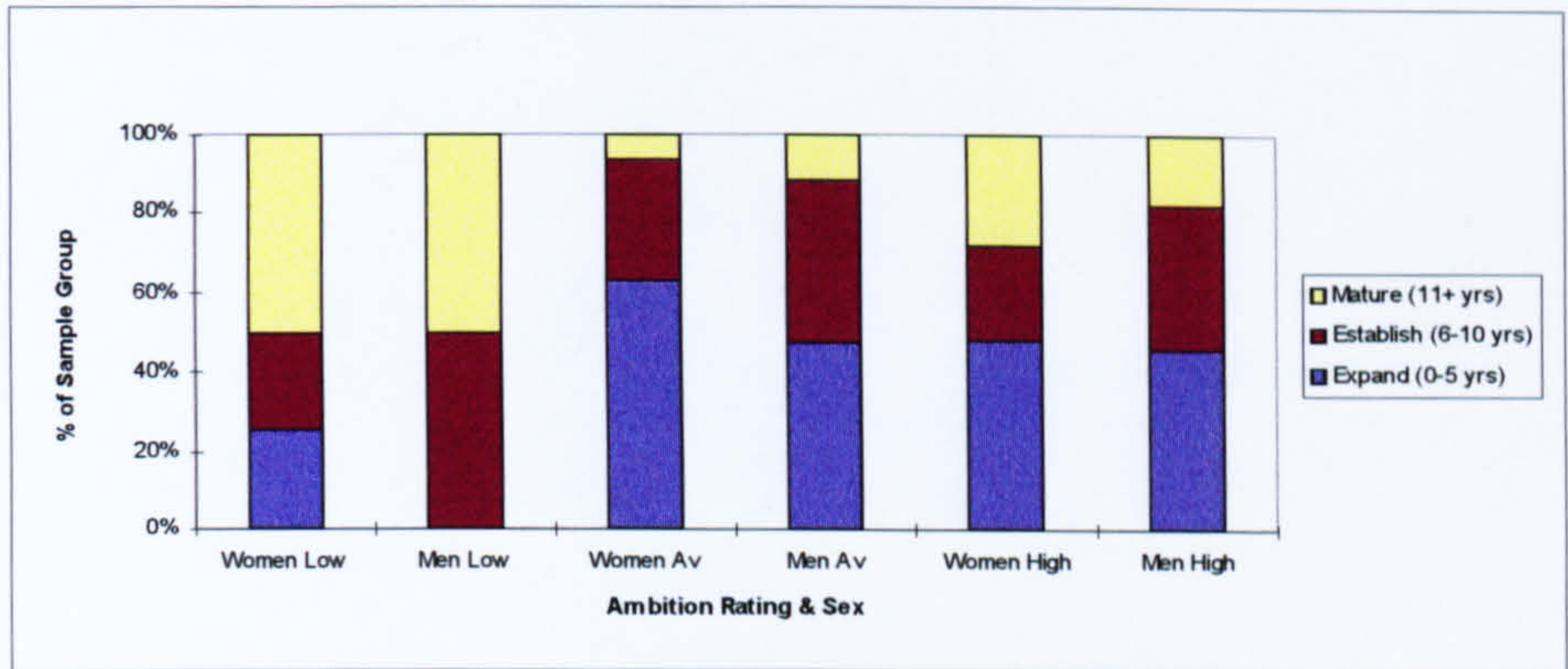


Fig 6.17: Ambition of informants by career stage

Those exhibiting low ambition were almost exclusively in the group with five or more previous employers and those with greater experience (Fig 6.18).

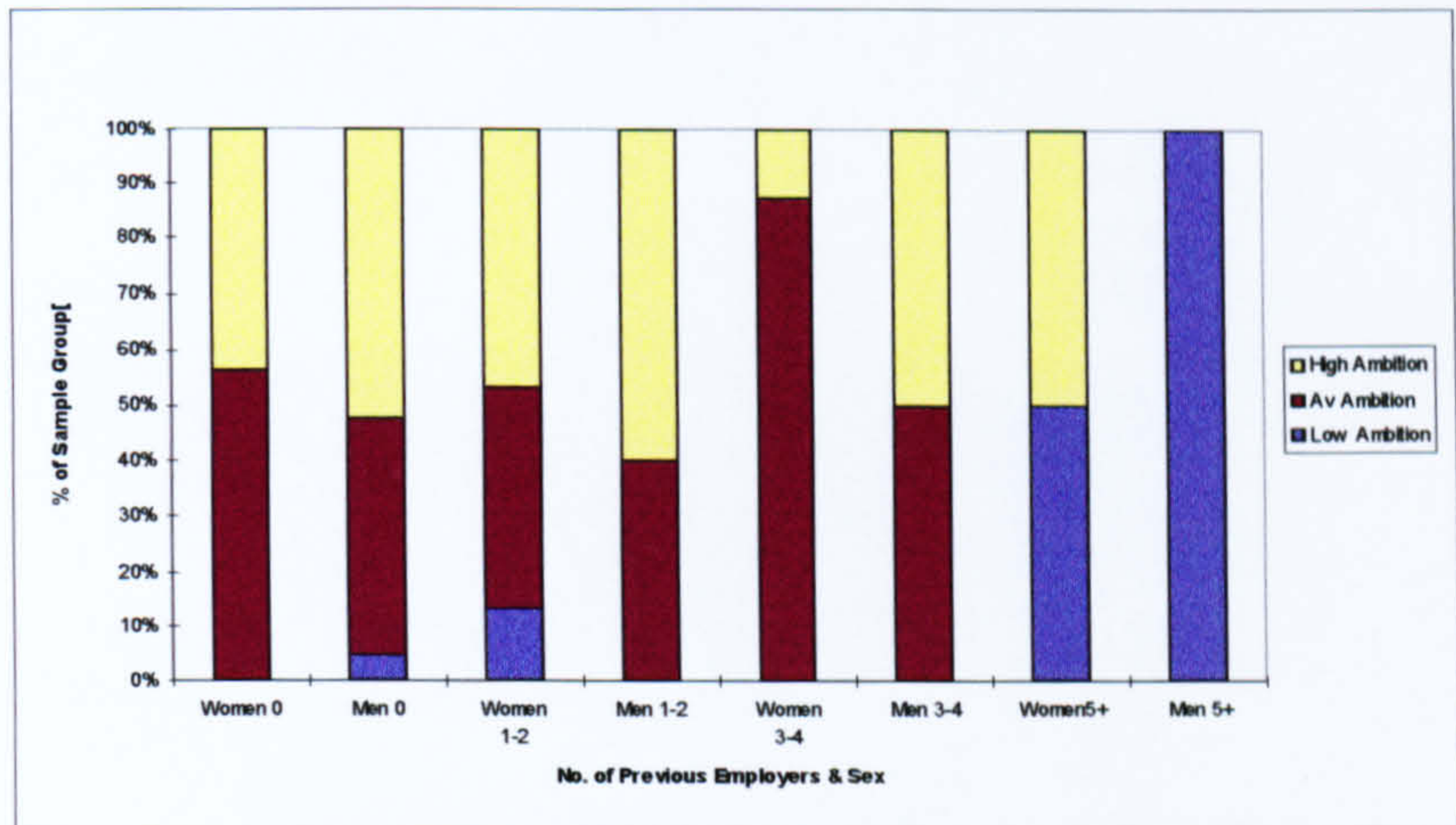


Fig 6.18: Ambition level by no. previous employers

Another gender difference was apparent when ambition levels were compared with the personal status of the employees (Fig 6.19). Men with partners were more ambitious than women with partners. However, single status informants in general elicited higher ambition ratings than those with partners.

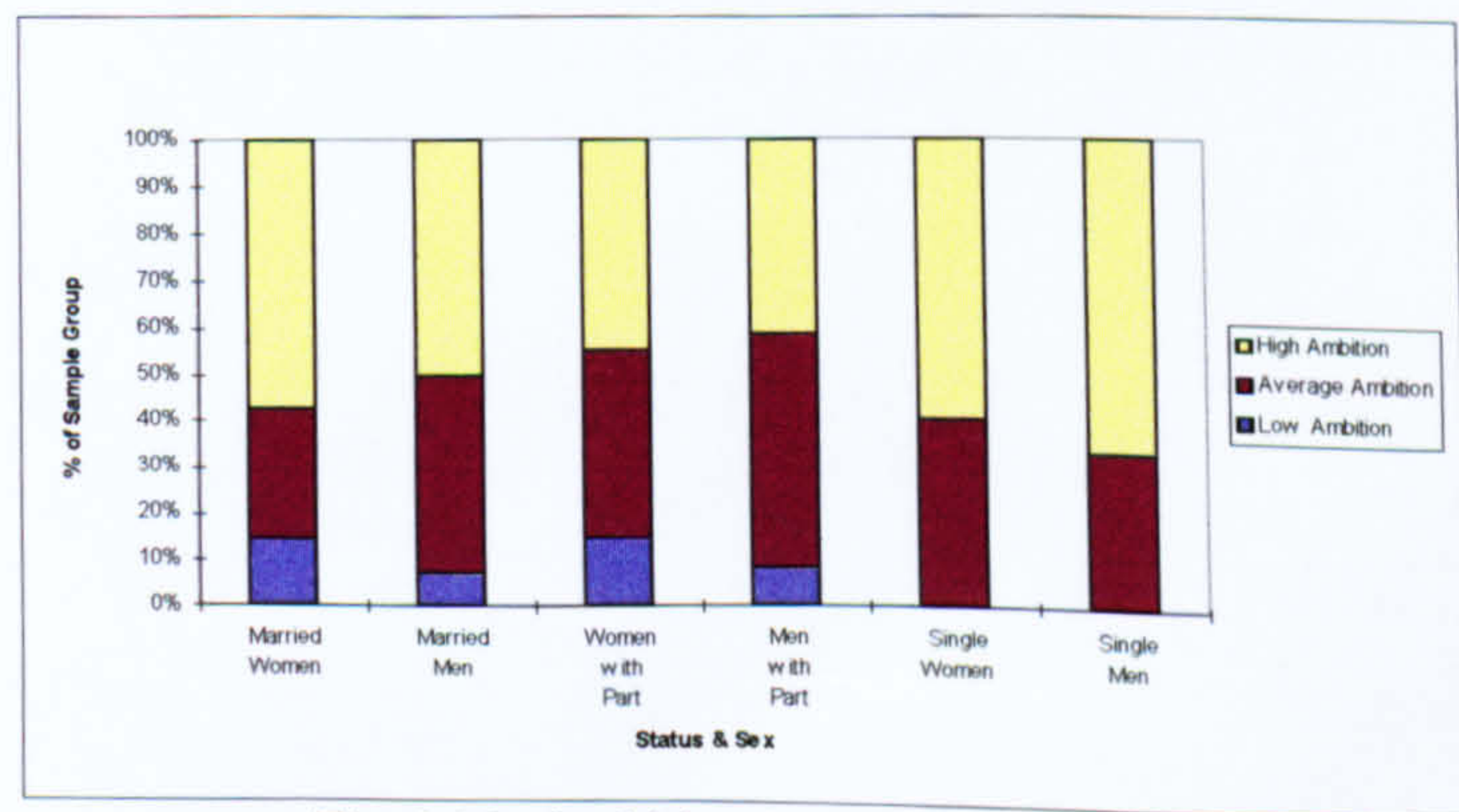


Fig 6.19: Ambition by personal status

6.1.3 Quality of match between the pairs

The selection criteria ensured all that all professional Co.1 women employees willing to participate in the research were interviewed, and that a stratified random sample were interviewed from the remaining companies. The male respondent group, whilst not representative of the men working for each organisation, were well matched to the female sample. This was indicated in the similarity in their professional and experiential backgrounds. By considering each of the matching criteria in turn, the quality of the pairing process can be assessed:

1. *Educational attainment* was consistently high across the sample, with both men and women tending to enter from graduate backgrounds, with similar classifications of first degree. This indicates that those entering the organisations did so from a similar academic base;
2. The number of *years service* to their current employer was also similar, with few pairs differing by more than a few months. As such, each pair of informants had the same opportunities to develop their organisational careers;
3. *Designation* differed slightly, but to match accurately under the other criteria several women in supporting positions had to be paired with men in operational roles. In these cases a match was made between the first degree and initial career paths of the informants. This was appropriate as the informants were generally given the opportunity to define their own career path upon entrance to the organisation, and so their degree subject did not necessarily restrict their occupational choice; and finally,
4. The *experience* of the informants was also similar, with most having worked in contracting for a period within one year of their paired participant. As such, each pair of informants had developed their career over a similar period of time.

Finally, the amount of data collected from the respondents was also consistent across the different career stage groups, with a marked similarity in the interview lengths between the men and women from each pair (see Appendix D). Overall, this suggests a good match was made between the paired participants.

6.2 Career Progression Dynamics

Section 6.1.2 showed that male informants had, on average, reached higher positions than their female pairs. This suggests the existence of gender determined disparity in terms of the career progression rates of the informants (see Fig 6.3). This section presents a summary of the general trends in the informants' career progression and dynamics, by establishing the relative effects of a range of contextual variables about which data was collected at the outset of the interviews.

6.2.1 Development of the career models

In each of the progression analyses below, the informants' career positions are assessed against time, for the full range of base-data variables collected from every informant at the outset of the interviews. The informant's hierarchical positions were initially established from the personnel records of the organisation, prior to the interview being carried out. However, to allow an objective historical comparison of the career dynamics of the informants, and particularly in terms of how careers had developed within different organisations, an objective and generally applicable career scale was required to benchmark their career progression against. However, the literature did not yield a standardised scale suitable for this purpose. Using job titles would have resulted in a meaningless interpretation of the hierarchical positions of men and women working in different organisations because of inconsistencies in their meanings across different organisations. Thus, the approach taken was to develop a set of generally applicable career models for all of the career paths of the informants being interviewed. These hierarchical levels were then adjusted by representatives of the companies supplying the data, to form a career scale applicable to the entire sample (see 5.4.4).

Approach of the participating organisations

Each of the five companies taking part in the study used different systems of job titling and career positions. Co.1 used a series of letters (from A to H) to signify responsibility levels. This formed a transferable scale across all the disciplines within the organisation, allowing the hierarchical positions of informants in different career paths to be compared directly. For example, a grade C employee was at an 'assistant' manager/professional level, whether

they were employed as a quantity surveyor, construction manager, design manager, or in any supporting function. The other organisations all used distinct job titles for different career paths and positions, all of which differed from the other companies.

Data collection and analysis

Due to the focus of the study, being on large construction companies, the FAME³ database was used to identify a stratified random sample of 50 companies with a turnover of at least £50m and 200 or more employees. After follow-up telephone calls, 21 of these contractors agreed to take part in the development of the models. The range of organisations wishing to take part in the study provided a significant amount of data from which to develop the models. These data comprised job descriptions, salary scales and structural hierarchies for a variety of key positions. These included area managers and directors, construction managers (building), construction managers (civil engineering), quantity surveyors/commercial managers, estimators, planners, buyers and design engineers.

All of the data were entered into a spreadsheet, allowing a visual comparison to be made between the different job descriptions, and any trends in the career structures to be identified. Most of the organisations provided the expected ages that employees were expected to reach particular positions, particularly for those at junior levels. This may indicate that age bars on promotion exist within some organisations. Each generic job category was compared with the others, and common themes and titles explored within the data, until a best fit was found. These data were then entered into NUDIST to categorise the data into a hierarchical format. In this way, the analysis remained systematic, and was incorporated into the main analysis for the study (see Dainty *et al*, 1995; and Dainty, 1996 for a fuller description of the analysis technique).

Stage 1 - trends apparent from initial data collection

It was apparent, even upon first examination of the data collected, that despite there being little degree of conformity in job titles, job descriptions were relatively uniform across all of the participating employers. All of the organisations had similar career development paths,

³ This refers to 'Financial Analysis Made Easy', a CD ROM database of regularly updated company financial information.

although eight had extra levels built in between the common positions. These tended to be the contractors with more rigid hierarchical organisational structures (Co.2 and Co.3). However, similar titles denoted different levels of seniority across organisations, and even across the operating divisions of particular companies. This had occurred because directors had a large degree of autonomy in being able to impose their own job titles and descriptions for positions within their divisions. Furthermore, telephone conversations with representatives from some of the responding organisations indicated that job titles had changed to reflect the increasing complexity of the construction professionals' tasks, and the standing of professional positions had been raised accordingly. For example, 'site agents' have become known as project managers and senior Quantity Surveyors had become 'Commercial Managers'.

Stage 2 - findings from subsequent refinement study

An initial set of standardised models were developed by combining the data supplied. These were then tested with the original informants. The key areas where changes needed to be made to the initial models related to oversimplification of the number of layers in the career ladder for certain positions, incorrect lines of responsibility and suggesting average ages for reaching positions that were too low. It was also clear that line responsibility often differed from functional responsibility. For example, the chief (or regional) QS may have functional responsibility to the director of surveying, but will usually have line responsibility to the area manager or regional construction manager. This was due to the matrix structures used at an operational level, which were combined with a line and staff structure at an organisational level (see 2.3.2).

Stage 3 - initial feedback from companies who were sent models for validation

A final validation of the refined models indicated that they were suitable for summarising the generic nature of their career structures. Only smaller companies expressed concerns over the relevance of the models to their own structures, where employees fulfilled a variety of functions across several disciplines. As such, they could not fit into rigidly defined career hierarchies and job descriptions.

The construction management career path (civil engineering) is shown in Table 6.3 as an example of one on the career development models. This model broadly corroborates Young and Duff's (1990) assertion, that the further up the career ladder the engineer progresses, the longer the tenure at each successive level. This is indicated by the increasing predicted age of the employee at each stage within the model.

CONSTRUCTION MANAGEMENT (CIVIL ENGINEERING)					
Code	Job Title(s)	Job Description	Responsible To	Likely Qualification Held	Likely Min Age
1	Area Manager/ Director/ Regional Construction Manager	Overall charge for all civil engineering activities for a particular region or group company	Senior Management grades 1 and/or 2	Degree, CEng & MICE	40+
2	Contracts Manager/ Snr Projects Manager	Oversees a number of large projects or one very large project	CMC1	Degree, CEng & MICE	35+
3	Project Manager / Snr Agent	Manages a single project to £20m -£30m	CMC2	Degree, CEng & MICE	32+
4	Site Agent	Manages medium projects or sections of large projects up to £10m	CMC2/3	Degree, CEng & MICE	30+
5	Sub Agent	Manages small projects or sections of large projects up to £5m	CMC5/3/4	Degree, CEng & MICE	26+
6	Section Engineer	Controls engineering for one section of the site	CMC 4/5	Degree	23+
7	Assistant Engineer	Trainee position mainly setting out	CMC6	HNC/Degree	21+

Table 6.3: Construction management (civil engineering) career model.

6.2.2 Development of a transferable career scale

As was discussed in 2.3.2, management hierarchies can be broken down into three generic levels of senior (such as area management and chief Qs), middle management (such as contracts, major projects managers and senior Qs) and junior management (such as site managers, sub agents and Qs). By grouping positions in this way, comparisons can be made between different levels without the lack of conformity in job titles to obstruct such a comparison. Overall, eight distinct levels emerged as applicable to the organisations supplying the data. General descriptions of these career stages are shown in Table 6.4 with Spencer and Hanna's (1986) equivalent positions shown in brackets.

Equivalent Grade	General Description	Examples of Job Titles under each category
1	Very junior trainee position such as student placement or initial trainee post (graduate).	Student, assistant engineer.
2	Graduate / trainee position (graduate).	Graduate or graduate trainee.
3	Assistant operations manager with a limited degree of autonomy for defined tasks (level 1).	Assistant manager/QS/planner etc., section engineer.
4	Assistant operations management position with autonomous role for defined tasks (level 1/2).	Sub-agent, assistant manager, assistant estimator/buyer etc.
5	Operational manager with autonomy for a broad range of functional management task (level 2).	Site agent/manager, quantity surveyor, planner, design engineer.
6	Senior operational management with control over a project or operational unit (level 2/3).	Project manager, senior design engineer, senior quantity surveyor.
7	Senior management with some strategic management function in control of several operational units or functions (level 3).	Contracts manager, commercial manager, chief estimator, head planner.
8	Area manager or associate director with strategic management responsibility (level 4).	Area manager, associate director, director, operations manager.

Table 6.4: General descriptions of career stages against Spencer and Hanna's (1986) classification.

This career scale is used throughout the remainder of the analysis to define the informants' hierarchical positions at different career stages. Career progression is considered in terms of whole-point ordinal transition, and does not take account of career progression *within* each of the scale bands. To sub-divide each of the career bands would have increased the subjectivity of the analysis in terms of interpolating the relative positions of the informants against the scale. This would have made little significant difference to the overall assessment of their career progression from the career progression graphs (see 5.5.5 and Appendix C). To ensure an appropriate assessment of the informant's position on the scale, they were asked to describe their exact job function to establish the level of competence required for their position. The career history graphs from the informants were then adjusted to match the career positions on the standard scale in Table 6.4 (see Appendix C).

6.3 Career Progression Analysis: Average Progression Rate and Tenure

The career position of each respondent was noted for each year of their career development from their accounts which were graphically represented on the career progression graphs

(see Appendix C). The mean hierarchical level was calculated for each year of development according to the career progression scale. This allowed the average progression rate for men and women to be calculated for the entire sample group. The standard deviation for each year shows the variance in progression rate within the sample group (Fig 6.20).

Figure 6.20 shows that, for the period of the graph where the standard deviation remains under one hierarchical level (where the sample size is greatest), men remained approximately one hierarchical level above their female pairs. A standard deviation of under one position indicates little variance in average progression rate in the first 20 years of their development. There is greater variance in career progression rate as the informants reached senior levels within their organisation, although the sample size of those with this amount of experience was too limited to draw firm conclusions.

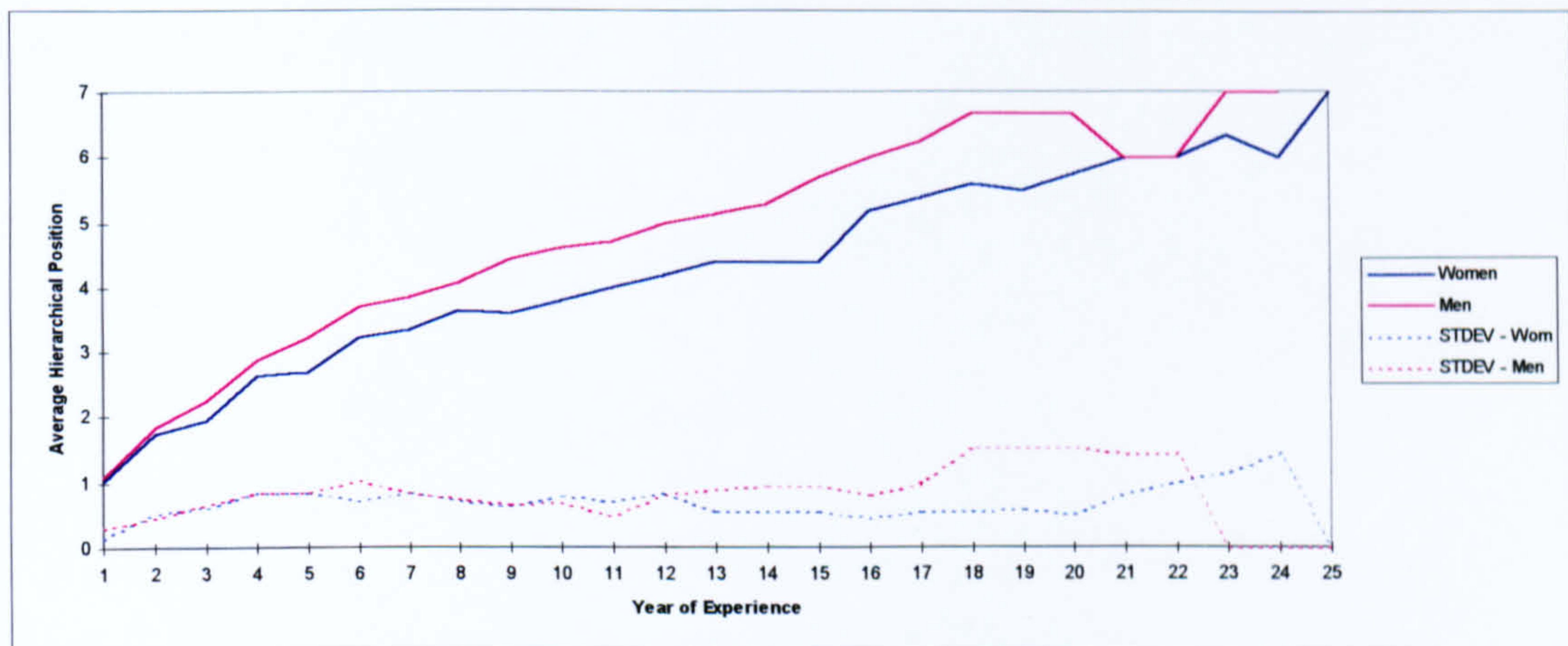


Fig 6.20: Average career progression for each year of career: all informants.

By considering only the time that the informants spent with their current employer, this provides a more accurate impression of the typical career progression within their organisation. This was only carried out for the Co.1 employees, as the small sample size in the other organisations made the reliability of such an analysis questionable. In this case, the position was noted and the mean position taken for each year of the development that the informant worked for Co.1. For example, if an informant joined Co.1 in the fourth year of their career, and had worked for the company for a period of three years, their progression was included for the fourth, fifth and sixth years of their development. This is shown in Figure 6.21.

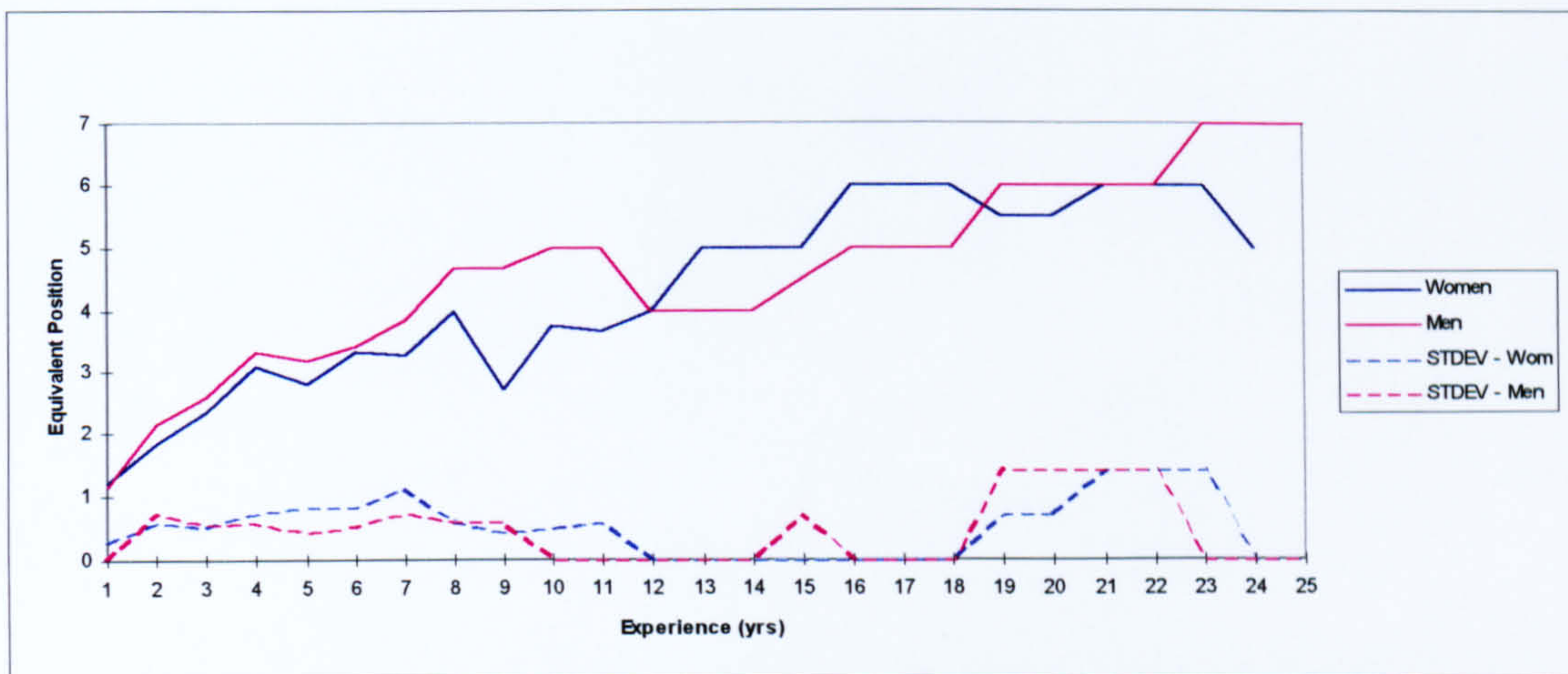


Fig 6.21: Average career progression for each year of career: time worked for Co.1 only.

When Co.1 employees were separated from the remainder of the sample, it could be seen that after 11 years, women with long service actually had a better overall career development rate than their male peers. This would typically equate to an employee reaching 32 to 33 years of age, and indicates that women who remain in the industry for a long period, and with a single employer, can expect late career acceleration. There was little variance in the progression rates of those taking part in the study through this period, and so it does not appear from the standard deviation, that the level of achievement of women through this period has been distorted by some having achieved exceptionally rapid progression. However, the low numbers of men and women in the sample brings into question the reliability of the career acceleration of women after this point.

The average tenure of the sample at each hierarchical level is shown in Table 6.5, and graphically in Figure 6.22. Tenure reached a maximum value at career point 5 for all groups, before progressively reducing through the senior levels. This infers that level 5 represents the slowest period of development for the construction professionals in the study. Why this should occur is unclear, and is beyond the scope of this research. However, women spent longer in virtually all positions before gaining promotion than men, and women from Co.1 in particular tended to plateau at point 5 on the career scale. This indicates that women had greater difficulty in achieving promotion at this career stage. However, Co.1 women progressed more rapidly than women in other organisations up until the level three stage (assistant operations management level). Thus, within Co.1 promotion through junior grades was relatively unproblematic, but became significantly more difficult the further that women rose through their organisational hierarchy.

Equivalent Position	Average Tenure (Years)			
	Co.1 Women	Co.1 Men	All Women	All Men
1	1.16	1.17	1.2	1.27
2	1.95	1.59	2.05	1.71
3	2.01	1.94	2.5	1.96
4	3.91	3.5	3.22	2.89
5	5.66	4	4.66	4.36
6	4	3	4	3.75
7	-	-	-	2

Table 6.5: Average tenure at each hierarchy level.

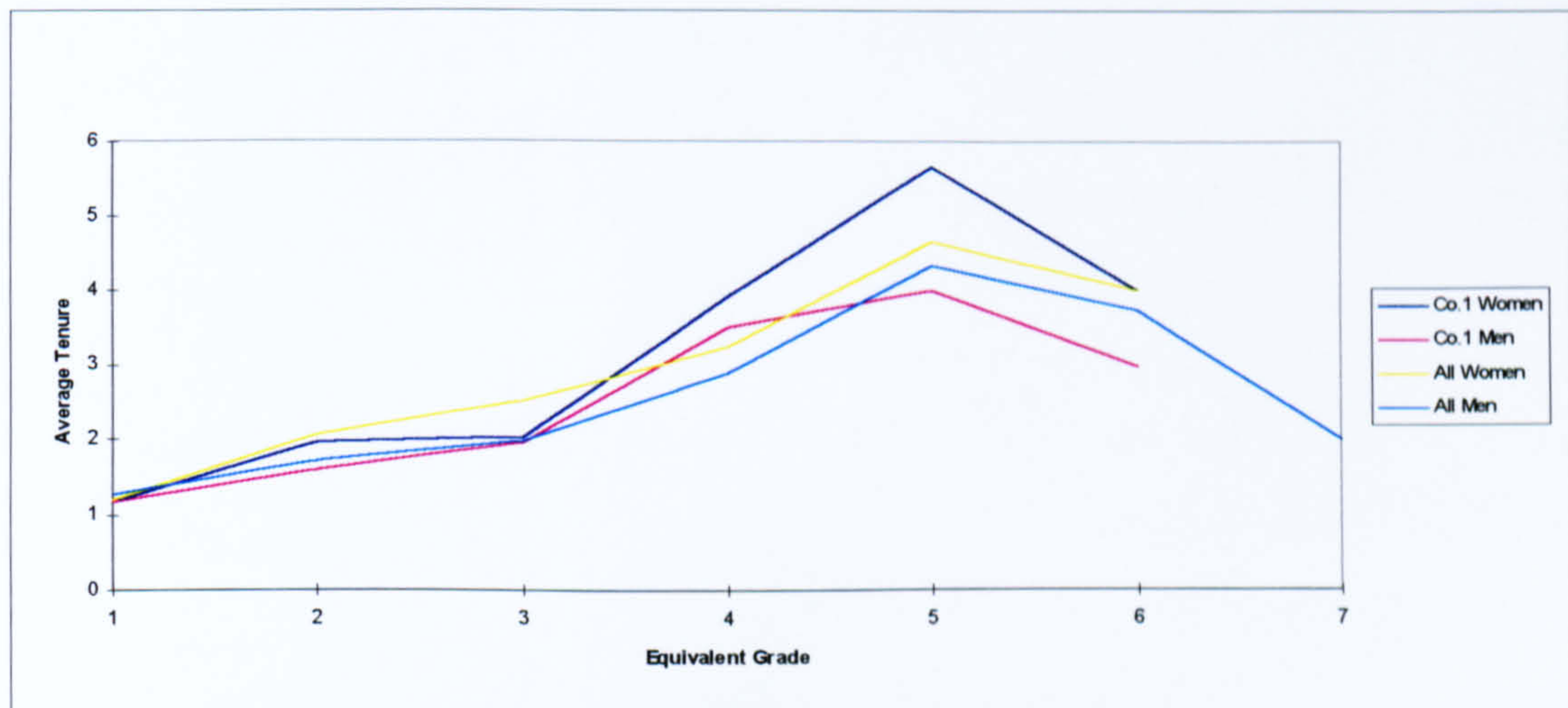


Fig 6.22: Average tenure at each career position

6.4 The Effect of Personal and Vocational Circumstances on Vertical Progression Dynamics

The relative effect of work and family contextual variables on the career dynamics of men and women were assessed by measuring the hierarchical level attained against the number of years that they had worked in the industry. This was carried out against each of the base data categories collected at the outset of each interview (see 5.4.2; 5.5.4). These variables included those which were work related (such as designation, organisation, ambition and qualifications), and those which were personally determined (such as marital status, number of children and geographical location). This analysis suggests whether trends in career progression may be attributable to the personal situations and career choices of the informants.

6.4.1 Analytical approach

Even though a standardised scale was utilised, the career positions of the informants remain ordinally spaced, in that the distinction between each hierarchical position in their respective company was not equidistant. The lack of an interval/ratio variable scale means that any inferences made of 'typical' progression traits of the informants are likely to be spurious⁴. In the absence of an interval/ratio scale, little can be established of the arithmetical qualities of the data (Bryman and Cramer, 1997). Thus, any inferences derived from this analysis have to be made from a simple visual interpretation of the data to establish the comparative effects that each of these variables have on men's and women's careers. For this reason, each of the charts below have been annotated with a grid to allow men's and women's career positions to be comparatively viewed for the effect of each of the base data variables⁵. The relative performance of each informant can be assessed by the section of the chart that they occupy (see Fig 6.22). The number of men and women appearing in each square of the matrix indicates the relative success of that group in developing their career under each issue explored. Where gender differentiated progression is apparent from the graphs, this suggests areas for interpretative investigation in the qualitative data.

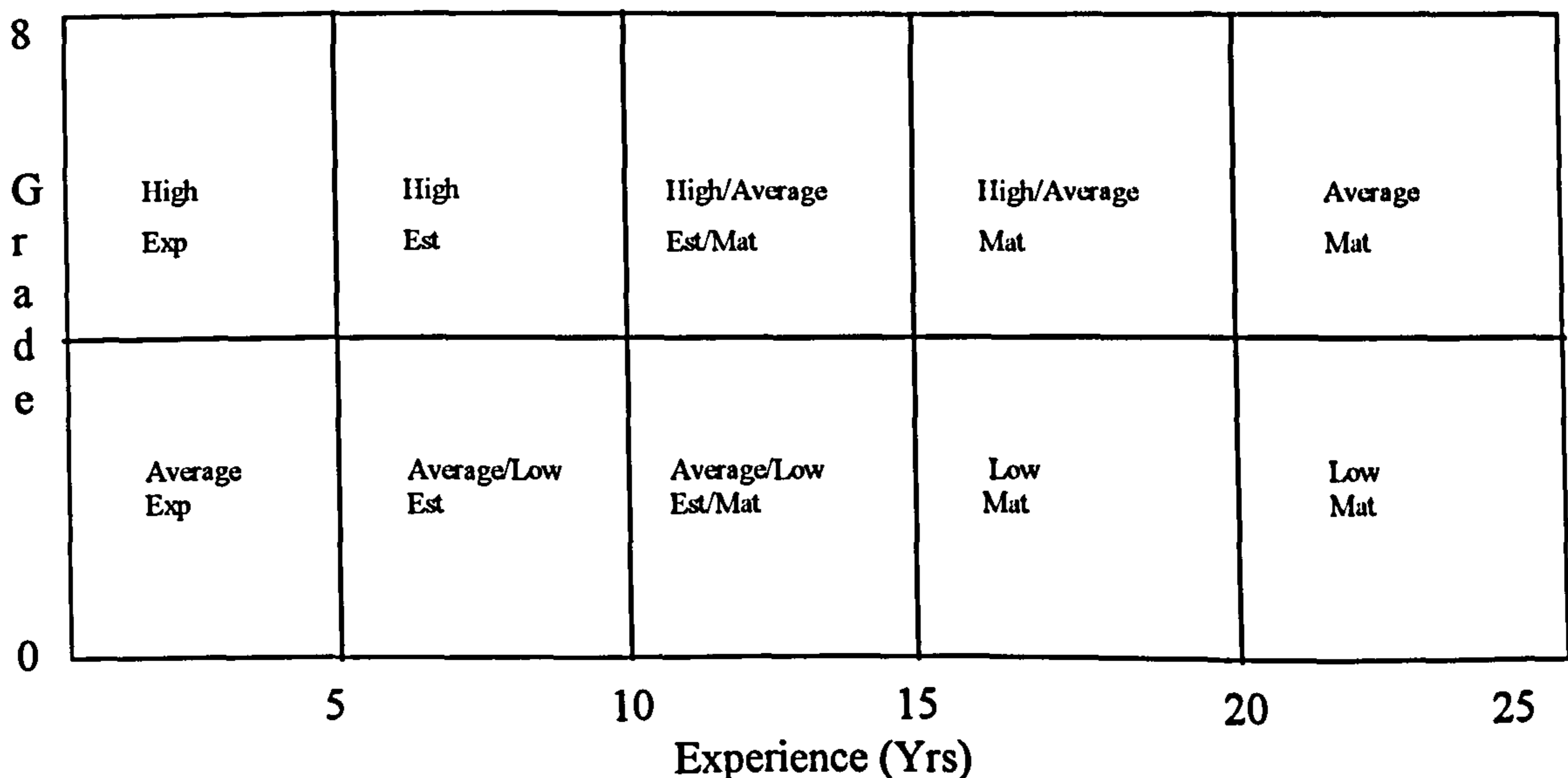


Fig 6.23: Career progression classification matrix

Key: *Exp* - Expanding career stage; *Est* - Establishing career stage; *Mat* - Maturing career stage

⁴ For example, an informant graded at level 2 is not necessarily twice as senior as someone at level one.

⁵ This approach was adapted from the work of McCrary (1993), who mapped career patterns in the construction sector using a similar technique.

6.4.2 Work experience

Figure 6.24 shows the career progression of the informants against their experience. Men reached senior positions sooner than women, following a fairly standard progression (i.e. the career positions follow an approximately linear progression to senior positions, but with progressively longer tenure as they are promoted through the hierarchy). There appears to be more diversity in women's progression, as several points deviate from a standard development rate. The majority of the higher achievers were men, and the majority of the lower achievers were women.

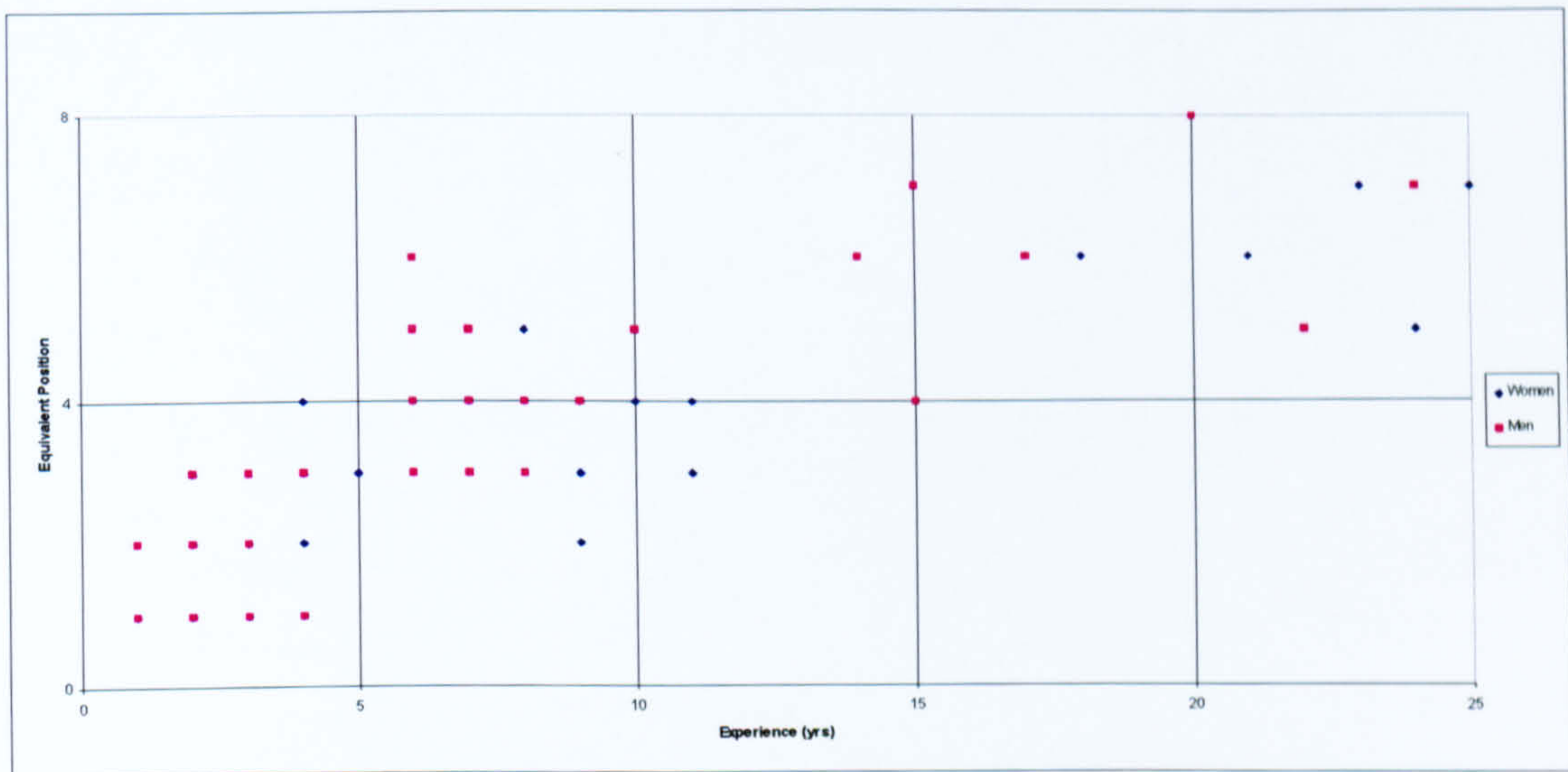


Fig 6.24: Experience by hierarchical position (all employees).

A different progression pattern emerged when Co.1 employees were examined in isolation (see Fig 6.25). Whilst this analysis does not take into account the previous development of the Co.1 employees within other organisations (i.e. it represents their career positions at a particular point in time), it indicates that there is more conformity in career position between men and women, and that women are likely to enter the organisation in hierarchical positions that correlated with their experience.

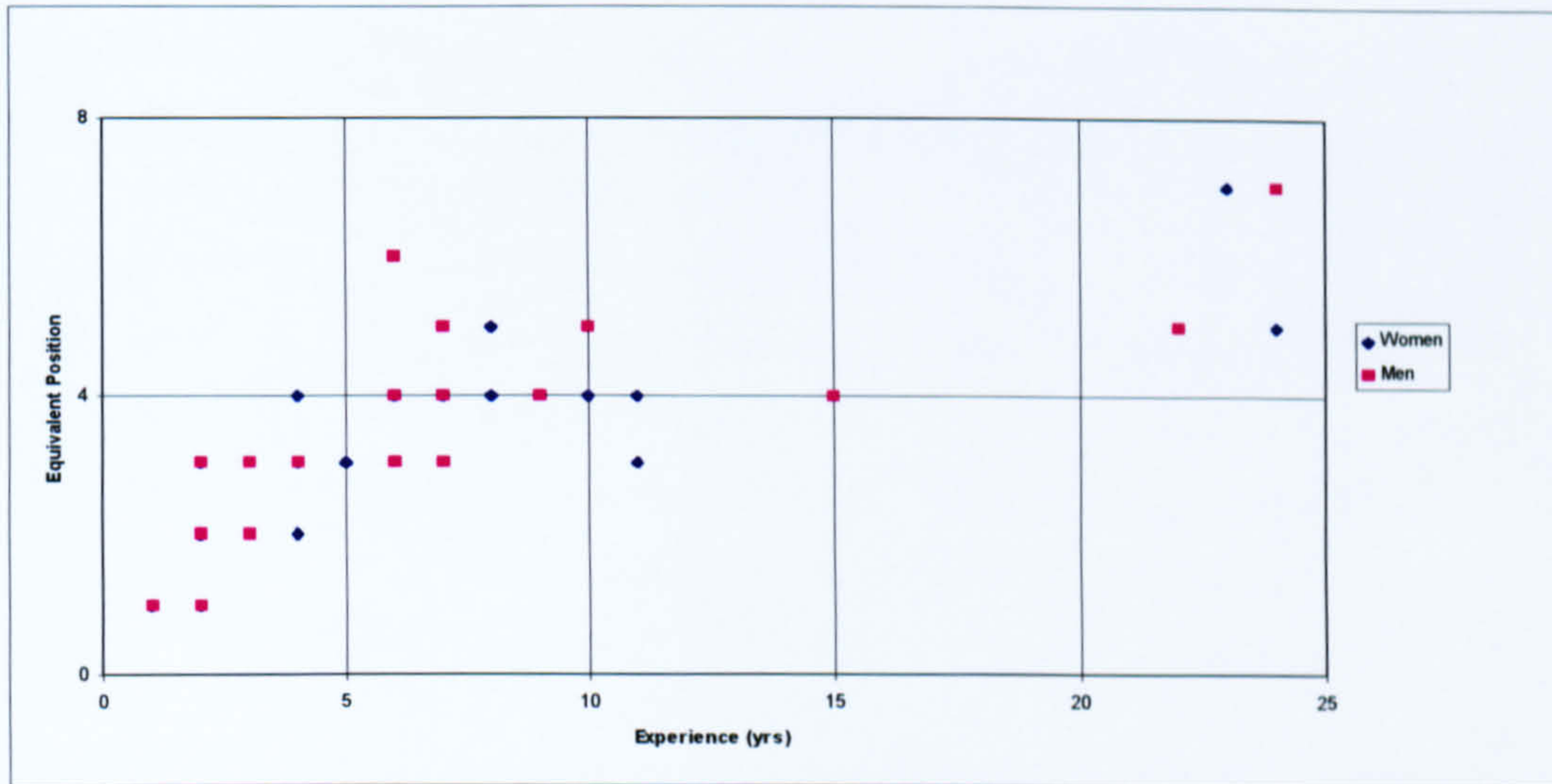


Fig 6.25: Experience by hierarchical position (Co.1 employees only).

6.4.3 Career progression, ambition and ability

The effect of individual ambition on the rate of career development was ascertained by comparing hierarchical positions by experience by the informants' self-perception of their ambition. Informants ranking themselves at level 1 or 2 were deemed as having low ambition, those at level 3 were deemed to have average ambition, and those at levels 4 and 5 were deemed to have high ambition. Figure 6.26 shows that only women with a high self-perception of their ambition had reached senior positions. This suggests that the ambition scale is valid. Moreover, figure 6.18 showed that the women's ambition was markedly higher where they had worked for only one or two previous employers. Hence, loyal and ambitious women were likely to be able to develop their career most rapidly, and remain within the industry in the longer term.

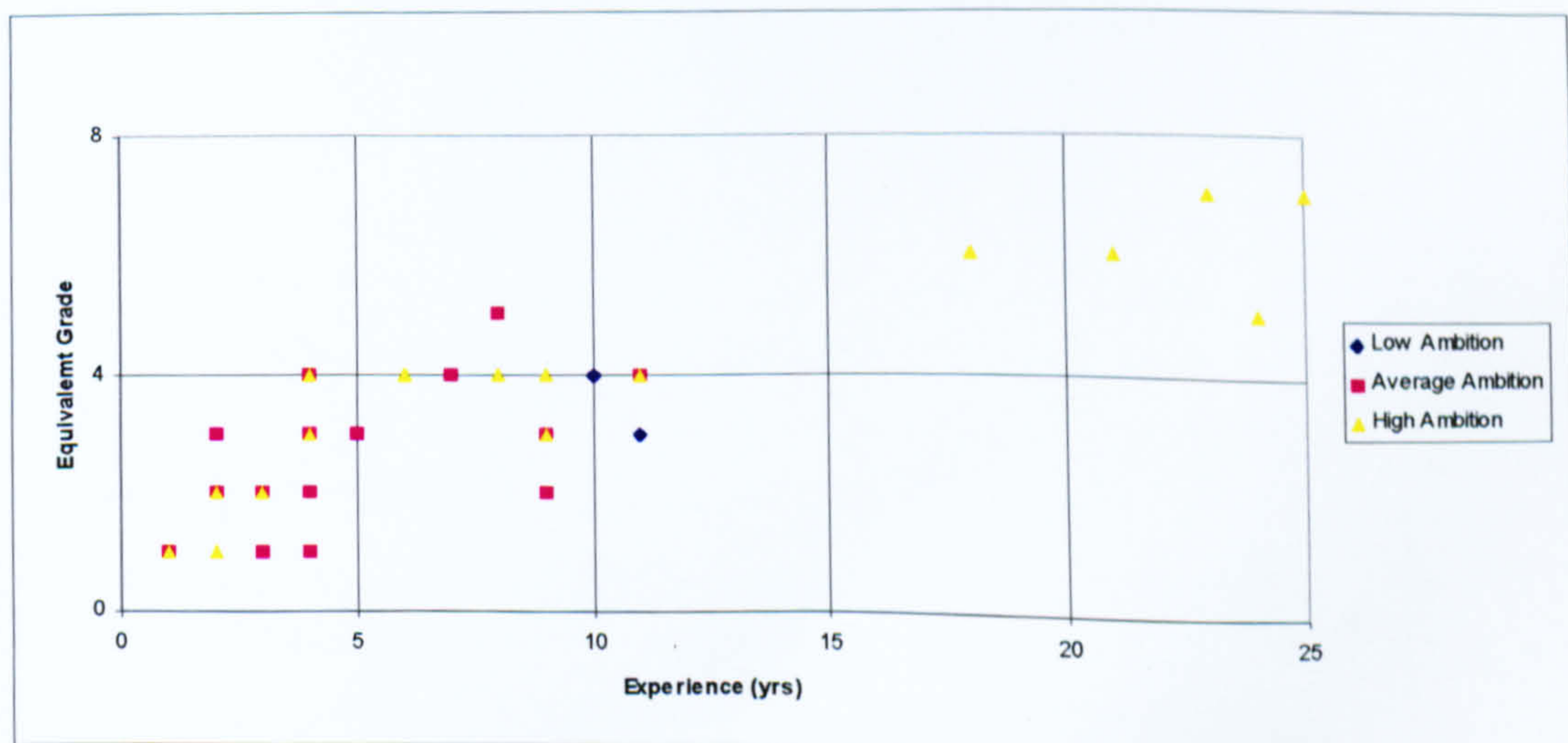


Fig 6.26: Hierarchical position by ambition levels: women

Figure 6.27 shows the positions of men by their perceived ambition. Whilst a similar trend of higher levels of success correlating with seniority are apparent, two further salient points emerge from this comparison: that ambitious male construction professionals are more successful than ambitious female professionals; and that those of average ambition are as likely as ambitious women to remain in the industry in the long-term, and succeed in reaching a senior position. Hence, ambition appears less significant to men's development than it does to women's.

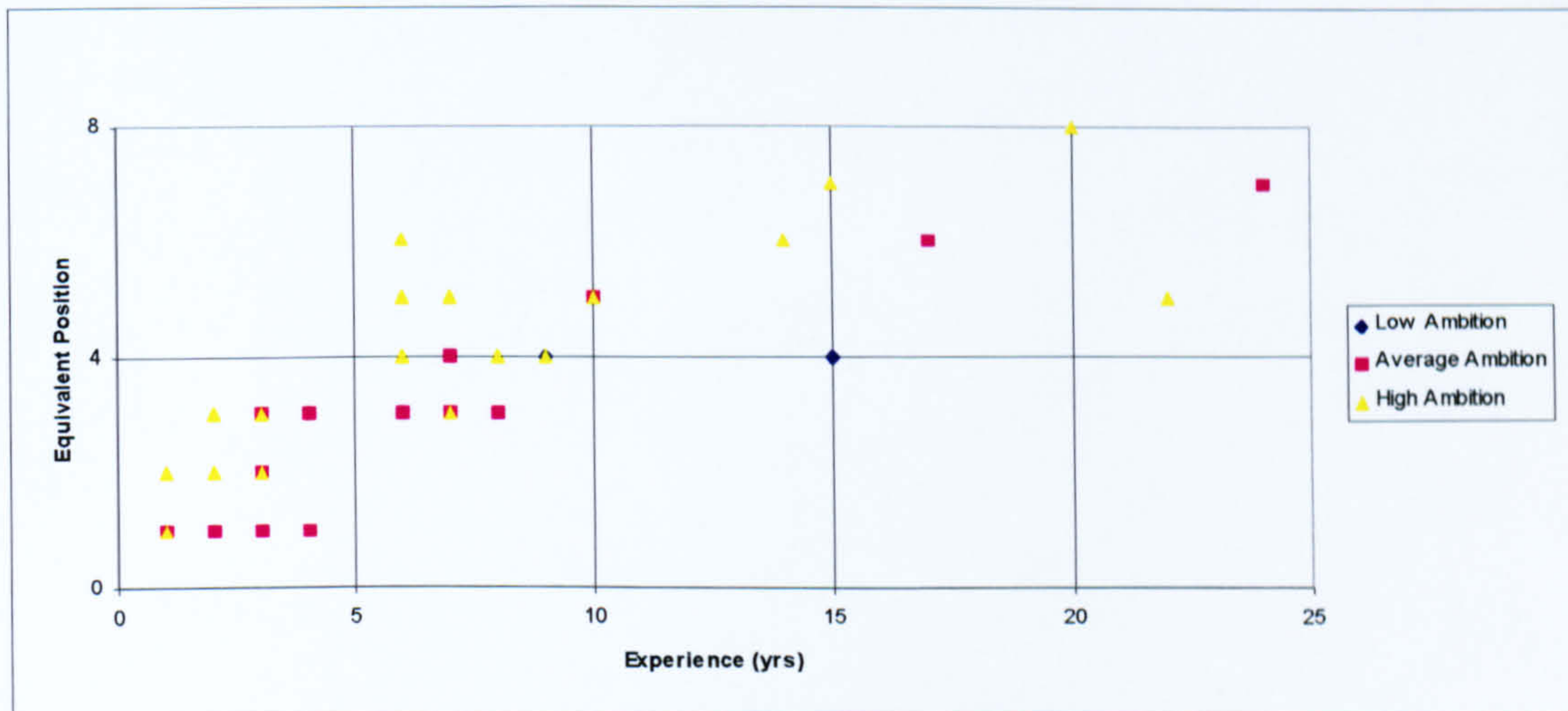


Fig 6.27: Hierarchical position by ambition levels: men

The ambition levels of the informants were marginally higher for men and women working in support positions away from the production side of the business (Fig 6.28). Experienced women also had higher perceptions of their own ability (Fig 6.29). This indicates that ability (or self-belief) was a pre-requisite for successful career development, or vice-versa. A similar trend is apparent for men (Fig 6.30).

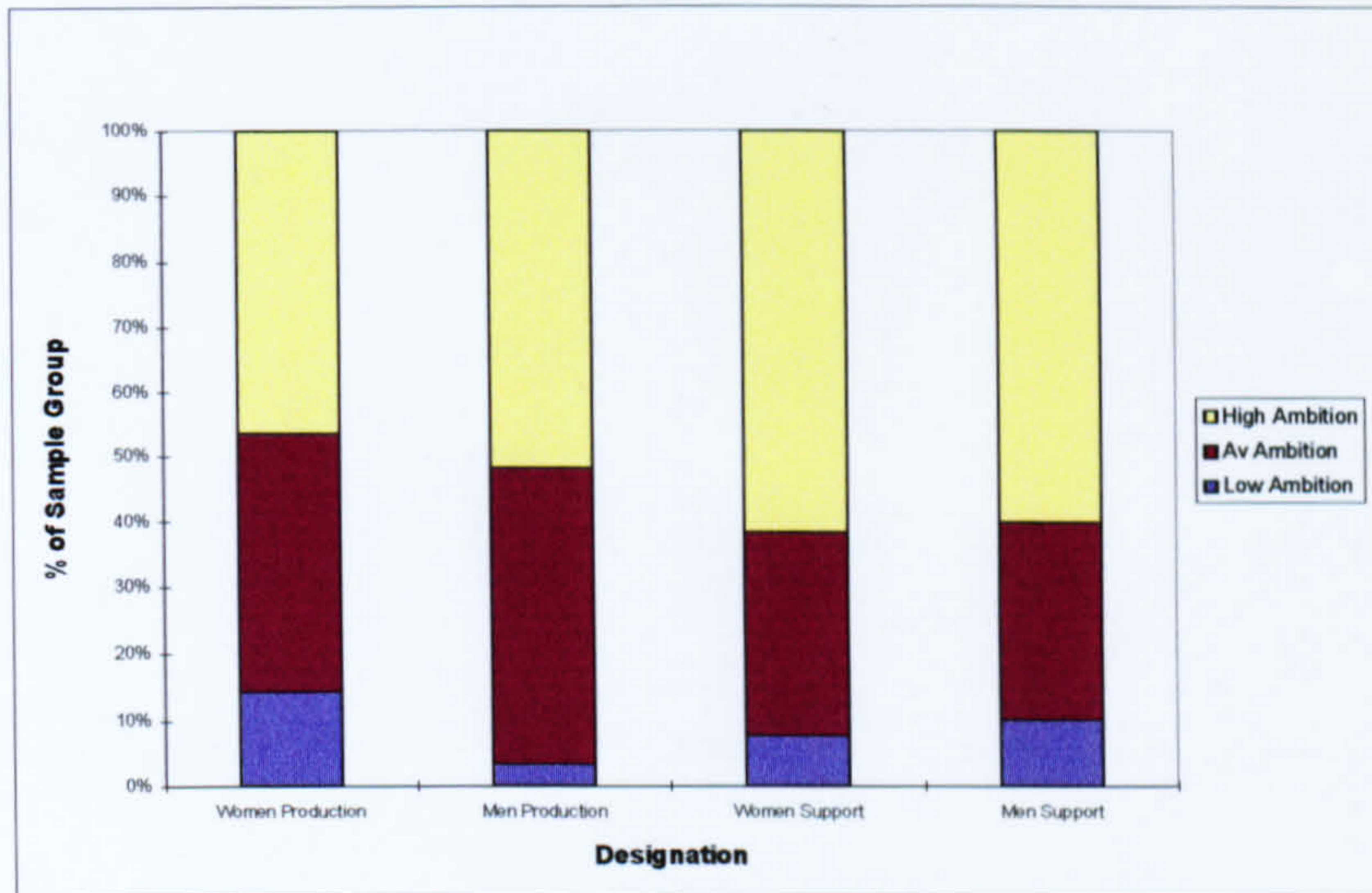


Fig 6.28: Ambition levels for generic job function

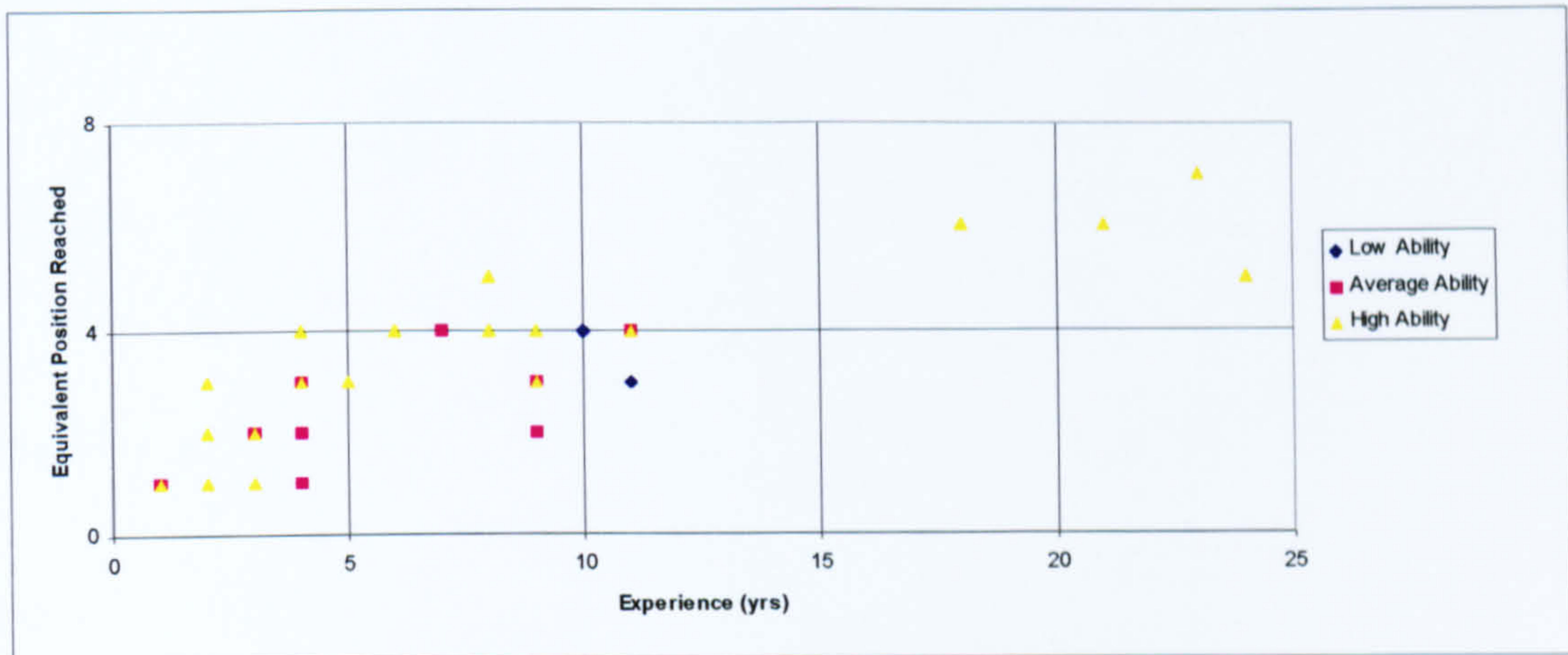


Fig 6.29: Hierarchical position by ability levels: women

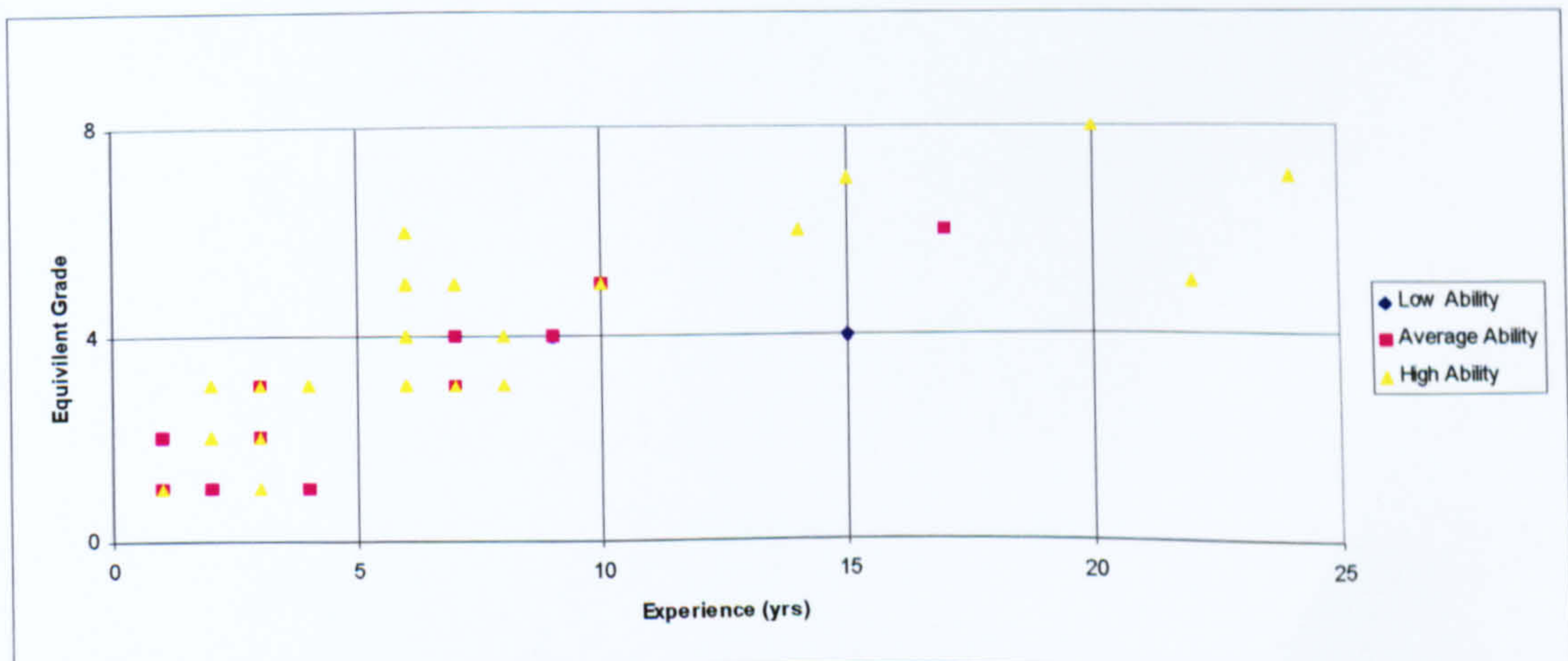


Fig 6.30: Hierarchical position by ability levels: men

Informants with lower ability scores tended to be in their establishing - maturing career stages (Fig 6.31). The 6-11 year experience group felt that their ability was lowest out of the female informants. This reinforces the contention that ambition declines as informants

careers progress, and suggests that progression difficulties exist for women in the establishing career stage. This is also supported by the average tenure of the sample (6.3), in which it was shown that women found it difficult to develop beyond point five.

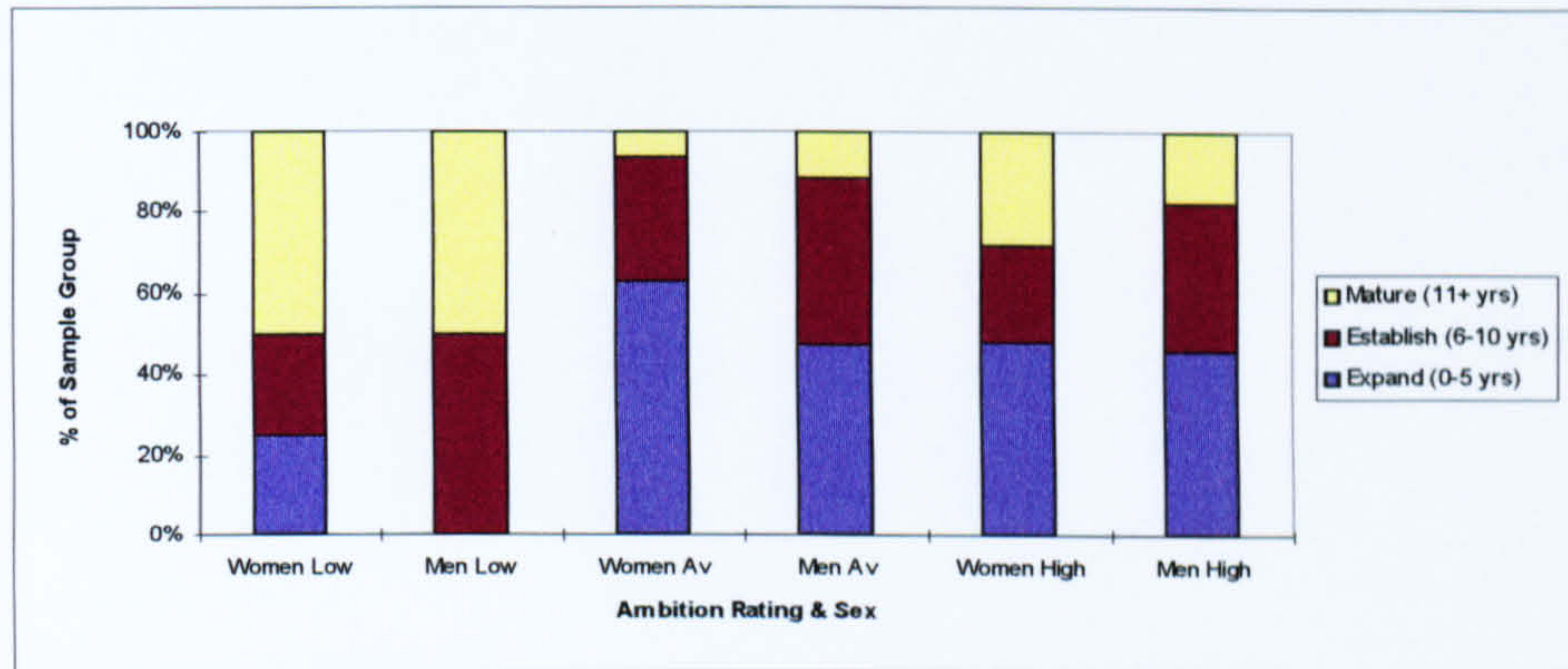


Fig 6.31: Perception of ability at each career stage

6.4.4 Geographical location

Despite a large number of prestigious projects in London and the south east of the country at the time of the interviews, geographical location had little effect on the progression of the informants. This is demonstrated by Fig 6.32, although this chart does not indicate whether the informants worked prior to the project that they were working on at the time of the interview.

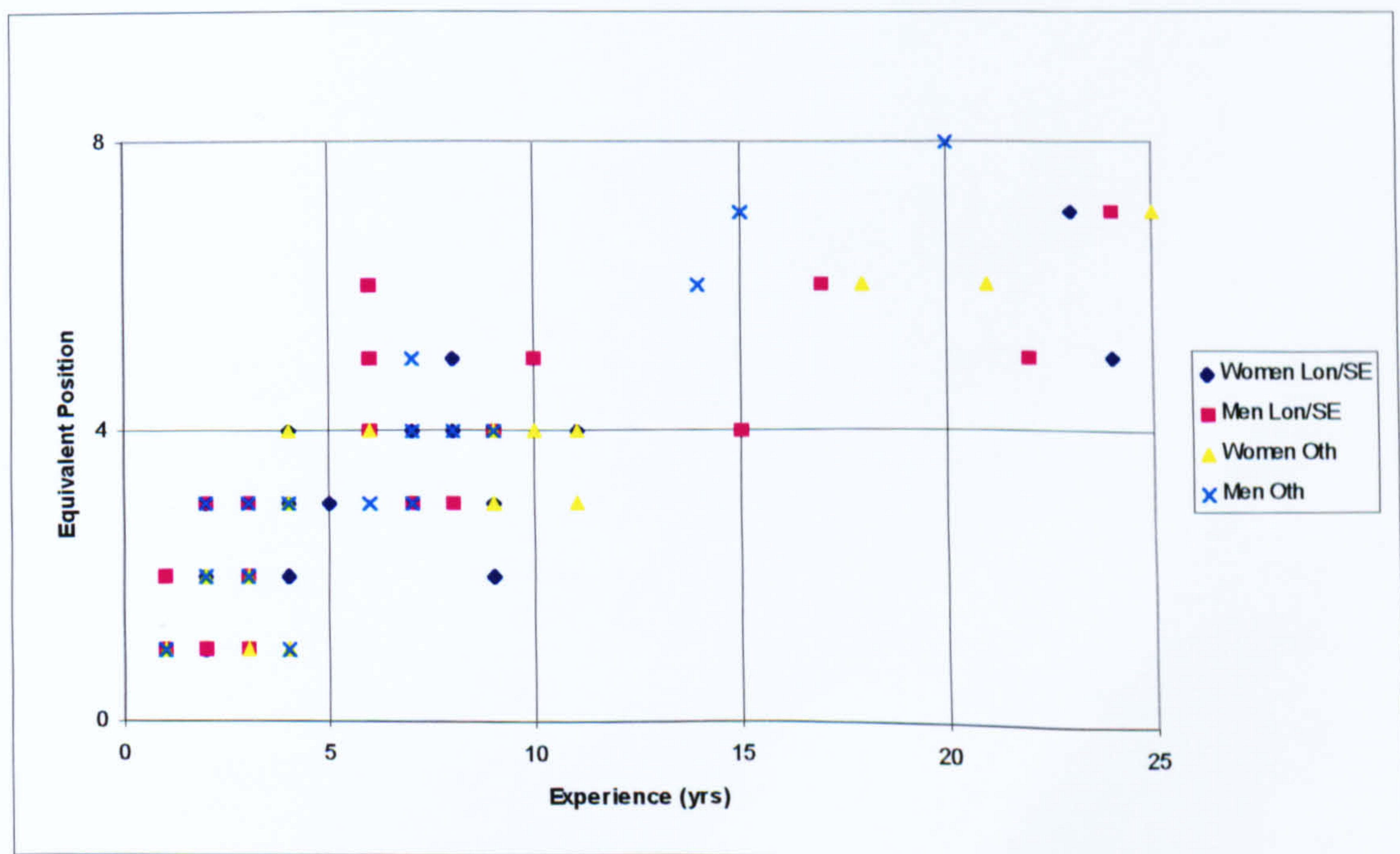


Fig 6.32: Career progression by geographical location

6.4.5 Qualifications

Informants with degree level qualifications had more rapid career progression than those without (Fig 6.33). However, the career enhancing benefits of higher degrees were more significant for men and women (Figs 6.34 and 6.35).

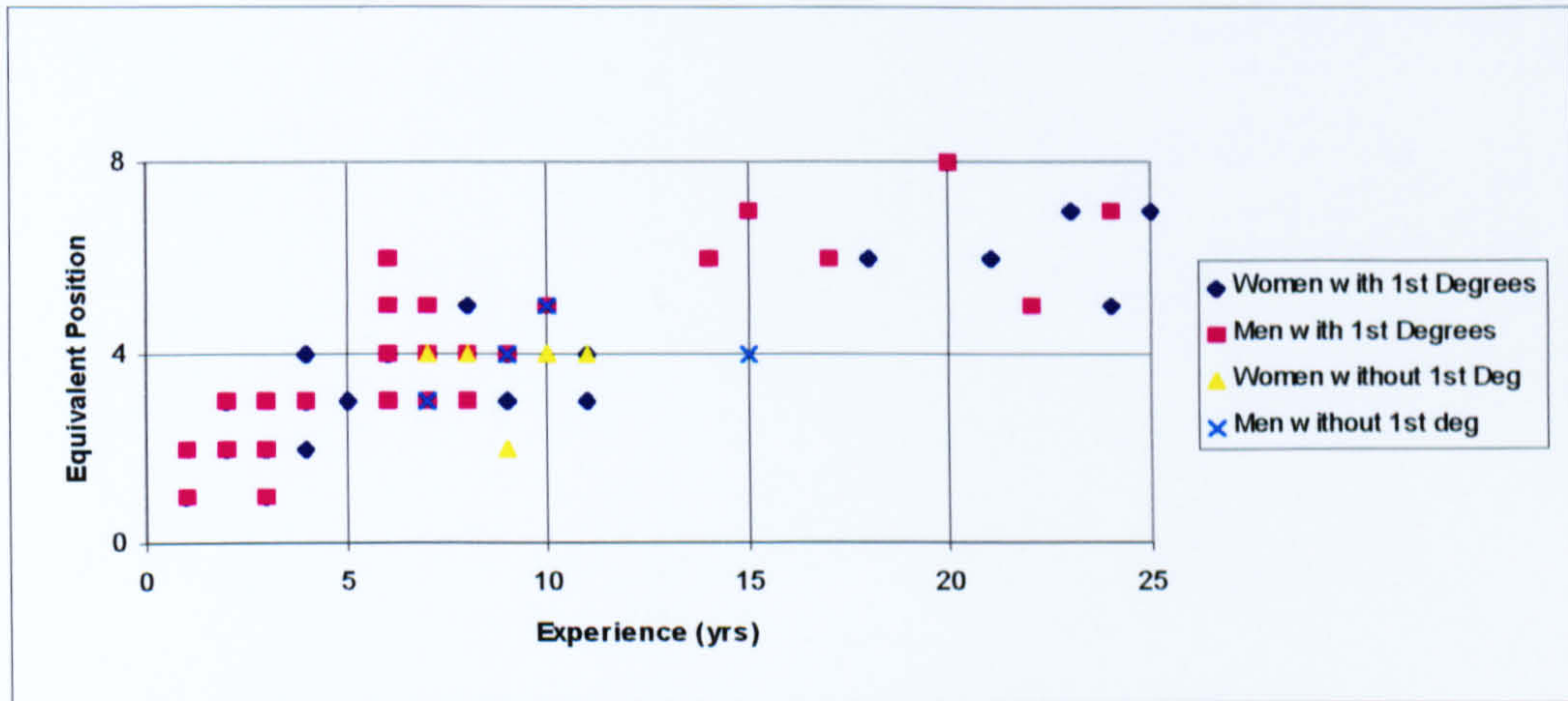


Fig 6.33: Career progression by academic qualifications and sex

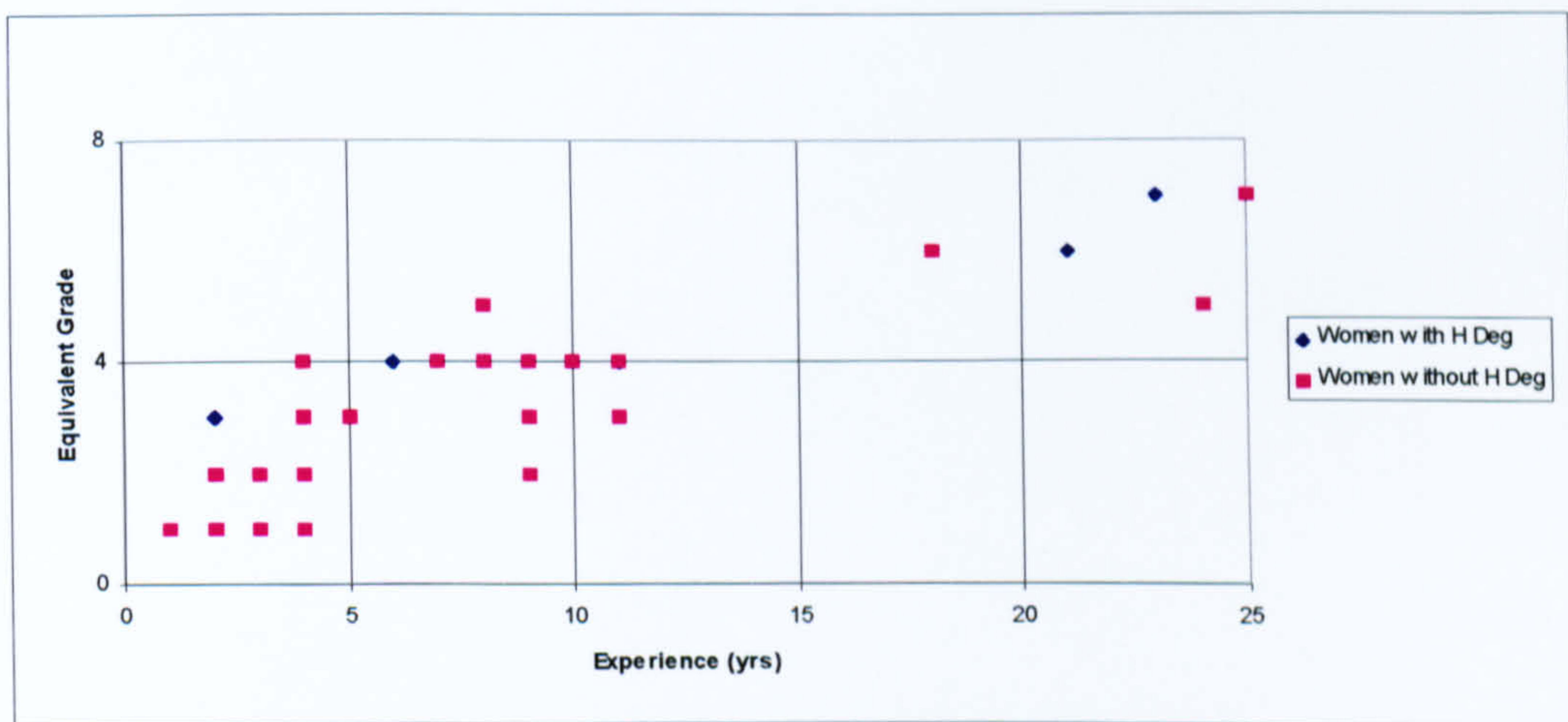


Fig 6.34: Career progression for higher degrees: women

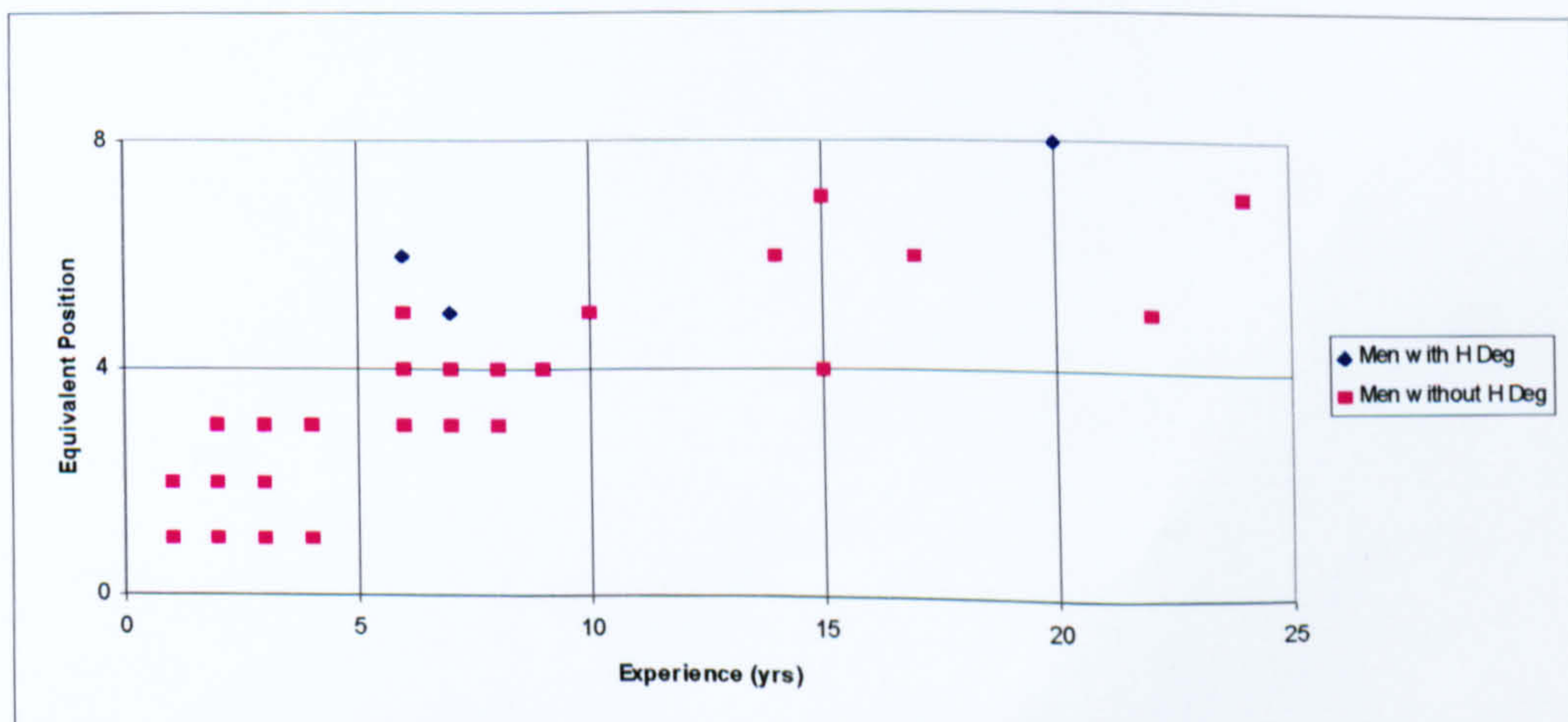


Fig 6.35: Career progression for higher degrees: men

Unsurprisingly, informants with greater experience were more likely to have obtained professional qualifications. However, men were more likely than women to have benefited from them in terms of vertical progression (Fig 6.36).

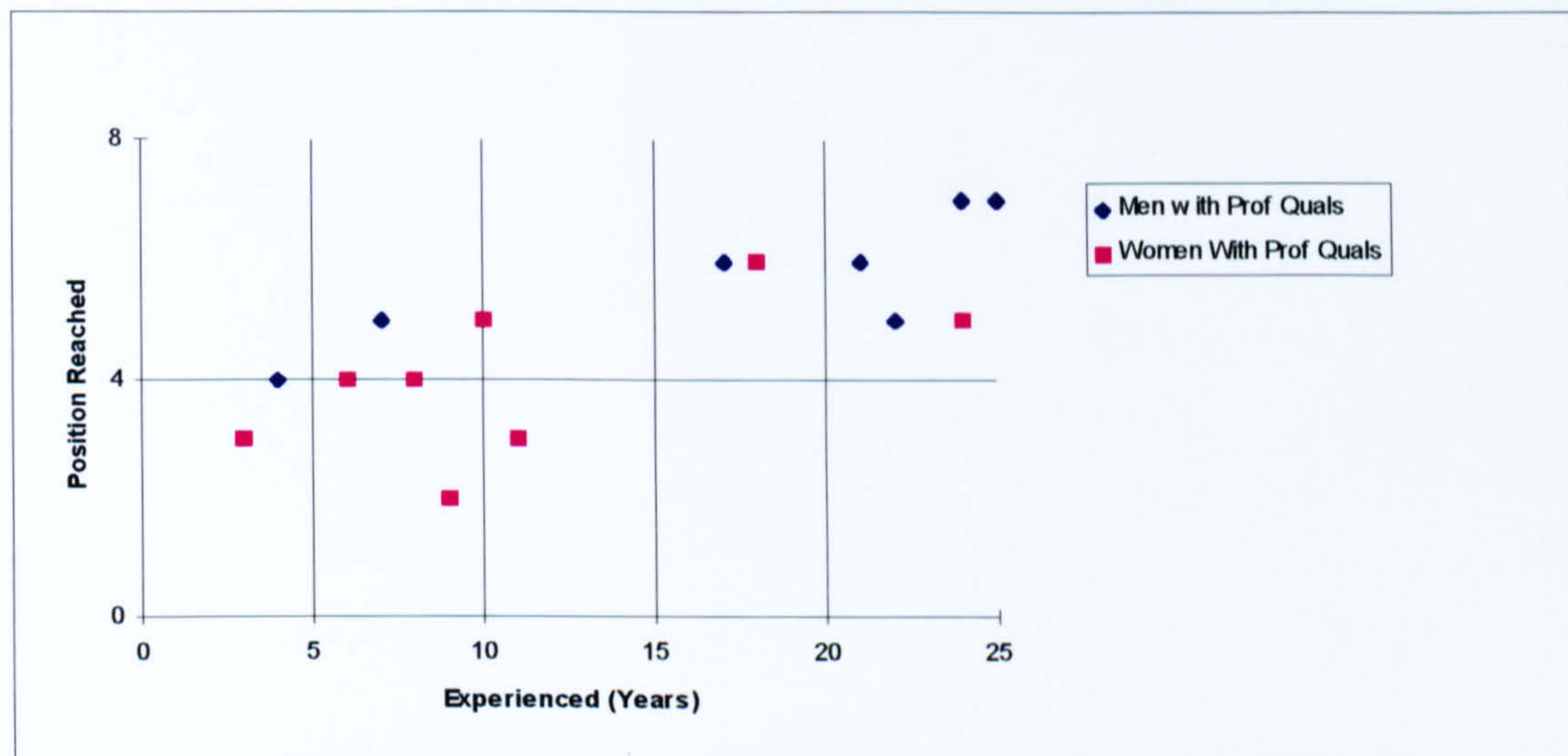


Fig 6.36: Career progression of professionally qualified informants by sex

Also evident from Figure 6.36 was that women gained professional qualifications earlier in their careers than men. This suggests that younger women value professional qualifications to a greater extent than men. Men with over 15 years experience were more likely to have gained professional qualifications than their less experienced colleagues. This points towards a declining influence in the importance of professional qualifications amongst male construction professionals, or that men tend to study for them in later career stages.

6.4.6 Project size

Most of the interview sample worked on specific projects. The nature of the projects that the informants were working on at the time of the interviews were assumed to be the typical size of project that they were usually involved with. This assumption could be made because the operating divisions of the participating companies tended to deal with projects of a similar size and nature. The interview sample were broadly divided between those working on large and complex projects over £20m and those working on smaller projects under £20m. A progression analysis of these individuals indicated that, in general, women appear to be more successful on smaller projects (Fig 6.37), whilst men appear to have more rapid progression on the larger projects (Fig 6.38).

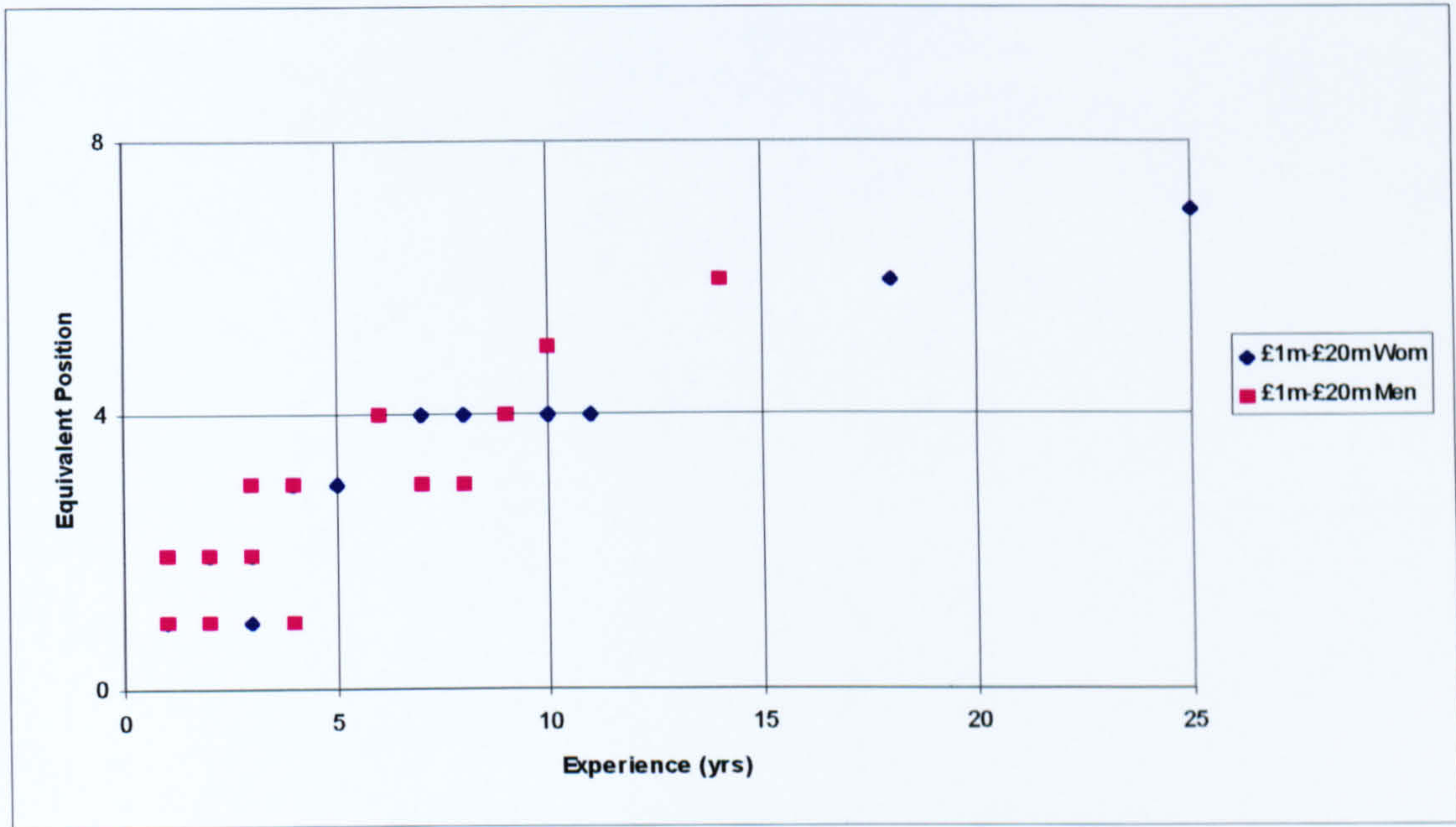


Fig 6.37: Career progression by sex: projects <£20m

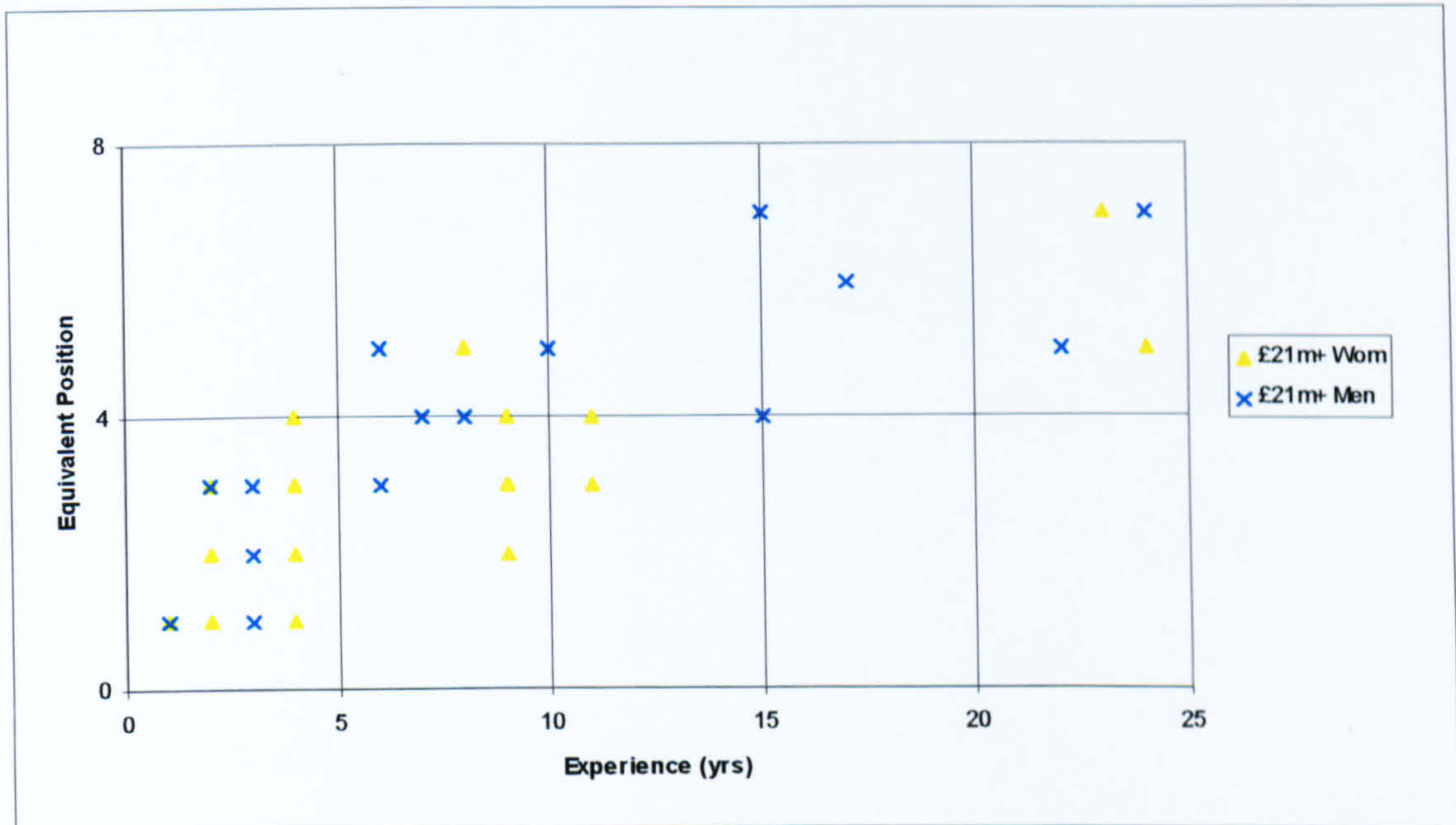


Fig 6.38: Career progression by sex: projects >£20m

6.4.7 Previous employers and length of service

Men were rewarded with rapid vertical progression for remaining loyal to their employer. Figure 6.39 shows that men with five years or more service with their employer progressed at a more rapid rate than their female peers. When men with shorter service were compared to women, they could be seen to have progressed at an approximately equivalent rate. Similarly, Figs 6.40 and 6.41, show that men without previous employers progressed at

more rapid rates than their female colleagues, whereas those who had moved between companies progressed at a similar rate. Thus, organisational loyalty appeared to be a strong career determinant. Men and women who had shown loyalty to their respective organisations were more likely to have reached senior positions than those exhibiting frequent inter-company mobility.

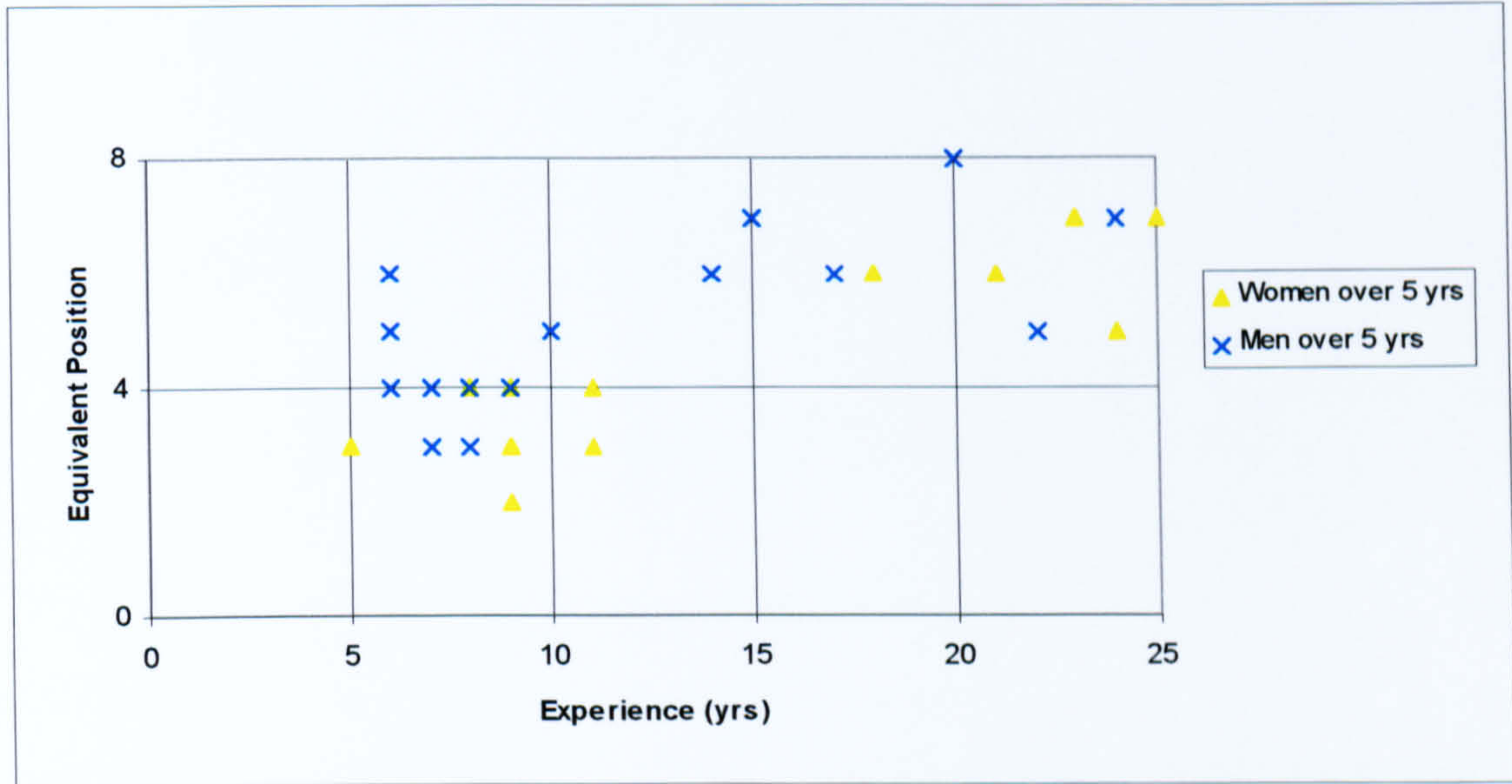


Fig 6.39: Career progression of employees with over 5 years service to present employer by sex

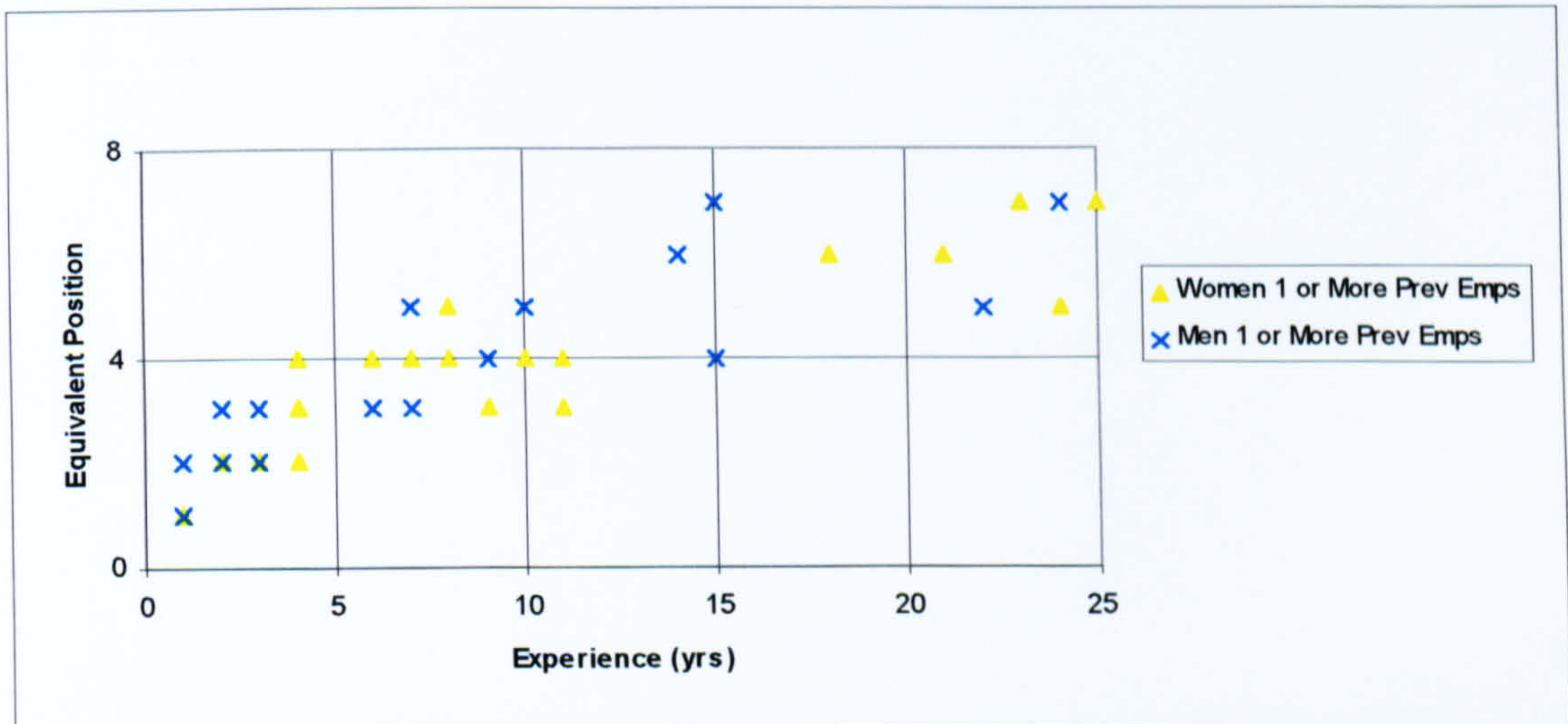


Fig 6.40: Career progression of employees with one or more previous employers by sex

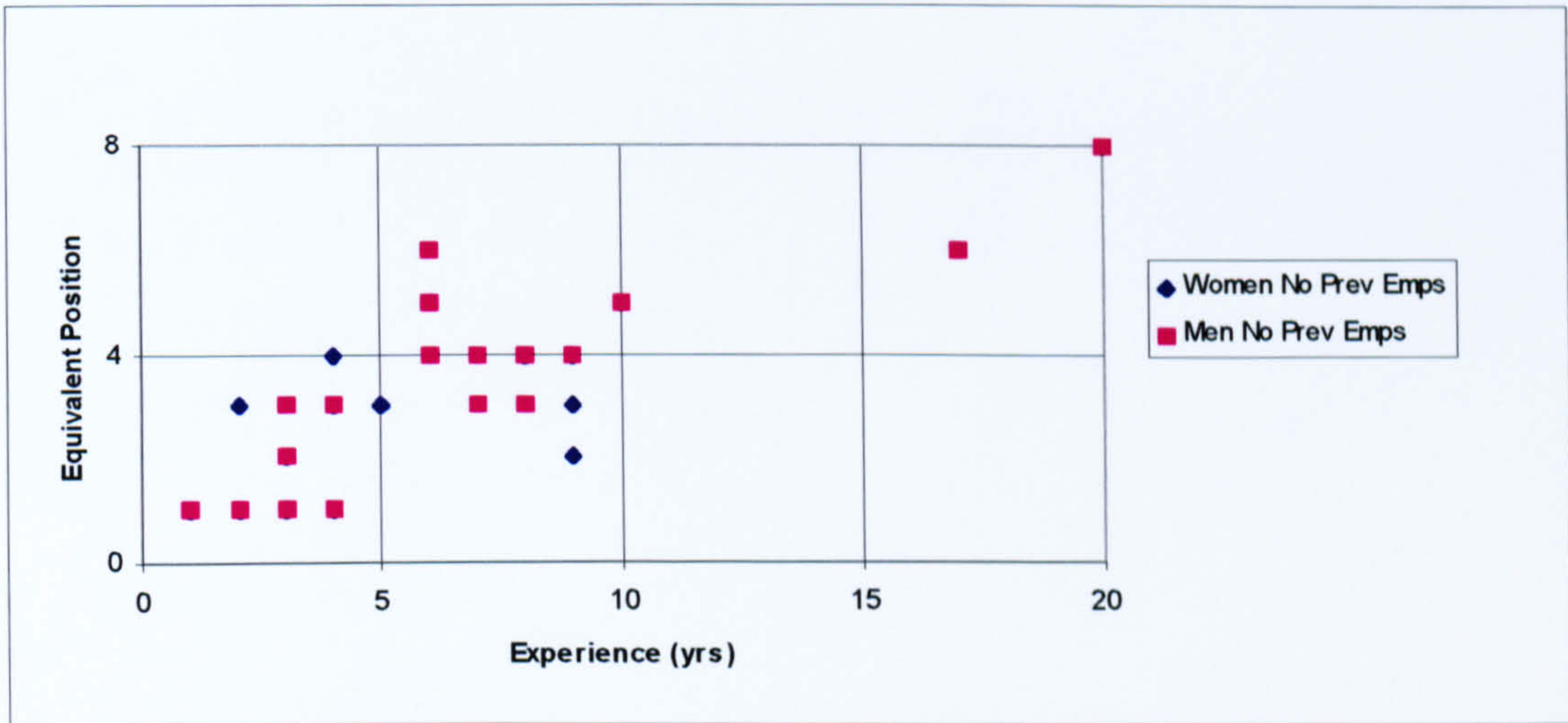


Fig 6.41: Career progression of employees working for only one organisation by sex

6.4.8 Marital/cohabiting status and dependants

There was no apparent relationship between the progression rate of the informants and their personal status (Figs 6.42 and 6.43). However, there were more women without partners than men, particularly at senior levels, whereas none of the male informants with over 8 years experience remained single.

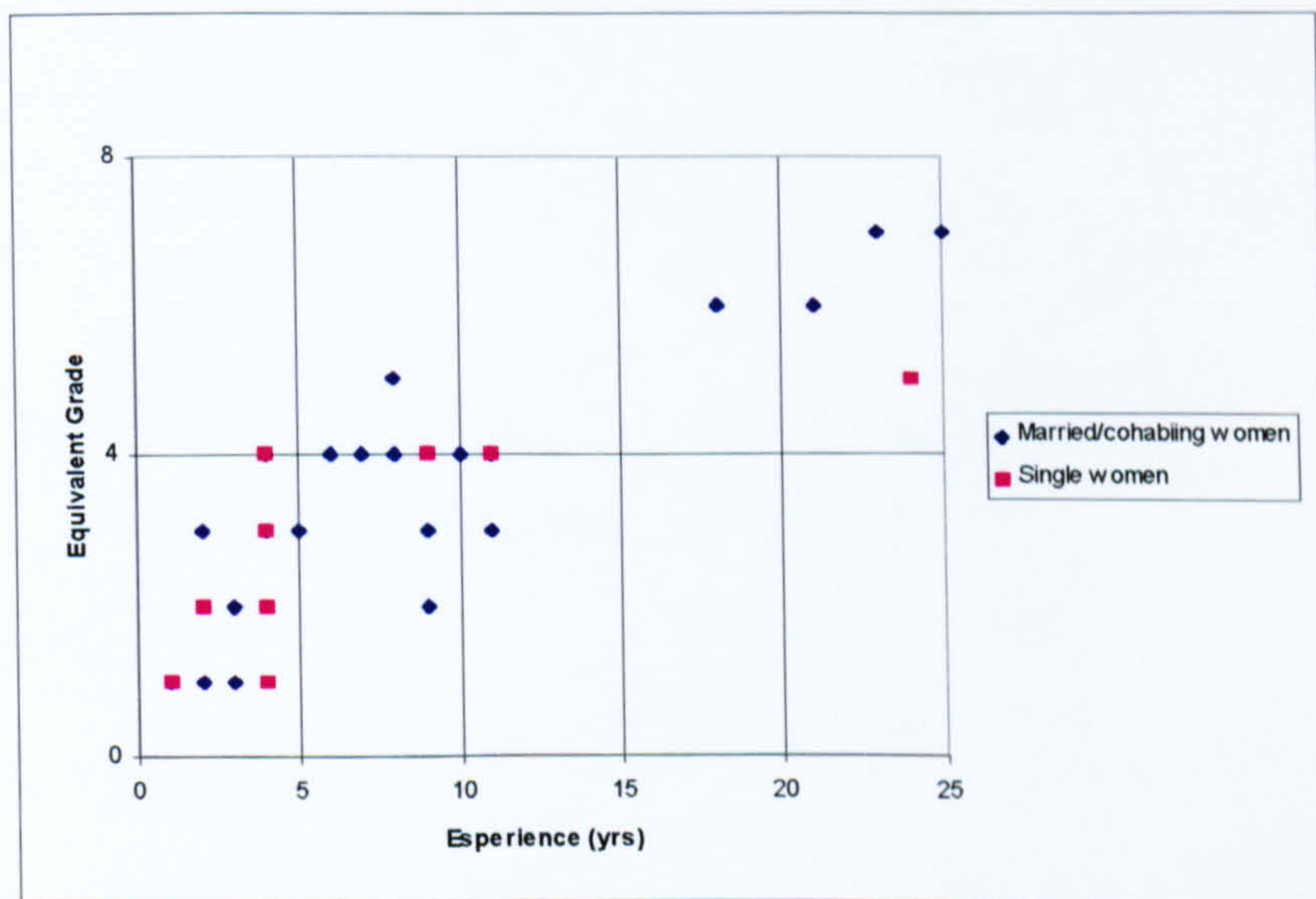


Fig 6.42: Career progression of women by marital/cohabiting status

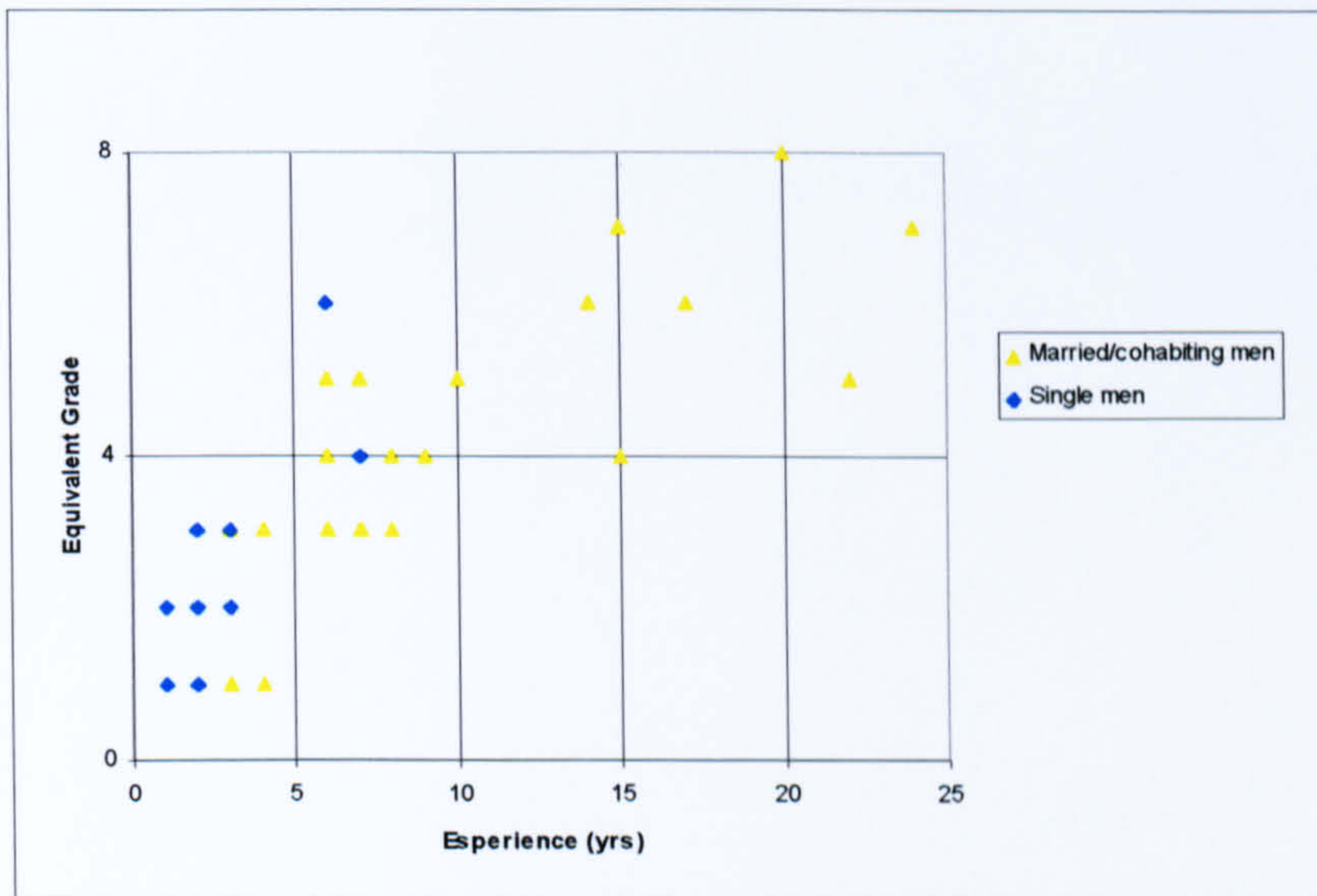


Fig 6.43: Career progression of men by marital/cohabiting status

Where married/cohabiting men and women were compared directly (Fig 6.44), men with a stable partner can be seen to have progressed more rapidly than women. Thus, being in a stable relationship is less likely to adversely affect men's careers.

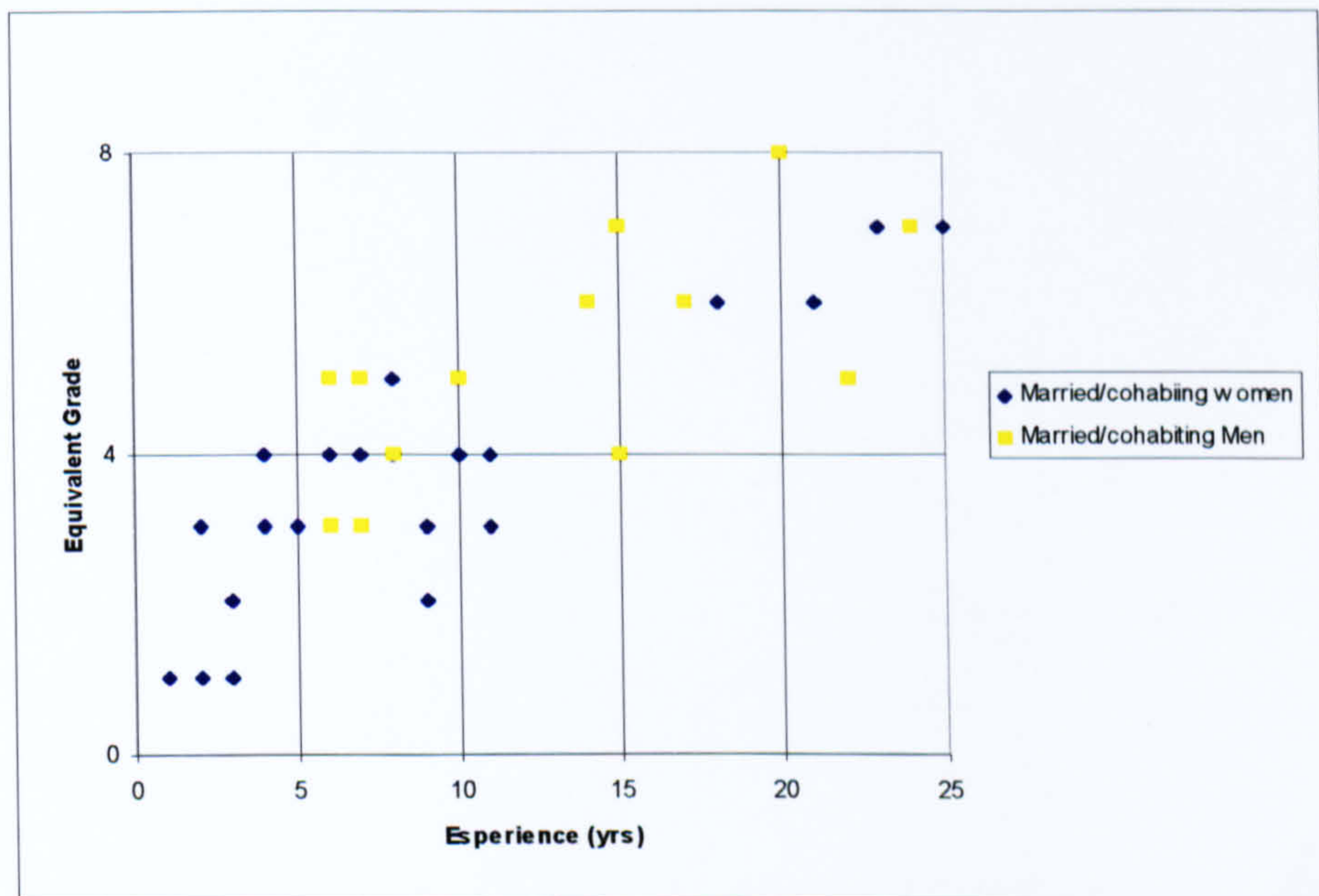


Fig 6.44: Career progression of married/cohabiting informants

Men without partners were also the most ambitious group in the sample (average rating = 4) followed by women without partners (3.6) married men (3.5) married women (3.4) and then cohabiting men (3.38) and cohabiting women (3.2). Single informants remained ambitious throughout the three career stages.

There was little indication that having children had a detrimental affect on progression rate (see Fig 6.45). Although men with children progressed more quickly than the women with children, only two women had children in the sample, and only one of these was working in a site based position (see 6.1.2). This in itself may be a more significant finding than the effect of having children on their progression dynamics. Moreover, these findings have increased relevance when the personal and vocational circumstances of the female informants are also considered (see 6.1.2 above). This is because most of the women worked in national divisions, whilst at the same time were less likely than men to have children or long-term partners. This suggested an increased likelihood of work/family conflict for women.

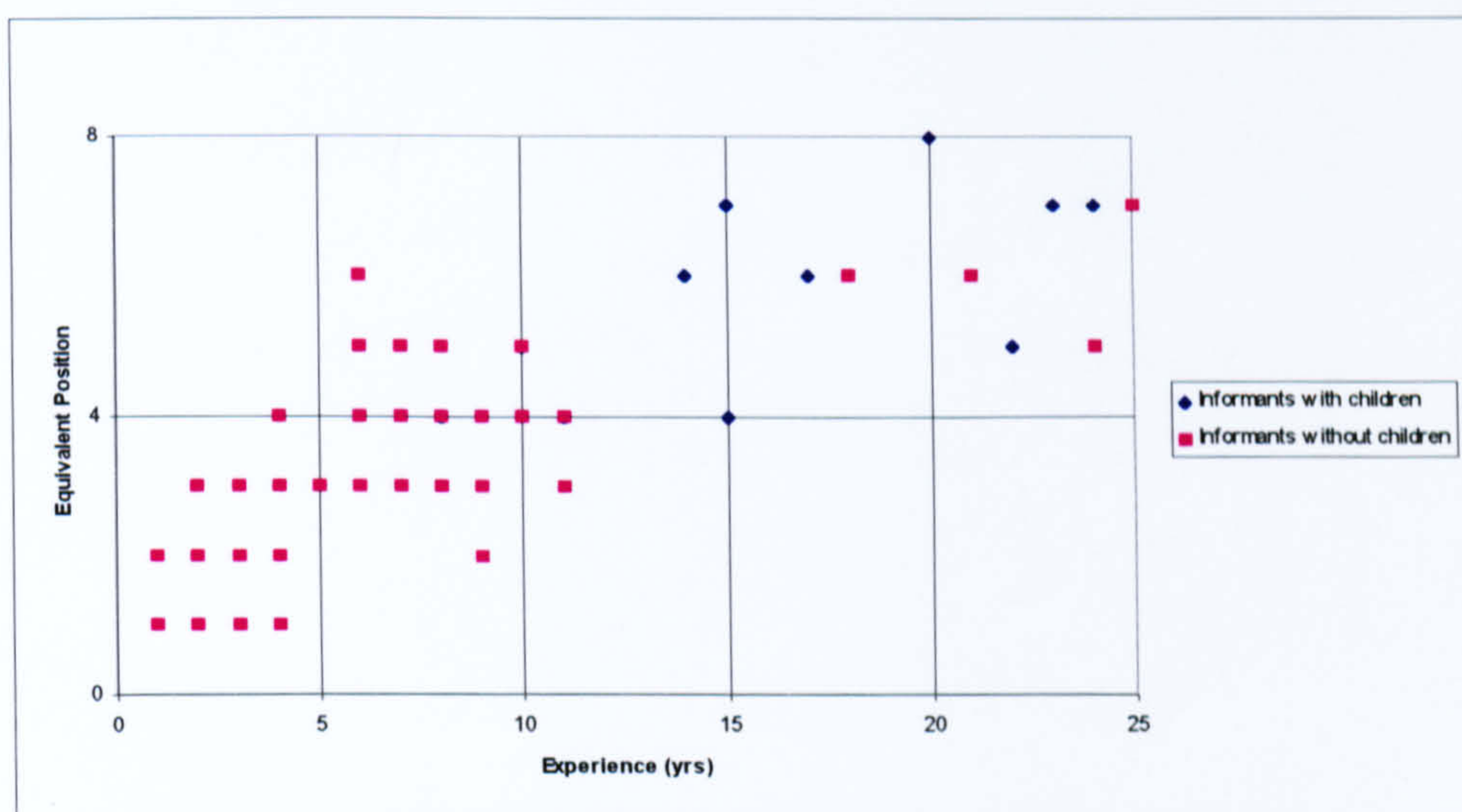


Fig 6.45: Career progression by family circumstances

6.4.9 Designation

Whilst the informants comprised a diverse range of different productive and supportive professionals, the two most prevalent were quantity surveying and construction management. There were more female quantity surveyors than any other profession within the companies taking part. However, construction managers tended to have better overall long-term progression prospects (Fig 6.46). Supporting positions such as design managers and design engineers tended to be based away from site, and exhibited longer service to their respective organisation. This may be because site based staff are likely to move to office based positions in the long term. They had generally developed their careers more rapidly than their site based colleagues.

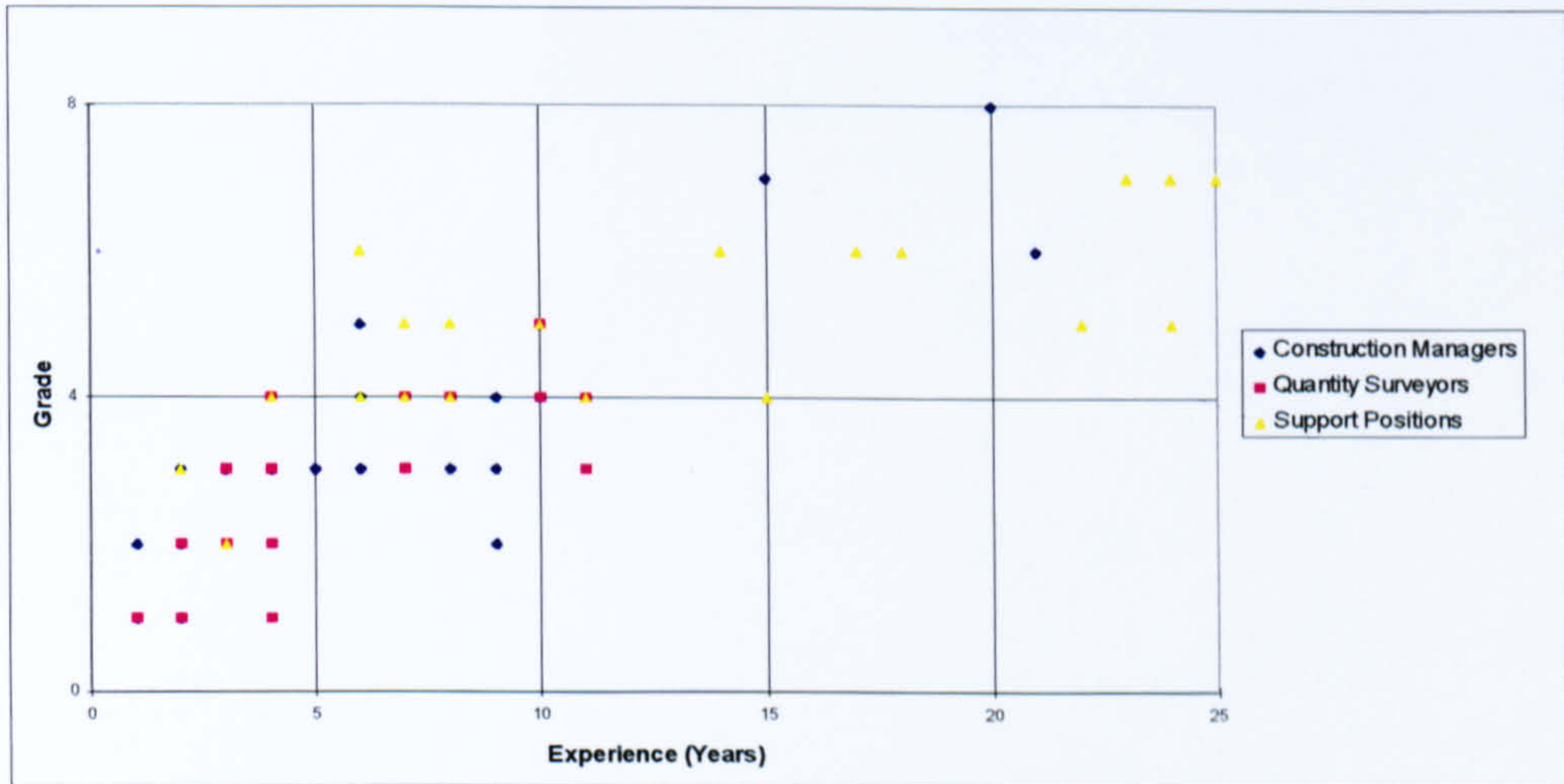


Fig 6.46: Career progression by designation

Figures 6.47 and 6.48 show the progression rate of men and women for the two main career paths of quantity surveying and construction management. Whilst there appears to be little gender differentiated disparity in career progression for quantity surveying, there was a significant difference in construction management.

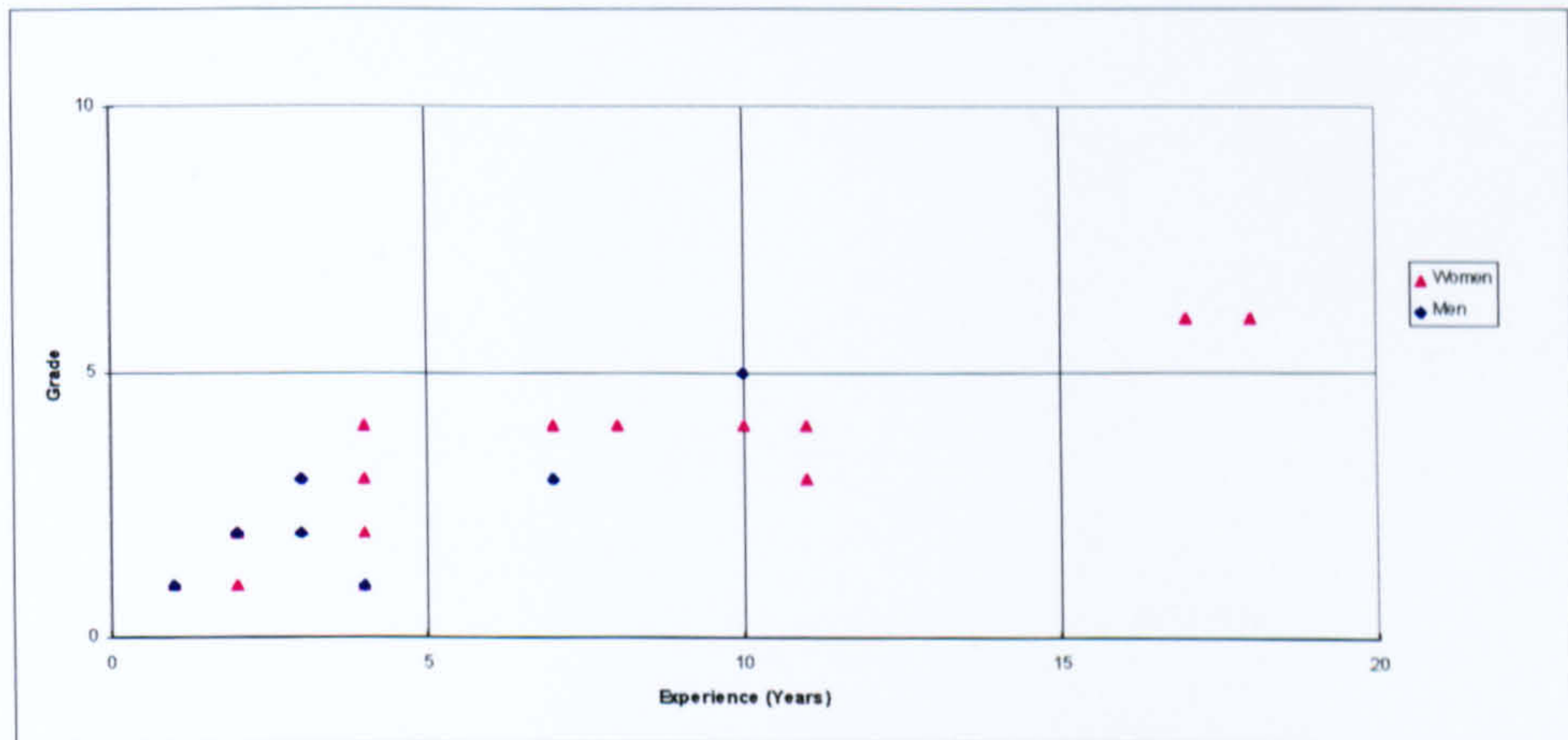


Fig 6.47: Career progression of quantity surveyors by sex

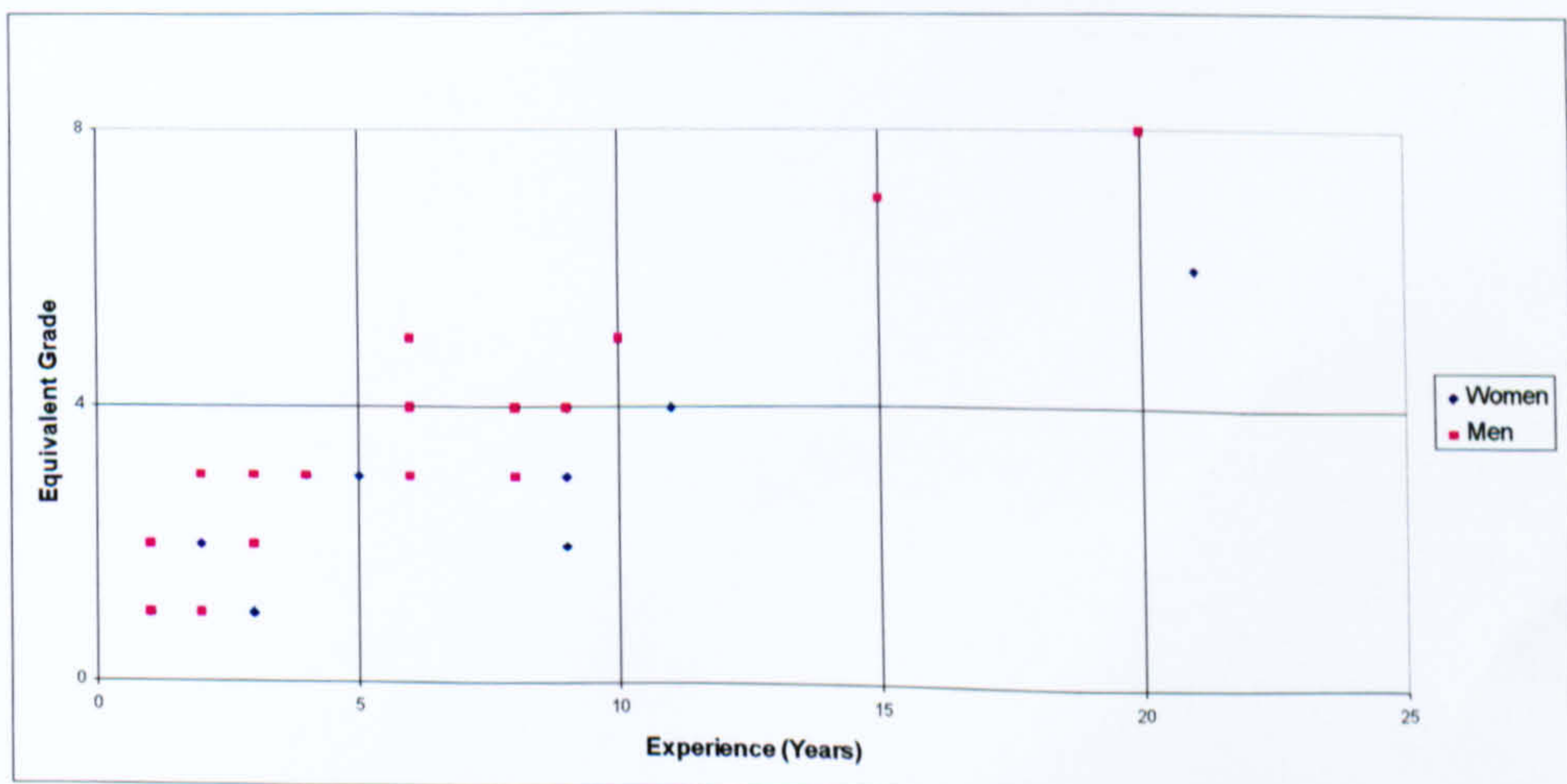


Fig 6.48: Career progression of construction managers by sex

6.4.10 Other determinants of career dynamics

The most significant determinants cited by the informants during the interviews are shown in Table B-1 in Appendix B. These determinants were extracted from the informant's accounts and career progression graphs (Appendix C), and listed for every year in the informant's careers. A tabular summary (Table B-2) shows the frequency of these determinants, when they took effect, and their conceptual location in terms of whether they originated from inside or outside the labour market. These data provide an overview of the factors affecting careers, and at which stage they take effect. Furthermore, they allow comparisons to be made between each informant pairing. Thus, the salience of the factors for men and women in the different career stages can be established.

When the career histories data are taken as a whole, Appendix B shows that men's and women's career determinants and actions, and the rationale behind them, differed in several important respects. Firstly, family related decisions were made earlier by female informants, especially in terms of securing geographical stability. These decisions included efforts to ensure job security. This was more of a concern for women, as they were five times as likely to have been made redundant than men. Accordingly, they cited actions that they had taken in order to broaden their experience approximately twice as often as men. Men appeared more concerned with requesting promotions or remunerative increases. As such, men have a more direct approach to developing their careers. Whilst these simplified data do not provide the deep ethnographic insights necessary to understand the relative impact of these career determinants, they suggest that the strategic dimension of women's careers has a significant influence over their progression dynamics.

6.5 Summary

The progression analysis has raised issues for further investigation in the qualitative data (Chapter 7), and has provided a contextual background to facilitate theory development (Chapter 8). Furthermore, several issues have emerged from this chapter which have contributed to addressing the propositions formulated in 5.2. These concern the effect of

several contextual factors on career development, which appear to be gender differentiated. These included career path (women were over-represented in commercial and in supporting roles which adversely affected promotional opportunities); the number of previous employers (women exhibited a greater propensity for inter organisational mobility which had led to slower development); the size and nature of projects (men worked on larger projects which had facilitated their development); professional qualifications (men were more likely to have benefited from gaining them); personal status and family responsibilities (women were less likely to attempt to combine their careers with having a family or even a long-term partner, and men with partners progressed more rapidly than women with partners); and the levels of ambition and perception of ability (women's were lower suggesting lower self-confidence and work motivation).

The progression characteristics of women have also been shown to be slower and more variable than men's, particularly during years three to ten of their careers. The average tenure of the informants at each level suggested that progression from junior to middle management (beyond level five) was particularly problematic for women. However, it is unclear whether this progression disparity is attributable to personal decisions on behalf of the actor, or to organisationally imposed constraints. For example, women's greater propensity for inter-organisational mobility may be indicative of them pursuing promotions in other organisations, or may infer that they were experiencing barriers within each organisation that they worked for. As such, these phenomena remain unexplained by this preliminary analysis. However, the slower vertical progression of women in comparison to men may support the first proposition of the research, that women were more likely face additional barriers to their progression.

Women's apparent disloyalty in the establishing career stage, and their markedly slower developmental rate through this period, suggest that the retention of the establishing group should form the focus for the participating companies, and principal target of any recommendations put forward to address proposition five. However, there is now a need, during the remainder of the analysis, to explore the precise causes of the career determinants that have impeded women's careers. This will allow the investigation of the second and third propositions, which seek to establish structural and cultural factors which affect women's careers. Furthermore, there is also a need to compare the perceptions and

resultant actions of the informants to address proposition four, and understand the strategic dimension of women's careers. This will also allow the relative effectiveness of women's strategies in dealing with barriers to their development to be established, which will help focus the development of the recommendations in chapter 9, in order to address the fifth proposition.

CHAPTER 7: CAREER DETERMINANT ANALYSIS

This chapter presents the main qualitative findings of the study, analysed using NUDIST. The findings are presented under conceptual headings which together, form the analytical framework used for the remainder of the analysis and theory development. Representative quotations from the informants are used to provide rich insights into their career experiences. Although these findings are presented in isolation from the contextual findings emerging from Chapter 6, their interrelationship is established through theory development in Chapter 8.

7.1 Analytical Strategy

After searching the data using NUDIST's index system search tools (ISS), the findings emerging from each section were simultaneously fed back into the index system (built back into the appropriate part of the analytical model), *and* removed from the analysis to be stored as determining issues. This approach allowed the development of explanations of the phenomena emerging from the career progression analysis (Chapter 6), as well as those emerging through the coding process itself. As such, it allows the investigation of the second, third and fourth propositions, which seek to identify the structural, cultural and action dimensions of men's and women's careers, and how they interrelate to define any disparity between their career dynamics. Together, these theories form an explanatory framework of women's career development in the industry. To facilitate this process, an analytical model was used to interpret the interview transcripts and field notes coherently, and to allow cogent explanations of the emerging issues to be developed.

7.1.1 The development of the analytical codification framework

As was discussed in 5.3.1, career dynamics are dependent upon the structural organisational and industrial framework in which careers develop; the strategic and reactive decisions made by the actor; the effects of the cultural environment; the personal characteristics,

strengths and abilities of the individual; and their ability to integrate into and interact with their organisational environment (see Evetts, 1996). To take account of the effects of all of these aspects, a conceptual framework was required to allow their distillation and investigation across a range of different cases. Although such a model simplifies the complex social processes by presenting an ordered and sequential view of the emerging factors, it allows the findings to be presented in an intelligible and logical form.

The strict coding paradigm which is an integral part of the GT methodology (i.e. the axial coding process - 5.2.4) promoted the logical categorisation and distillation of the most significant career defining variables. The analytical framework was then developed by grouping conceptually similar labels from NUDIST's index system¹. Accordingly, the development of this model could not be initiated until the primary coding of the data had been completed. The 300 emerging career determining variables identified were grouped under 13 generic headers, and then further refined into the model shown in Fig 7.1. The figures in brackets following each description refer to the chapter sub-headings under which each aspect of the informants' careers are presented. The resultant career dynamics of the informants are presented as the final GT of women's careers presented in Chapter 8, as a culmination of the career progression and determinant analyses.

In developing the analytical model, each variable (node within the index system) was defined and placed under one or more of the following categories:

- antecedent variables (those which contributed to initial career decisions and choices of the individual);
- mediating variables (those which intervened in the career development of the individual);
- strategic variables (those which the informant controlled or significantly affected through a defined proactive or reactive career strategy); or
- outcome variables (the resultant career effect of the identified issue or factor).

¹ Note: Appendix E contains a full list of the coding nodes and their addresses within the index system.

VARIABLE TYPE

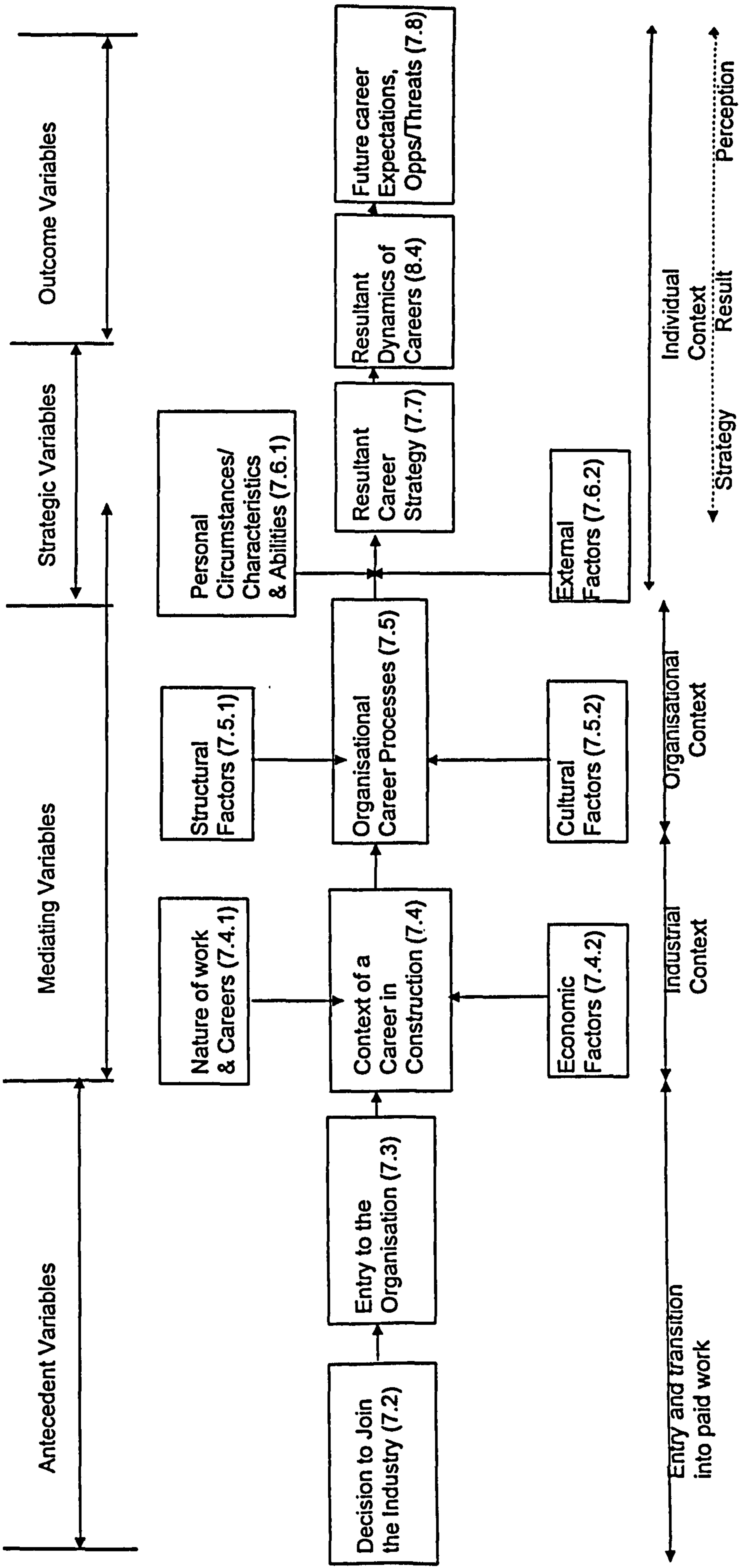


Fig 7.1: Analytical framework for investigation of careers in construction (chapter numbers shown in brackets)

Most of the textual data were coded with more than one conceptual label, and so appeared under more than one category. Hence, during the searching of the coded data, there were frequent overlaps between the categories. When this occurred, the relationship or causal link was eluded to by attaching an appropriate memo to the node within NUDIST. Whilst this indicated the conceptual link to another category, each issue remained distinct by remaining in its own conceptual section of the analytical framework. The alternative, to repeat categories throughout the model, would have unduly complicated the analysis, and would have made cross-referencing with other analytical areas problematic. Coding notes were taken as a reminder of these links as they previously appeared, in order that they could be re-explored within the more logical analytical system later in the analysis. In addition, the context of the issues arising from the analysis were also categorised within the model. These were delineated according to the origin of each issue in terms of whether they represented the process of entry into the work place, an industry-wide context, an organisation specific context, or an individual perspective. Beyond these classifications, the determinants were considered as strategic determinants representing action on behalf of the individual, the resultant effect that this had on the individual's career, and the individual's perspective.

The remainder of the analysis is presented in the sequential order defined by the analytical model. As was discussed in 5.7, a variety of different matrices and other representational tools have been used to convey as many responses as possible where most informants discussed a particular issue. However, the rich insights into the informants' experiences and attitudes are conveyed through representative quotes taken from their career accounts. In each case the sex, age and career path of the informant from whom the quote was drawn has been stated, and where relevant, their employing organisation. Where little appreciable differences existed between employees from different companies, this has not been stated to help to preserve the anonymity of the informants. Where sensitive data has been collected, for example, details of sexual harassment, the descriptor of the informant has been changed slightly to avoid identification.

7.2 Occupational Choice

Most informants reflected on their decision to join the industry, and the appropriateness of their occupational choice, as a precursor to describing their careers and the influences on them. Reasons for entering the industry emerged as a significant category within the model, despite it not forming one of the initial focus areas for the research. These issues have been categorised within the analytical model as an antecedent issue, within the context of the entry of the informants into paid work.

7.2.1 Influence and advice on career choice

Influences on career choice were more diverse for women than they were for men. Two thirds of the men (66%, $n=28$) said that they were influenced by a direct family member to join the industry, where as women, and particularly those entering the industry within the last 5 years, were more likely to have been advised by careers advisors, targeted recruitment campaigns, or through their own research. Only 12% ($n=5$) of women said that a family member was their principal career choice influence.

			Principal Determinants of career choice														
			Father/ family		Friend		Careers advisor		Recruitment campaign		Own research		Don't know reason		Other reasons		
Grouping	Yrs. Exp	<i>n</i> in samp	Prim	Sec	Prim	Sec	Prim	Sec	Prim	Sec	Prim	Sec	Prim	Sec	Prim	Sec	
Women	0 to 5	18	X				X	(X)	X	X	X	X				Prim	Sec
	6 to 10	13			X	(X)	X	X	X	(X)						X	
	11 to 15	5				X	(X)	X		X	X					X	(X)
	16 to 20	3	(X)														
	20+	2	(X)	(X)	(X)	(X)											
Men	0 to 5	18	X	X	(X)	X	X	(X)				X	X				
	6 to 10	13	X	X	X		X		(X)		X		(X)				
	11 to 15	6	X	X		(X)							X				
	16 to 20	3	(X)			(X)							(X)				
	20+	1															

Table 7.1: Reported reasons for choosing a career in construction: cross-case-ordered variable by variable matrix. (Note: - primary and secondary reasons included. (Key: X=cited unambiguously by several informants; (X)=cited unambiguously by one informant; Blank=no unambiguous reason given; Prim=Primary reason for career choice; Sec=secondary reason for career choice).

Table 7.1 shows differing influences between the younger and older women in the sample. Whereas women with over ten years experience cited a family member's influence as the

principal reason for joining the industry, younger women suggested that friends and relatives who worked in the industry had actively tried to dissuade them from embarking upon a construction career, as did some careers advisors. Accordingly, they tended to have investigated careers themselves before making their choice. This had led to a reliance on promotional literature produced by industry bodies and individual companies.

“I went to this careers convention where there was this really sexist guy who was a quantity surveyor who told me it was a man’s industry and that I would be better off elsewhere. I joined just to prove him wrong!.... I went and got all the literature on the available careers, and it made the industry look like glamorous, and exiting and varied.”

Female trainee QS - 22 yrs

The effectiveness of active promotion of professional and managerial careers appeared to have improved in the last few years. Around three quarters ($n=14$) of the women with under five years experience said that they had been influenced by promotional campaigns specifically aimed at attracting them to the industry.

“My initial interest stemmed from a Women Into Science & Engineering course at Brunel University in my last year of A levels. They said that there were more women joining than at any time before.... I think that once I realised that an engineer wasn’t the bloke with his head under the bonnet of the car it became a lot more appealing.”

Female site engineer - 24 yrs

For men, gaining an in-depth understanding of the industry and the type of work with which they would be involved was not an important pre-requisite of making an informed career choice. There were few apparent differences in career influence for age, with most citing family or friends as their principal influence.

“My father and brother are in the business and my uncle is a plasterer, I have another uncle who is a brickie so its kind of in the blood I suppose.”

Male assistant QS - 28 yrs

Whilst the poor image of the industry, fluctuating workloads and job insecurity were all acknowledged by the informants to act as a barrier to high achievers entering construction, men’s vocational influences tended to be from family members from trades or other non-professional backgrounds. They felt that entering the industry in a professional capacity would negate aspects of the industry which their relatives had found problematic.

“My father is a self-employed builder.... I know that there are bad things about working in construction, and I’ve seen my father struggle in the past, but it’s not the same working as a professional.... you get more respect, and it’s a lot more stable.”

Male trainee QS - 21 yrs

There was a perception from some informants that the industry attracted those who did not necessarily make it their first choice. Several ($n=6$ women and 4 men), saw the industry as a last resort, having not attained the academic qualifications for their preferred career path.

“I did not get the grades otherwise I would have done medicine, engineering was my second choice..... So many folk just kind of end up in construction, I mean, on this site we have one failed dental student who is one of the QSs, we have a guy with a degree in medieval history. You think that folk end up in construction as a last resort half the time and it shouldn’t really be like that.”

Co.1 female assistant QS - 28 yrs

7.2.2 Career path

For the majority of informants, it was not the industry *per se* that they were attracted to, but their specific profession. The informants imposed their own hierarchical status on construction careers. Notably, architecture, quantity surveying and civil engineering were seen as being high status, whilst construction management and particularly domestic construction were regarded as being low grade careers. Both men and women described quantity surveying as “more professional” and “requiring commercial skill”. Moreover, it was seen as particularly suitable for women because of the distance of the QS from the physical aspects of construction work. However, some informants admitted to having little awareness of different professional roles before they entered the industry, and several women admitted that their perception of their chosen career path bore little relation to the work with which they were now involved.

“When I joined the industry I had this idea that a QS was more like an accountant. I was amazed to find myself working on site and dealing with sub-contractors all day.”

Female QS - 30 yrs

Co.1, Co.3 and Co.4 offered a variety of careers to graduate entrants, and often made the final decision as to the actual career path that they followed. These did not necessarily match the vocational content of their degree courses, with quantity surveying and

construction management graduates being treated as interchangeable. Many women had been directed into commercial and supporting roles.

“When I joined [Co.1] I was a bit confused. I didn’t know whether to go for quantity surveying or construction management because I had done construction studies, but they pushed me towards surveying. It wasn’t until afterwards that I realised that a lot of people within [Co.1] feel that if women want to get on in the construction industry they are better off to go into the surveying side, because they will never be listened to if they go into construction management.”

Co.1 female assistant QS - 23 yrs

7.2.3 Construction educational experiences

Most of the informants ($n=76$), entered the industry via a degree route. This reflected a changing emphasis in recruitment in the industry, as all of the companies sponsored students on degree courses at universities, and many of those interviewed had worked for their sponsor on sandwich placements. The informants’ experiences on their degree courses represented their first experiences of working within a predominantly male environment. However, the only women that experienced difficulties during their higher education were in the maturing career stage, who went to university in the late 1960s and 1970s.

“Our professor said in front of the whole class that the point in recruiting women was to keep student numbers up without increasing the number of people in the profession. I think that started off the resentment, we used to get a very hard time off the male students, but nine of us ended up in the industry at the end and that was almost as many as the men so we had the last laugh.”

Female design manager - 46 yrs

None of the younger women described feeling isolated or persecuted. Rather, they had found their educational environment relatively protective. However, this had left some inadequately prepared for the cultural environment which they were subsequently to find in the industry.

“I really enjoyed my time at college, and I didn’t have any problems being the only woman in the class. Having said that, I wouldn’t say that it was very good preparation for a career in construction. You get a very sanitised view of the way that things work, which increases the shock when you have to confront it.”

Female assistant construction manager - 23 yrs

Accordingly, most of the women had made a careful choice regarding the vocational content of their degree course, and many sought sandwich placement periods.

“The degree is just theory, it’s just so far removed from what you actually do. You don’t get to understand what anything is really like until you get onto site and see it first hand. I deliberately applied to universities with sandwich placements to give me a chance to see whether I would stick it or not.... the women I know that have left have been those who did their degree full time and without getting a flavour for what it is really like.”

Female sub-agent - 32 yrs

Few men in the later career stages discussed their educational experiences and academic qualifications. However, female informants in their later career stages appeared to value their first degree as a tangible demonstration of their ability.

“I tell every women I know, work like crazy because once you’ve got that good degree, whether it be a first or a 2:1, it keeps you warm for the rest of your life because no-one can take it away from you. When you are up to your neck and the alligators and people are yelling at you, you just think well this is about the only thing that you can draw upon to keep you going.”

Female project manager - 42 yrs

Only six informants had followed a part-time educational route. All had relatives working in the industry, and saw it as an imperative to gain as much practical experience as possible whilst at a junior level. Although none expressed regret over their career choice as many of the female graduate entrants did, they all resented the influx of graduate entrants into the industry, and regretted not entering via that route themselves.

“I just get fed up of slogging it out every day, and getting really good at my job, just to see graduates coming in and being put in a more senior position, but that’s not to say that I regret my career choice, just the way in which I entered it.... if I saw my time again I’d do a degree and get into the industry that way.”

Female trainee QS - 22 yrs

7.2.4 Reflections on career choice

Many of the informants discussed the appropriateness of their career choice at the outset of the interviews as a caveat to their explanations of their subsequent career strategies and actions. Most women expressed regret over their career choice, and were resentful of how they were influenced to enter the industry. Many recent entrants felt that they had been misled into believing that the industry offered greater challenges and opportunities than

had actually proven to be the case. The principal reasons cited by the informants for regretting their initial career choice are shown in Table 7.2. This also shows whether they were cited as primary or secondary causes of regret.

			Reasons cited for regretting career choice													
			Career dev opps		Cultural integrat-ion		Instability of industry		Remune-ration/ conds		Geogra-phical instability		Hours/ stress/ pressure		Other	
Grouping	Yrs. Exp	n in sample	Prim	Sec	Prim	Sec	Prim	Sec	Prim	Sec	Prim	Sec	Prim	Sec	Prim	Sec
Women	0 to 5	18	X	X	X	(X)	X	X	X	X	X		X	(X)	X	
	6 to 10	13	X		X	(X)				X	X		X			
	11 to 15	5		(X)			X			X	X			X	X	X
	16 to 20	3								(X)						
	20+	2			(X)											
Men	0 to 5	18	X	X		X			X	X	X	(X)				(X)
	6 to 10	13	(X)		X				X	X			X			
	11 to 15	6	X								X	(X)	X	X	X	
	16 to 20	3				(X)					X					
	20+	1						(X)							X	

Table 7.2: Reported reasons for regretting choice of construction career: cross-case-ordered variable by variable matrix (Note: Sex and contracting experience by determining variable - primary and secondary reasons included Key: X=cited unambiguously by several informants; (X)=cited unambiguously by one informant; Blank=no unambiguous reason given; Prim=Primary reason for career choice; Sec=secondary reason for career choice)

Table 7.2 indicates some interesting trends in the informants' reflective comments on their career choice. Of the women with under 5 years experience (n=18), three quarters stated that the industry had not lived up to their expectations.

"I went to see a careers teacher who suggested quantity surveying and here I am. If I ever see that woman again I'm going to shoot her!.... I wouldn't recommend this industry, not to women. I had my illusions shattered during my first day on site, and I've been battling to stay in it ever since."

Female assistant QS - 24 yrs

The nature of women's regrets were well defined, with the majority stemming from a lack of understanding of the cultural aspects of industry (particularly difficulties in being a non-traditional entrant), and/or a lack of appreciation of the workplace stress, pressure, hours and geographical instability.

"I liked the way the construction professionals at the careers fair described the industry, the way they put forward the package and what you could get training wise.... and like an idiot I believed them and that is why I am here basically.... I don't know if that would have been the case if I had done a sandwich year.... if I saw my time again I'd be an accountant."

Female QS - 27 yrs

The women in the establishing career stage expressed similar disappointment, but had developed strategies to cope with difficulties that they had encountered. However, their early enthusiasm had declined as they confronted barriers to their progression.

“After a while I just accepted that I would face problems, and I have tended to move around quite a bit as a result.... I’ve learned that you’re better to leave than confront some men in this game.... I’m not sure what the future will bring, but it’s not going to be senior management for me, I wouldn’t want them all baying after my blood!”

Female construction manager - 32 yrs

However, women in the maturing stage, and particularly those whose initial careers advice came from a family member, did not share such regrets. They had realistic expectations of the type of career environment that the industry would offer them and were more likely to have made a career choice informed by accurate accounts of the nature of working life in the industry.

“My father has his own construction company and I used to often help him out on site when I was living at home. I got a good impression of what it was all about from that and I am glad, because I think that I saw the industry for what it was at an early stage.... I was amazed at how unaware some of the other women on my course seemed at university.”

Female construction manager - 38 yrs

Most of the male informants, regardless of career stage, believed that the industry’s image merely reflected the realities of working life within it.

“It should be obvious to anyone looking from the outside with the image that the industry has got that it’s going to be tough. The image only reflects what it is really like, and if you choose a site based position you have to accept that.”

Male assistant QS - 24 yrs

Ambitious male informants cited the poor image of the industry, and the resultant lack of competition within it, as leading to resultant opportunities for rapid progression. This had influenced their decision to join it.

“I have to admit that I saw opportunities in construction, mainly because I knew that it wouldn’t attract the real high flyers from school. It’s a lot easier to make your mark in an industry where you can be a big fish in a little pool after all.”

Male assistant construction manager - 23 yrs

Similarly, several ambitious women also perceived that it would be easier for them to succeed in the industry *because* of their visibility within it.

“In some respects I see it as an advantage to be a woman in construction, that’s why I joined. Its being able to stand out, and really make your mark that counts, and that must be easier when people are going to notice you anyway.”

Female graduate trainee QS - 22 yrs

Ambitious women exhibiting a greater degree of determination towards their career goals tended to be from the expanding career group. Most women agreed that only those who were single-minded in terms of developing their careers were likely to be successful.

7.2.5 Summary

Whilst support for choosing a construction career was generally forthcoming for men, women often had to convince parents, careers advisors and even their peers that they had made an appropriate career choice. Hence, women were more likely to be committed to their career choice when they entered the industry. However, men were more likely to have knowledge of the cultural, less tangible aspects of the industry, through having close association with someone that had worked within it. This also applied to non-graduate female entrants, who were more likely to be influenced by family members and so benefited from having deeper insights into the realities of working life in the industry. Women’s lack of knowledge in this regard was evident in their subsequent career accounts, where their motivation and ambition declined in proportion to their experience as they confronted barriers to their careers. Maturing stage women however, who cited their interest in construction as stemming from friends or relatives, did not have such high expectations, and so did not become disillusioned as quickly.

7.3 Entry to Employment and the Recruitment Process

Gaining entry to construction organisations was widely discussed, both in terms of initial entrance to the industry, and in terms of subsequent inter-organisational transitions. It has been included as a distinct issue within the analytical model because, whilst it still remains an antecedent variable to the focus of the study, it is set firmly within the labour market context, and in some cases at an organisational level. Furthermore, the recruitment process within the companies was discussed in-depth by many informants as a key career determinant in its own right.

7.3.1 Entry to employment

By cross-tabulating accounts of experiences of the recruitment process for different career groups, a distinction was made between data referring to initial entry to employment and subsequent inter-company mobility. Strategies for securing positions could be seen to differ according to the experience of the informants. Table 7.3 summarises the reasons for the informants taking up their position with their present employer. This shows a distinction between the younger and older informants in the sample, with expanding stage informants citing the importance of training and development opportunities in addition to remuneration and the opportunities for vertical and lateral development.

“I didn’t join for the money, it was because I knew that they had graduates within the company, and the opportunities for training seemed excellent the way that they were described. They said that we could try out different areas of the business, and look towards moving into the one which suited us best. When you join, that’s what you need to hear, not when you’re going to get each promotion.”

Female assistant construction manager - 23 yrs

Their interviewer had an important role in marketing the organisation’s training opportunities during the recruitment process.

“I had an interview at [Co.1]. It was very informal and I really liked the training manager’s attitude. I think it was him who made the difference between them and the other companies who interviewed me.”

Co.1 female trainee QS - 21 yrs

Key influencing factors >			Remunerative package/promotion					Training and/or dev prospects					Work type					Geographic location					Other						
Sex	Co.	n	<	6	1	1	>	<	6	1	1	>	<	6	1	1	>	<	6	1	1	>	<	6	1	1	>		
			5	-	1	1	2	5	-	1	1	2	5	-	1	1	2	5	-	1	1	2	5	-	1	1	2		
			yr	s	yr	s	yr	yr	s	yr	s	yr	yr	s	yr	s	yr	yr	s	yr	s	yr	yr	s	yr	s	yr		
Men	Co.1	25	3	4	2	1	1			6	4	1	1								1					1			
	Co.2	4	1				1	2																					
	Co.3	5	1	1					1				1		1														
	Co.4	5	1		1	1	1				1																		
	Co.5	2					1				1																		
Women	Co.1	25	2	3	2		8	3	1		1	1	1						1				1	1					
	Co.2	4	1	1			1																	1					
	Co.3	5		1	1		1	1			1												1						
	Co.4	5		2	1		1																1						
	Co.5	2					1											1											

Table 7.3: Determinants frequency matrix: Principal reason for applying to or joining present employer by company, age and sex.

In addition, opportunities to work overseas were also cited as an important influence by the male expanding stage informants as reasons for selecting their initial employer.

“I had two offers. I wanted to get as much experience as I could and I wanted to travel as well and [Co.1] seemed to offer more of these opportunities.... they told me about other graduates that had done well and the opportunities for early responsibility and promotion, and the chances to work abroad, that’s what really swung it.”

Co.1 male assistant QS - 23 yrs

Informants from the expanding stage who cited remunerative incentives for their choice of employer, did so because of the need to pay off debts accrued during their time at university. However, it was generally acknowledged that there was little variance in starting salaries between large contracting companies, and so remunerative incentives were a low priority for this group.

7.3.2 Inter-company mobility

Promotion and remuneration became progressively more important for men and women in the establishing stage.

“From what I have found Co.1 are good payers, that’s one of the things that attracted me to joining them. I’m not just talking about the salary, I’m including the package, the car, the benefits. That’s what made me leave my last company”

Co.1 male construction manager - 28 yrs

The Reputation of companies was an important factor influencing company choice. Male establishing stage informants relied upon superficial measures of their organisation's reputation, such as rumours about remunerative levels, or knowledge of prestigious projects that they had recently completed.

"I had read that they had achieved a new methodology in working on some of their previous projects in London in the 1980s, so I could see that Co.1 had a good reputation, a strong management culture, and they paid well also. I wanted to work for the best."

Co.1 male senior procurement manager - 28 yrs

"My father told me that they had a very good reputation in the 60s when their forte was cooling towers and power stations. I liked what I heard, their reputation and the kind of work they did, and I liked the head office when I came for interview, the pictures of their projects and the technical problems that they had overcome."

Co.3 male QA manager - 38 yrs

In contrast, women in the establishing stage were more concerned with their prospective employer's reputation for staff development. Notably, many women said that they had chosen Co.1 because of its reputation as a 'people company', and had rejected other employees without such a reputation.

"My uncle told me that Laing were the best company in the construction industry in the UK, but that Co.1 were also a people company. At the interview with Co.1 the outlook they gave me was something I wanted, plenty of training and opportunities for getting my ARICS."

Co.1 female trainee QS - 22 yrs

"When I told my boyfriend I was going to apply to them he said 'no, you can't do that', because he had worked for them as a sub-contractor, and he said that the pressure was so great on site that the project manager had a nervous breakdown! I must admit, that kind of thing does put you off, even though they were offering good money."

Female QS - 27 yrs

In the maturing career stage, men cited a desire to widen their experience in terms of the types of work and developmental opportunities. This was seen as particularly important for those experiencing career plateaux, who had few opportunities for further vertical promotion.

"I had to make a decision if I was going to stay as a designer *per se* or someone who was more on the management side. My role as a director in the architectural practice had led me more towards management of staff, and so it was more fitting for me to

join a management organisation. At that point I was deciding whether to join a client organisation or an in-house team or a developer as a sort of external consultant. Although I hadn't worked directly with Co.1, I was very aware of them, in that they offered the best management opportunities or the best management systems. So I joined them in 1990, not for the money, but as what I saw as a positive career move."

Co.1 male executive design manager - 46 yrs

Women in the maturing stage were more likely to seek geographical stability, job security and extended training opportunities, particularly with regard to achieving professional qualifications. Most of these women were willing to compromise on remuneration in order to secure these benefits.

"The reason I came here was that they could offer me some degree of permanence, both in where I worked, and who I worked for. The company never work outside of the M25, and I know that, they are always going to be secure financially. It was worth the pay cut for that level stability."

Female project QS - 32 yrs

7.3.3 Strategies for securing employment

Beyond initial graduate employment, strategies for securing entry to organisations encompassed a diverse range of approaches, from speculative enquiries through to actively seeking opportunities from ex-colleagues (Table 7.4).

	Co.	n	Contacts					Speculative application					Response to advertisement					Head hunted					Other (e.g. co. take-over)					
			<5 yrs	6-10 yrs	11-15 yrs	16-20 yrs	>20 yrs	<5 yrs	6-10 yrs	11-15 yrs	16-20 yrs	>20 yrs	<5 yrs	6-10 yrs	11-15 yrs	16-20 yrs	>20 yrs	<5 yrs	6-10 yrs	11-15 yrs	16-20 yrs	>20 yrs	<5 yrs	6-10 yrs	11-15 yrs	16-20 yrs	>20 yrs	
Men	Co.1	25	3	4	2	1	1	6	3			2	1			1		1										
	Co.2	4	1	1			1																1					
	Co.3	5		1			1					2		1														
	Co.4	5			1	1					1	2																
	Co.5	2			1					1																		
Women	Co.1	25	1	3	1		1	9	4	2		1	2	1	1													
	Co.2	4	1	1			1	1																				
	Co.3	5			1		1	2							1													
	Co.4	5			1		1	1			1																	
	Co.5	2	1								1																	

Table 7.4: Determinants frequency matrix: Strategies/determinants that have led to previous appointments in organisations for age, company and sex.

Table 7.4 indicates a relationship between the way in which the informants found out about opportunities and secured positions, and their age and experience. Expanding stage male informants were more likely to use contacts or family members, who also played an important role in facilitating their entry to the industry.

“I rang all the people I had worked with in London and I asked a couple for a references. The next thing I knew I had a phone call from the personnel department offering me a job. I found out that this guy I had asked for a reference from had phoned them up and sold me to them.... it's who you know in this industry that counts.”

Male assistant project manager - 26 yrs

Hence, women were disadvantaged by being less likely to have been introduced to the industry by a close friend or relative.

“Recruitment works very informally. I think its a personality industry and so you are recruited by people you know, and then by default by how good you are. It's hard when you start off, because unless you already have a few contacts in the company that you're trying to get in to, its hard to get your foot through the door.”

Female assistant manager - 25 yrs

In the establishing stage, networks of contacts within organisations allowed individuals to circumvent personnel departments, who were seen as gatekeepers to the recruitment process. However, even for graduates, knowing someone inside the company was likely to help them to secure a first interview.

“I was in the pub one night and happened to be chatting to this guy I knew from a job I had worked on. He said that he knew a director, and he turned out to be a main board director in Co.1! He told me to write to him personally and mention his name. He passed the letter down to personnel, they invited me in for a chat. At the end of two hours I had been offered a job just like that, so I guess you could say it's who you know!”

Co.1 male graduate trainee - 23 yrs

Inter-organisational mobility became easier in the establishing career stage, as contacts made on each contract expanded to present opportunities in many organisations. There were numerous examples of line managers requesting that staff from previous employers be offered positions within their company. Men embraced this method of securing positions to a greater extent than women.

“I'd only been at the company for about six months when my old boss phoned me up and asked if I fancied moving over to work with him at his new company. I've got to be honest, it was a foregone conclusion that I'd get the post.”

Male assistant construction manager - 26 yrs

candidate had progressed to the interview stage. Senior women in particular were subjected to an in-depth examination of their commitment and professional competence.

“I had two interviews, the first with the head of department, the second with the director and the two principal engineers. I then had one of those psychometric tests where they fed the results back. They asked some very probing questions, I was wondering when it was all going to end...”

Co.5 female principal design engineer - 48 yrs

Men were unlikely to experience such a rigorous process or a questioning of their commitment. Most preferred this informal recruitment process.

“The interview process wasn’t too hard, just a single stage and he was very easy going, but he seemed clued up and knew what he wanted. I guess you could say that was a bit of a foregone conclusion, because he knew that I had contacts at a senior level within the division, and that they had asked me to apply.”

Male senior manager - 36 yrs

There was also a correlation between the depth and rigour of the recruitment process, and women’s ages. Female informants entering the organisations between the ages of 28 and 33 had encountered particular difficulties. Several had been asked about their personal relationships and many felt that this stemmed from assumptions that they would have families at this age.

“As the interview went on she began to ask me some very pointed questions about my future plans with regards to having children and getting married. I tried to fend them off as much as possible but it was clear that she would not back down until she had an answer on my future plans.... needless to say I said that I didn’t want children.”

Female construction marketing assistant manager - 28 yrs

Discriminatory questioning was not always overt, with tacit questioning of women’s long-term commitment often being made through questions regarding the candidate’s personal status.

“I think that he only offered me a short-term contract because he knew I was a woman who had been married for 4 years and I was getting to that stage when I may decide to have children.... several of the questions were directed in that way, towards areas which did not seem directly relevant to the position, things about my social life and long term plans, but nothing that appeared too obvious.”

Female business development manager - 29 yrs

Discriminatory questioning was apparent from divisional directors and other divisional staff with no formal training in recruitment and selection techniques. They tended to retain responsibility for recruitment issues over specialist HR staff.

“The problem is that the human resources department don’t actually do the recruiting, they only manage the process. Its all done by the project staff. All that personnel do is ensure that the legislation is adhered to so that we can make people redundant without going to court!”

Female project manager - 40 yrs

Thus, an inconsistent approach had resulted in most of the companies. Moreover, company HRM policy often contradicted divisional recruitment strategies.

“There is no consistency in the way they approach recruitment. Some people get a real grilling, others seem to waltz into this company without so much as an informal chat. It depends on how desperate they are for staff at the time, and of course the mood of the director who is in charge of recruitment.”

Female site engineer - 24 yrs

For many informants, the recruitment process involved a period of negotiation between the candidate and the interviewer as to the level of remuneration that they would receive. Most informants discussed the problems of low initial offers from construction employers, and a few women described underhand techniques used by some employers during this process.

“They offered me a little bit more money for a lower grade car. I don’t mind about that as I don’t drive much anyway so I accepted the job on these terms, but when the letter came a week before I was due to start, all of the terms and conditions were different, much lower than they originally offered. There was not much I could do because though because I needed a job.”

Female safety manager - 25 yrs

In general, men indicated that they were more likely to negotiate over remunerative packages than women.

“I wanted the job, but financially I could not afford to accept the [Co.1] offer. I went to speak to the training manager and told him I had another offer and in the end he agreed to match it. The other company were not offering any kind of formal training though, so I doubt if I would have turned [Co.1] down in the end, but you have to ask and negotiate or you get nothing.”

Male assistant QS - 25 yrs

7.3.5 Hidden agendas in recruitment policy

Most informants felt that their employer sought particular types of employee with regards to both academic ability and attitudinal perspective. As was discussed in 7.2.3, recruitment within all of the companies was graduate focused, with only Co.2 having a policy of regularly recruiting school leavers and training them through day release schemes. However, graduate selection based on academic performance was widely criticised by many women managers.

“All the trainees they pick seem to be from Salford or Loughborough. They always pick people who get firsts, but they are the ones without any life experience. I mean, I’m not saying that we should employ hairy arsed builders, but we do manage the building of things so why not employ people that understand the industry?”

Female site engineer - 25 yrs

Beyond a graduate level, there was confusion over the issue of succession management within all of the companies. In Co.1, several informants said that directors had encouraged younger managers to move away to another company to widen their skills, expertise and knowledge, and then to return in the future (see 7.7).

“There are a lot of managers who leave the company only to appear at a higher level a couple of years later. I think it’s something that is generally encouraged, as people widen their experience and return with new ideas. I think also that it is better to experience other companies systems and procedures, and this is why they develop faster than those of us that haven’t bothered to move.”

Male design engineer - 30 yrs

In Co.1 there was also a perception that there was a policy to recruit an unrepresentative number of women graduates. Male respondents perceived this as ‘positive discrimination’.

“The number of women that have joined in the past couple of years I think is out of proportion to the number entering the industry.... I’m all in favour of women coming in, but only if they justify it by their own merit, and I don’t see how this can be the case.”

Male assistant construction manager - 28 yrs

However, women themselves perceived such policies as detrimental to their careers, because they undermined their professional credibility.

“Although I feel that I deserved to get where I have, I do sometimes feel as though I am a bit of a token gesture. I am not sure how it’s going to affect my progression through the company from now on, but I have already had a few comments since I joined, that it’s easier for women these days.”

Female construction manager - 32 yrs

7.3.6 Summary

Women tended to seek training opportunities which ensured their long-term development in the industry. As such, they had longer term development goals than men, for whom remuneration became the deciding factor during the establishing career stage. In the maturing stage men, unable to gain further vertical promotions, also sought developmental opportunities. Women at this stage were more interested in job and geographical stability.

Whilst the strategies used by informants to enter employment or move between organisations were not gender specific, their effectiveness was gender determined. Informal contacts were pivotal to the informal recruitment practices used by the companies. This disadvantaged women who had difficulties in utilising the informal 'old boy's network'. Women were more likely than men to experience formal and rigorous recruitment and selection procedures, and suffered from inconsistent approaches to recruitment in different organisations. This was attributable to recruitment being devolved to operational management as opposed to trained HRM staff, which had led to confusing recruitment and management succession policies, particularly within Co.1. Particular problems emerged for women during their early 30s, where stereotypes assumptions were often made about their likelihood of having children and not returning to work. Thus, this informality had led to discriminatory recruitment practices.

7.4 Informant Contextualisation of Construction Careers

The overall context of a construction career was discussed during interviews to explain some of the decisions and determinants that had affected the informants progression rates. This is shown in the analytical model (Fig 7.1) as comprising two component parts. Firstly, the nature of careers and work is discussed, to explain the effect of the dynamic and transient nature of the sector. Secondly, economic factors are explored from the informants perspectives. Both are set within the wide industrial context, as they affected informants from all of the companies, and as mediating variables, because these factors effectively constrained or promoted certain aspects of individual strategy discussed in 7.7.

7.4.1 The nature of work for large contracting organisations

Intrinsic aspects of construction work

The informants discussed the high levels of satisfaction that they derived from aspects of their work. Table 7.6, indicates little difference in opinion in terms of the intrinsic motivational factors attributed to the various careers, with them all being seen as demanding, practical and involving team work.

Key influencing factors >			Hands-on					Demanding work/responsibility					Team integration					Variation/excitement					Other				
Sex	Co.	n	Const Man	QS	Des/arch	Sen man	Support	Const Man	QS	Des/arch	Sen man	Support	Const Man	QS	Des/arch	Sen man	Support	Const Man	QS	Des/arch	Sen man	Support	Const Man	QS	Des/arch	Sen man	Support
Men	Co.1	25	2		1			6	6	1	1		1								1	1				1	1
	Co.2	4	1						2									1									
	Co.3	5	1					1		1																	1
	Co.4	5	1					1			1			1	1												
	Co.5	2									2																
Women	Co.1	25	1	3	2			2	4	1				3				2	1		1	1					
	Co.2	4		1									1	2													
	Co.3	5	2				1	2																			
	Co.4	5	1					1			1			1				1									
	Co.5	2									2																

Table 7.6: Work satisfaction frequency matrix: principal fulfilling aspects of work for profession, company and sex - intrinsic motivators. (Key: Const man = construction managers; QS = quantity surveyors; Des/arch = designers, architects and design managers; Sen man = senior managers; Support = others in supporting positions)

Most of the informants felt that site based roles offered high levels of responsibility, even at junior levels. Co.1 tended to put their personnel into positions of responsibility earlier than the other companies, which was generally favoured by the informants.

“What I like about working for [Co.1] is the responsibility. I’m running about £5m worth of packages here, you tell me one other industry where you could get that level of responsibility at 25 years old.”

Co.1 male assistant QS - 25 yrs

However, Co.1 employees were generally less likely to value the practical aspects of their work, which reflected the management orientation of their functional roles. However, the majority of the other informants were motivated by the physical satisfaction of producing buildings.

“I would say that there two things that motivate me about this job, working with people and forming good relationships is one, but the other is that I don’t think you

can ever get away from the fact that you start a job, physically see it built and you finish the job and its a complete thing within a reasonably short space of time. You arrive on site with nothing there and you see this building grow and develop. It's fantastic."

Male site manager - 29 yrs

"I really like these type of projects because they give you something to get your teeth into. It's going to be so impressive when its finished and I'm proud to say that I was part of the team that did it."

Female section engineer - 30 yrs

Stress, long working hours, unchallenging work, poor teamwork and a lack of stability and job security were seen as the most negative aspects of contracting work (Table 7.7). Again, few gender differences were apparent, although geographical instability and job insecurity were cited as particularly significant de-motivators by female site based staff.

Key influencing factors >			Overworked /stress & hours					Undemanding / repetitive work					Poor team integration/ professionalism					Instability (job/geog etc.)					Other				
Sex	Co.	n	Const Man	QS	Des/arch	Sen man	Support	Const Man	QS	Des/arch	Sen man	Support	Const Man	QS	Des/arch	Sen man	Support	Const Man	QS	Des/arch	Sen man	Support	Const Man	QS	Des/arch	Sen man	Support
M e n	Co.1	25	4	2		1		1	2				2	2			1	1	1	1				1			1
	Co.2	4	1					1	1																		
	Co.3	5	1						1									1									
	Co.4	5	1																1			1		1			
	Co.5	2								1																	
W o m e n	Co.1	25	2	1														2	4								
	Co.2	4	1						1				1					1									
	Co.3	5	1					1										1	1								
	Co.4	5	2					1								1						1					
	Co.5	2								1															1		

Table 7.7: Work dissatisfaction frequency matrix: Negative aspects of work for profession, company and sex - de-motivators only. (Key: Const man = construction managers; QS = quantity surveyors; Des/arch = designers, architects and design managers; Sen man = senior managers; Support = others in supporting positions)

Table 7.8 shows the data from Table 7.6 cross-tabulated with experience. This indicates a change in perception and attitudes as the informants gain experience and seniority. The practical aspects of the work, which were a strong motivator in the early years of career development, are replaced by the other intrinsically motivating aspects such as the team-based and challenging nature of the work, particularly in the site based positions of construction management and quantity surveying.

Key influencing factors >			Practical aspects of work					Demanding work/responsibility					Teamwork aspects					Variation					Other									
Sex	Co.	n	<	6	1	1	>	<	6	1	1	>	<	6	1	1	>	<	6	1	1	>	<	6	1	1	>					
			5	-	1	1	2	5	-	1	1	2	5	-	1	1	2	5	-	1	1	2	5	-	1	1	2					
			y	r	y	r	s	y	r	y	r	s	y	r	y	r	s	y	r	y	r	s	y	r	y	r	s	y	r	y	r	s
Men	CM	20	7	5				2								1	2			1	1		1				1					
	QS	14	4	1	2			3	1					2																		
	DA	3											1					1	1													
	SM	2					1															1					1					
	SO	2					1														1											
Women	CM	14	2	3				2														1										
	QS	17	3		1					1	1			3	1			1														
	DA	3	1																													
	SM	2																				1										
	SO	5		1					1									1				1	1									

Table 7.8: Work satisfaction frequency matrix: fulfilling aspects of work for experience, profession and sex - intrinsic motivators only. (Key: CM = Construction management (civil & building); QS - Quantity surveying; DA - Design engineering or architecture; SM - Senior management; SO - Supporting or Other role)

In terms of de-motivating aspects of the work by career stage, Table 7.9 shows that site based staff were more likely to be de-motivated by excessive workloads at junior and middle management levels. However, later in their careers, these were replaced with concerns over poor teamwork, undemanding tasks and the insecurity of the industry.

Key influencing factors >			Stress & hours &/or under paid					Undemanding or repetitive work					Poor teamwork or professionalism					Instability (job/geog etc.)					Other									
Sex	Co.	n	<	6	1	1	>	<	6	1	1	>	<	6	1	1	>	<	6	1	1	>	<	6	1	1	>					
			5	-	1	1	2	5	-	1	1	2	5	-	1	1	2	5	-	1	1	2	5	-	1	1	2					
			y	r	y	r	s	y	r	y	r	s	y	r	y	r	s	y	r	y	r	s	y	r	y	r	s	y	r	y	r	s
Men	CM	20	4	1	2								1	1				1	4			1	1	1	1							
	QS	14	3	2	1			1					1	3				2	1													
	DA	3								1					1									1								
	SM	2					1										1															
	SO	2				1																				1						
Women	CM	14	2	2									1					2	2	1		1										
	QS	17	3	2				1	1				1					1					1									
	DA	3			1					1				1																		
	SM	2																														
	SO	5																														

Table 7.9: Work dissatisfaction frequency matrix: fulfilling aspects of work for profession, company and sex intrinsic de-motivators only. (Key: CM = Construction management (civil & building); QS - Quantity surveying; DA - Design engineering or architecture; SM - Senior management (overseeing); SO - Supporting or Other role).

Work location

Younger informants perceived that there were better opportunities in site based work early on in their careers. Junior office based managers were seen as organisational liabilities, and as lacking the site based experience that gave an affiliation and status within the industry. For women, there was also a perception that site based experience was necessary to gain respect and be seen as credible by their male colleagues.

“If people phone me up and say can I speak to the safety manager and I say ‘yes’, I often get ‘well where is he then’, and I say ‘well you’re speaking to one’. It’s because they don’t see you on the job, out on site. Once you have walked around with your theodolite strung over your shoulder and climbed up a few ladders, you become part of the site, and it becomes easier to get accepted by the men.”

Female office based safety manager - 24 yrs

Almost half (45%) of the site-based women interviewed expressed a desire to remain in such positions because of the high levels of satisfaction that they could derive from it, and because it allowed them to demonstrate their ability to their male colleagues.

“I think on site you can have a certain pride in your work and I think that its something that I wouldn’t want to lose. Even in the long-term I would like to think that the role I do will be site based, and it’s obviously something that I need to think about for the future career and where it’s going to go.... when I got out on site, I noticed that people treated me differently, with more respect. I think that they thought that the fact that I was a woman working in this environment, must have meant that I knew what I was doing, and I love it because the work is so exiting. I would never want to swap this for an office based position.”

Female project manager 42 yrs

In the establishing-maturing stages, the office environment was seen as being more stable, and as offering greater opportunities to develop the networks of contacts that would ultimately enhance their career development in the future. This was particularly the case for male Co.1 employees.

“If you want to get on you have to get yourself into the head office and get involved in a few tenders. That’s where you get noticed by the directors. It’s just the hours and instability of working on site they would get you down in the end.”

Co.1 male site based assistant construction manager - 28 yrs

Thus, for ambitious informants, site based work was regarded merely as a transitory stage on route towards a senior office based position.

“I do enjoy the action and the challenges that site gave me but I think you have to face it that you can’t reach a senior position if you stay based in a site role, it’s a means to an end, and that’s the reason I can put up with it in the short-term.”

Male section engineer - 26 yrs

In terms of the physical aspects of site work, the only negative aspect affecting the women informants to a greater extent than men, were sanitary facilities.

“I find that toilet facilities on site are horrendous because they don’t think about women and the problems they go through once a month. You’re sitting on the toilet with holes through the ceiling and no lock on the door, and that’s the case on nearly every site I’ve been on. I say about it every time but it just doesn’t seem to be listened to. It may sound over the top, but it puts me off site based work quite a lot.”

Co.2 female quantity surveyor - 25 yrs

Geographical aspects of construction work

Despite the transient nature of the industry, only 40% ($n=10$) of Co.1 women and 48% ($n=12$) of Co.1 men expressed a willingness to be completely flexible in terms of geographical location. Of the other informants, 18% ($n=3$) of women and 44% ($n=7$) of men indicated a willingness to work where their employer dictated. Most of these informants did not have a partner or family responsibilities. For these informants, the opportunity to travel and work in different locations was cited as a reason for choosing a career in the industry, whilst for the others it represented the worst aspect of their chosen profession. Several women admitted to having not considered this aspect of construction work before joining the industry (see also 7.2).

“When I was originally placed in a division I said that I didn’t mind where I went and when I was placed in the national division I was happy, because I knew that people saw it as the engine room of the company. I wasn’t really aware at the time just how far apart they worked and the first job was in Newcastle for 18 months, and then I was down in London. If I’d have known just how flexible I’d have to be I’m not sure I’d have been so keen.”

Male assistant QS - 26 yrs

In attempting to remain geographically stable, several women travelled long distances to work.

“The hours aren’t too bad but I have to travel so far to get here, it’s so far away from home. It adds four hours to my day.... It’s my choice, and I know it could be worse, but in the end its worth it to maintain my career, and my relationship.”

Female senior design manager - 48 yrs

Men were less concerned over geographical instability in general, and even those with family commitments maintained a high degree of flexibility.

“At a personal level I would only be willing to move if the location was suitable with me and suitable to my family. The move would have to be for a long enough

amount of time to allow my child to settle, but that's not to say I wouldn't move at all, if you work in this industry you have to accept it."

Male senior construction manager - 32 yrs

Younger men saw advantages in being flexible such as the opportunity to travel and work in different areas of the country; the added remuneration for subsistence allowances; the active work-related social life; and the opportunity to work on large and potentially career enhancing projects. For those in their expanding career stage, working away from home presented an opportunity to make a substantial addition to their basic salaries through subsistence allowances. Combined with an active work related social life, men in this group perceived many advantages to this type of work.

"I think its great. Here everyone goes out every night after work and we have a good laugh. When it's a good crack, I'm happy to travel around as long as I'm based with a good team, because with the subsistence we've got enough to actually go out and make the most of it."

Co.1 male assistant QS - 23 yrs

However, the opportunity to work on prestigious projects formed the most significant incentive for the informants to work away from home.

"Every decision I make must always look good on my CV, and if I think that a move to Scotland or Europe to work on a specific project will look good, then I will go. I think that my wife and I have had to face by now that I wont be home most nights as the area where we have chosen to live is unlikely to supply many opportunities as far as prestigious projects are concerned."

Co.1 male executive design manager - 46 yrs

However, most women felt that they had little choice of where they worked.

"I like being close to home. They sent me to Scotland on the last job, and although it was a beautiful place, I really missed being close to my family.... they know I want to stay in London but they keep telling me there is no work. One of the divisional directors had me in to give me some friendly advice that by saying I wouldn't move I was harming my career, so I suppose in the end I am just going to have to go really."

Female assistant construction manager - 26 yrs

Designation

As was discussed in 7.2.2, women believed that particular career paths offered better opportunities for them. In particular, commercial positions were seen as more compatible with women's needs. However, most informants perceived that their professional role was broadening, and commented that the delineation of professional responsibilities was less clear than in the past. Some of the informants had been asked to be take on multi-faceted

roles to combine the construction and quantity surveying functions. This move was embraced by women, but was rejected by men.

“My role has completely changed because of their push to get us to be more rounded managers. I like the idea, everything is down to you from the procurement of the packages to the construction and paying the contractors.... you get much more of a complete picture.”

Female package manager- 32 yrs

“This idea of the rounded manager is stupid, I mean, either you’re a QS or a construction manager. If I’d wanted to be a surveyor I’d have been a surveyor, people should stick to what they’re good at.”

Male construction manager - 29 yrs

Men and women also had different views as to what defined their occupational status. Whereas professionalism and qualifications were cited by women, men saw levels of responsibility as defining how they were viewed by the organisation.

“To me status is about the amount of responsibility that you have. It’s not particularly well paid, but you can get a lot of responsibility early on, and that’s what gives you standing at work.”

Male site agent - 28 yrs

“I need to be able to get my chartered status. I’ve been chasing them because if you reach a senior level it is essential that you can be recognised by your professional qualifications.... to me it’s your qualifications that demonstrate that you can perform professionally, because they are a tangible demonstration that you have achieved a level of professionalism, and that you deserve recognition and respect from your colleagues as a result.”

Female assistant construction manager - 26 yrs

Project Size

Eighty five percent ($n=70$) of those interviewed were working on specific projects. The participating companies had projects ranging from £0.5m to £350m. However, due to the type of work being divided amongst the specialist divisions of the companies, most informants worked on similar sized contracts, unless they moved to a different operating division. Men’s attitudes towards the effect that project size had on career development were consistent across all career stages. They perceived larger projects as being the most prestigious and hence, career enhancing. Smaller projects were seen as being too restrictive to allow promotion to senior levels.

“I don’t know if you have looked around this project, but it’s massive, there’s hundreds of people on it, but that’s what I want, exciting projects. I couldn’t build

sheds for Tesco, where's the challenge in that? If you want responsibility then you have to work on big projects, that's how you get on."

Male site engineer - 22 yrs

Conversely, women preferred to work on smaller projects. Many felt that they allowed them the scope to obtain a more rounded experience.

"On smaller jobs of about 4 million or so you tend to get pushed in at the deep end and you are expected to take on a lot of responsibility. You get a bit of experience on everything, earthworks, drainage and the superstructure which is better than just looking after a package like brickwork or something. That's why it's better to get on the smaller projects."

Female section engineer - 25 yrs

Work related stress and pressure

Work related stress and pressure emerged as a complex area to analyse when related to construction project work, as it was not just the physical and mental demands that impacted on stress levels, but also the effect of working away from home and travelling long distances. Table 7.10 shows that expanding stage informants were more likely to be concerned with workload and responsibility than geographical instability and working hours, whilst the reverse was true in the later career stages. These informants accepted these elements of construction work as a necessary part of developing their career, but as their life-cycle responsibilities grew, then they became increasingly relevant.

Cause of work related stress			Workload					Responsibility to great					Working Hours					Geographical instability					Incompatibility of work & family life				
Sex	Co.	n	<	6	1	1	>	<	6	1	1	>	<	6	1	1	>	<	6	1	1	>	<	6	1	1	>
			5	-	1	1	2	5	-	1	1	2	5	-	1	1	2	5	-	1	1	2	5	-	1	1	2
			y	0	1	5	0	y	0	1	5	0	y	0	1	5	0	y	0	1	5	0	y	0	1	5	0
			r	y	r	s		r	y	r	s		r	y	r	s		r	y	r	s		r	y	r	s	
			s	r	s	s		s	r	s	s		s	r	s	s		s	r	s	s		s	r	s	s	
Men	Co.1	25	X	X	X			X	X	X				X					X		X		X	X			
	Co.2	4		X									X					X						X			
	Co.3	5							X				X	X													
	Co.4	5	X																	X		X			X		
	Co.5	2																X		X				X			
Women	Co.1	25	X	X	X					X			X	X	X	X		X	X		X	X	X	X	X		
	Co.2	4		X				X	X				X	X				X	X				X				
	Co.3	5		X					X									X						X			
	Co.4	5	X					X				X	X					X					X		X		
	Co.5	2						X																			

Table 7.10: Work related stress and pressure time-ordered frequency matrix (X = Cited unambiguously by at least one informant as a causal factor leading to work-related stress.).

Many informants talked of feeling ‘thrown in at the deep end’ or referred to their company’s HR policy on allocating responsibility as a ‘sink or swim’ approach.

“Their basic management philosophy is to keep loading you up until you burst, and when you scream they take it off which makes you look incompetent, so you don’t complain.”

Male assistant QS - 23 yrs

The long-hours culture was seen by many women as being ingrained within the work practices of the industry.

“When I was working on the tunnel I was down there at 7 and rarely got out before 8, 6 days so I saw virtually no daylight for 18 months. They even gave us a loyalty bonus for sticking it out at the end, not that many of us did though! That’s the way it is though, and it will never change. Either you accept it and work with it or leave, its as simple as that.”

Female section engineer - 30 yrs

7.4.2 Economic factors

The availability of construction work as a contextual career determinant was widely discussed, as at the time of the interviews the industry was recovering from economic recession.

Variable workloads

Economic downturns had adversely affected opportunities for promotion, and had led to feelings of insecurity. Women with relatively short service to their organisation, did not appear as confident as their male pairs.

“I am not confident that we will have a job to go to at the end of this one. I hear that we haven’t been winning much work and they haven’t got anything for us at the moment. It’s a worry, particularly since I’ve not been here long.”

Female QS - 28 yrs

Experiences of being made redundant had led some informants to be sceptical of their employer’s commitment to retain staff. Most informants who had been made redundant, and all of those who had lost their jobs on more than one occasion, were women.

“Things were pretty bad then, there wasn’t much work around and we knew that some of us would be made redundant. They called us all into a room and said that everyone was out on Monday. They made us all troop in individually to get our letters of redundancy and that was that. No explanation, no thank you, just goodbye - is it any wonder people aren’t loyal to contractors?”

Female building services manager- 32 yrs

Accordingly, during the recession, priorities for many women had been focused on ensuring job security as opposed to promotion and remunerative opportunities.

“When I graduated you could walk into anywhere and find a job and even demand the salary you wanted. I had three job offers when I graduated, but now it’s hard to even secure a permanent contract. I really fought to get one because I felt that if things really hit the skids then I wanted to put the onus on them to find me work somewhere else. I have ended up working in a position I don’t particularly like, but at least I have a permanent position.”

Female senior design manager - 48 yrs

A reduction in workload during the recession had also restricted opportunities to move *within* organisations. Divisional companies, operating as autonomous profit centres, were unwilling to take on more staff.

“It used to be the case that you could stay within the company and get the promotions, the better cars and better money. It seems to be static now since the recession, no-one gets promotions, because no division wants to take in new staff at the moment. If there is no movement in the company, either up or across, then to further your career you have to leave.”

Female assistant QS - 26 yrs

There was frustration amongst male and female informants that career opportunities were dependent upon economic factors, and so were out of their control. However, they also

believed that opportunities had been restricted because companies had made too many promotions prior to the economic downturn in the industry.

“It’s been agreed that if the work is available that I will get my own job. To be honest, I’m lucky to be in this position because we are dumping people on all the jobs that we have got left and there are no decent ones on the horizon at the moment.... what has happened is that we have promoted people like mad during the boom, and now we are in the position where we have loads of site managers but a reduced workload. So what happens is people have to become assistants on projects when they are used running their own jobs.”

Female assistant construction manager - 22 yrs

Another effect was that opportunities to gain certain experience and training were curtailed during the recession.

“I have wanted some experience of working on finishes for ages now, but the way it’s going there are so many people available for any work we do get, that I doubt that I will get the chance. My training and development is totally dependent on economic factors, they do it when turnover is up and talk about it when turnover is down. Training always seems to be the first thing to be squeezed in a recession. I find it very, very frustrating that no matter how hard you work, no matter how well you do, no matter how competent you are, it’s not going to help you because how well you get on depends upon somebody else and whether they are winning the work.”

Male site engineer - 24 yrs

Just as demand for construction work is cyclical, the informants saw the demand for professional skills as following similar cycles. Quantity surveying was seen as the most in-demand profession at the time of the interviews.

“I think that since things have started to pick up I have seen a boom starting for surveyors. Quite a few have seen opportunities and are leaving. Certain skills are needed more at different times and I think at the moment it’s the surveyors turn, but ours will come round again in the end.”

Male construction manager - 29 yrs

‘Luck’ as a determinant of career development

Being ‘in the right place at the right time’, or working ‘on the right kind of project’, was seen by most informants as being key to their career development. Almost every informant cited ‘luck’ as being in at least some way responsible for their career progression to date. A frequency analysis of the term ‘luck’ showed 176 uses of the term within 64 of the interviews. However, the concept of luck was gendered, in that women used the phrase to a greater extent than men. In particular, the allocation of personnel to projects was attributed to luck by women.

“I’ve been very lucky really. I turned up on the right day, got allocated to the right division, got to the right project, met the right guys and now I’m doing exactly what I want to and am two promotions ahead of my peer group. People say that you make your own luck and to some extent you do, but I have been lucky with the people that I have worked with, and that has helped my career.”

Female procurement manager - 27 yrs

Men tended to blame bad luck for negative aspects of their careers. Estimating departments in particular were blamed for project failures.

“Your career in this business is governed by luck, luck on the success of the job you go on. I have been on jobs where the tender price was too low and the job lost money. My career has taken a different path because people will always blame the project manager as to why a job is a failure. It’s more to do with the quality of the estimator than your management ability.”

Male project manager - 32 yrs

As such, some informants believed that a single successful project was likely to lead to future successes, in terms of managers being able to secure profitable projects in the future.

“Success breeds success, like if you have a successful job then you tend to be put on another job which is likely to be successful. If you get on a bad job, you get put on the next ‘hospital’ job that comes along. You get caught in this kind of spiral, caught in a trap, you end up in a situation when you keep getting put on jobs that are going to make money because of your past success. The team start saying that we wont fail because that guy never fails. People say and think it will happen, so it will happen.”

Co.2 male project manager - 32 yrs

7.4.3 Summary

All of the informants perceived contracting work as offering a challenging workplace environment, but one which was characterised by stress, long hours and a transient life style. However, there were many inherently motivating aspects of the work, and despite the harsh physical nature of site based work, it was assumed to offer better opportunities in the early career stages. As such, work location was cited as a strong determinant of career satisfaction. Women saw site based work as offering the potential to give them credibility, and allowing them to prove themselves to their male colleagues.

Certain professions were seen as offering better opportunities for women. Quantity surveying was seen as particularly suitable, particularly considering the greater demand for surveyors which had a positive effect on their career opportunities. Women had also

embraced the integration of commercial and technical managerial functions which was seen as a changing trend in the industry. This contrasted with men who generally wanted to retain functional divisions. However, the overriding contextual factor determining careers was the economic output of the industry. However, even attitudes towards economic factors were gender determined, as women attributed success as a result of economic opportunity to 'luck', whereas men blamed project failures on bad luck.

7.5 Organisational Career Determinants

This category within the analytical model (Fig 7.1) comprised the majority of the factors emerging from the careers interviews as affecting career progression and retention, and as such they comprise the principal mediating variables emerging from the analysis. In accordance with the careers literature, they have been divided into two broad categories of structural and cultural factors, although in some cases there was no clear distinction between the two. Furthermore, although categorised as originating from an organisational context within the model, there is some overlap with issues that could be categorised as relating to the sector as a whole, as they applied to all five of the participating organisations. Thus, the scope of the industry's influence can be seen to overlap into this section within the model.

7.5.1 Structural factors

Issues were categorised as structural factors if they formed part of formal HRM policy. Organisational approaches to HRM tended to be flexible to cope with varying economic demand cycles. As such, many of the informants' responses were specific to the particular structural conditions within the organisations at the time of the interviews. However, there were also structural factors underpinning career development which were ingrained within all of the employers' work practices.

Formal training provision

A reputation for providing comprehensive formal training was a significant factor in attracting women graduates to companies. Accordingly, disappointment with training provision was a major determinant of low morale. Many women described training provision as 'ad-hoc', or as being used only to meet minimum legislative requirements.

"When I joined the company they really sold the training side of things to me, but since I have been here I have only been sent on a health and safety course which all new staff get sent on anyway. None of my requests have been answered, and I've been left to pick up what I can from my colleagues on site."

Female assistant construction manager - 23 yrs

Experienced informants saw formal training as being restricted to the graduate trainees.

"After your training agreement has run out, then that is that for training. I mean in the last three years I have put on my appraisal that I have wanted to do some courses and I have heard nothing. I think they tend to leave you alone to look after it yourself. We have got a great training department as far as graduates go, but I think that beyond the first three or four years that is that."

Co.1 female sub agent - 32 yrs

Table 7.11 shows that there were little differences in opinion on training provision between the companies, as all were seen as having good graduate provision, but this declined in the later career stages.

Sex	Co.	n	General assessment of management training					Training towards professional qualifications					Training to comply with statutory legislation					Other training provision				
			< 5 yrs	6-10 yrs	11-15 yrs	16-20 yrs	> 20 yrs	< 5 yrs	6-10 yrs	11-15 yrs	16-20 yrs	> 20 yrs	< 5 yrs	6-10 yrs	11-15 yrs	16-20 yrs	> 20 yrs	< 5 yrs	6-10 yrs	11-15 yrs	16-20 yrs	> 20 yrs
Men	Co.1	25	3	2	1		1	3	2	1		1	3	3	3		2	3	3		2	
	Co.2	4	2	2				2	2	1			3	3								
	Co.3	5	3	2	1		2	3	2	1			3	3								
	Co.4	5	3	2			2	3	1				3	3								
	Co.5	2	3	2				3					3	3								
Women	Co.1	25	3	2	1		1	3	2				3	3								
	Co.2	4	2	2	2			3	2				3	3								
	Co.3	5	3	2			2	3	2				3	3								
	Co.4	5	3	2			2	3	2				3	3			3	3			3	
	Co.5	2	3				3	3					3			3						

Table 7.11: Time ordered frequency matrix: Quality of formal training provision (Key: 3 = High standard of formal training provision generally cited by respondent group; 2= Satisfactory standard of training provision; 1 = Poor standard of training provision; blank = Insufficient data to gauge opinion).

Informal training provision

Although overseen by HRM departments, responsibility for informal training provision was usually devolved to line management. Opinions on the quality of such provision appeared gender determined, with women complaining of inadequate supervision and assistance.

“The first few months were a nightmare because I was assigned to this guy who was never in his office. I arrived on the first day and they told me where to go and I met him, and the first thing he said was ‘we are off to a meeting’, so we went this meeting and I didn’t have a clue what was going on. He gave me some documents after the meeting and told me to read them and then disappeared for two weeks.”

Female assistant construction manager - 23 yrs

Conversely, men saw informal training as more effective than formal schemes.

“I think I have been fortunate because I have worked with some very good people. They were willing to spend time with me, willing to show me and educate me. Whilst I have got little out of the graduate training programme, I think that the experience and knowledge that I have gained on an unofficial basis has been second to none.”

Co.1 male assistant construction manager - 25 yrs

Skills and knowledge acquisition through observation and work with colleagues was acknowledged as being reliant upon good relationships between line management and their subordinates. However, for women in the establishing stage, requests for informal training were seen as damaging their credibility.

“It’s a bit embarrassing when you start on site because you don’t want to ask people for help every five minutes. I sometimes feel that it’s left to me to go and find out about how things work without really being told who I should be speaking to.... I think it’s easier for the men because if they make a mistake everyone on the site isn’t going to pick up on it. Sometimes I don’t feel that I could ask, or I will just make myself look stupid.”

Female trainee construction manager - 23 yrs

Career development support

Many respondents expressed concerns over falling training budgets and a reduction in HRM support. Some felt that companies refrained from providing intensive support to avoid making their staff more attractive to other organisations. As such, the HRM function was undervalued, seen as an administrative role, servicing the operating divisions. HRM

issues were perceived by women in particular as being dealt with in a reactive way by organisations.

“I think if you want support from personnel and training you have to go and seek it. They will help you but I find them all a bit wishy washy, its hard to get an answer out of them sometimes. You may as well go to your line manager really, they have more say in what goes on anyway.... all of the careers advice that I’ve had has come from my managers, not from the training department.”

Co.1 female assistant QS - 24 yrs

A consequence of this was that HR department held little power or influence within the organisations, particularly in Co.1.

“The training department just don’t keep us informed. I think its because they aren’t informed themselves really. Everything they say seems to get changed which is very frustrating. It’s like these salary increases, at first it was a £1000 every six months, then something else, then performance related, I think the directors just make it up as they go along, and training just have to implement it.”

Co.1 female assistant construction manager - 23 yrs

However, for trainees and recent graduates, the HRM department and particularly the training manager was cited as being key to their early career development, and in most cases good personal relationships had been developed which had led to them being able to turn to them for informal advice and opinions on their performance.

“Training and personnel are good for those just coming out of college because they can guide them and remain in contact with them. In a way I think it is better if the person that reviews your progress and salary in those first few years remains constant even if you don’t actually work with them. You need someone who knows you and the way that your career has been developing really.”

Co.1 male assistant QS - 24 yrs

Where active support had been given, women had a more positive attitude towards company HRM policy.

“The old training manager was awful. He ran things in a really structured way with no flexibility at all. No matter how much I complained he wouldn’t listen, at one point he had me in the accounts department stamping invoices all day until I got so bored that I actually fell asleep.... now we have a much more supportive team in there, they are much more active in making sure that we get a good training experience. It makes you see the company in a different light.”

Co.1 female assistant QS - 25 yrs

In Co.3, all of the respondents believed that the HRM function was valuable and was managed effectively. Their approach was to be proactive in early development, followed by active support of individual development after completion of the graduate training programme. This structured and proactive HRM approach had generated a high degree of career satisfaction and loyalty amongst these informants.

“I would say that the training department are very good, they send you on lots of courses and try and push you towards getting chartered. I think that once you reach that stage, say three years after graduation, that you should be able to stand on your own two feet, and that’s the approach that they take. But I know that if I want some advice or support they will help, I often stick my head in to say hello when I’m back at head office.”

Co.3 female site agent - 32 yrs

Professional training

Those in the formative stages of their careers were concerned with their professional development and membership of industry bodies. Generally, companies were seen as being supportive to the respondents in achieving their professional qualifications.

Prof Body			CIOB		RICS		ICE		CIBSE	
Sex	Co.	n	<5yrs	6-10yrs	<5yrs	6-10yrs	<5yrs	6-10yrs	<5yrs	6-10yrs
Men	Co.1	25	1	1	3	3	2	2	1	1
	Co.2	4	1		1		3	3		
	Co.3	5	2		2		3	3		
	Co.4	5	3		3		2	2		
	Co.5	2					3		2	
Women	Co.1	25	1	1	3	2	3			
	Co.2	4	2		2		3	3		
	Co.3	5	2		2		3	3		
	Co.4	5	3		3		3	3		
	Co.5	2					3			

Table 7.12: Support for professional development - time ordered frequency matrix: responses cited unambiguously by at least 50% of sample population under each experience banding (Key: 3 = High standard of formal training provision; 2= Satisfactory standard of training provision; 1 = Poor standard of training provision; blank = Not enough data to gauge opinion (Note: whilst all of the companies employed architects, they had all completed training upon entry to the organisations).

Table 7.12 shows that training departments offered strong support to those with structured training agreements for ICE and RICS membership. However, where official training agreements were not a requirement of gaining professional accreditation, such as for the CIOB, there was little support from the companies. Furthermore, the level of support was inconsistent. In Co.4, a mentoring system had also been developed, and the informants

from this company perceived them as being more proactive in supporting professional training.

“Well we have an assigned mentor who really looks after our training. I have someone who is CIOB accredited to oversee me. I see him every three months and he reviews what I have achieved against my objectives. It’s a bit like the appraisal but he looks at what have done in relation to working for my IOB membership. It works really well, I like to feel that the company has an interest in my CPD.”

Co.4 male graduate civil engineer - 23 yrs

Performance appraisal

The performance appraisal systems in all five of the companies worked very similarly, with line managers assessing staff within pre-defined competency bands for general skills deemed important by the organisation. These competencies tended to be non-specific to either function or hierarchical position. Scores were effectively negotiated with line managers and short-term (1 year) or medium-term (5 year) developmental goals were set for the appraisee to reach. Areas where further training was required to reach these goals were also identified. None of the systems were aimed at measuring the outputs of personnel, and were disliked by almost every informant. Moreover, Table 7.13 shows that women felt that there was a potential for a lack of consistency, bias or prejudice from line management to manifest themselves through the appraisal system.

Principal Concerns >			Subjectivity of assessment					Lack of consistency					Lack of feedback					Lack of regularity					Lack of role applicability					
Sex	Co.	n	<	6	1	1	>	<	6	1	1	>	<	6	1	1	>	<	6	1	1	>	<	6	1	1	>	
			5	-	1	5	2	5	-	1	5	2	5	-	1	5	2	5	-	1	5	2	5	-	1	5	2	
Men	Co.1	25		2	1	1				3	4	1	4	2	1					3		1				1	2	
	Co.2	4						2	2																			
	Co.3	5						1		1							1								1			
	Co.4	5	1			1		1												1								
	Co.5	2						1							1													
Women	Co.1	25		1	2			9	3	1		1	2	3								1	1					
	Co.2	4		1				1														1	1					
	Co.3	5		1				1	1			1			1							1						
	Co.4	5		1				1		1												1						
	Co.5	2											1															

Table 7.13: Time-ordered frequency matrix: Criticisms of PASs - unambiguously stated primary reasons.

Problems of bias on the part of the manager carrying out the appraisal, and the subjective nature of the systems were criticised by the majority of informants.

“If you are a trainee on site doing a trainee’s job like photocopying or sweeping as all trainees do, you get five, and then people like me doing a full QSs job and get middle grades. It doesn’t seem fair. This performance appraisal system is a joke. What you get completely depends upon who does your assessment - if you don’t get on with your line manager they could make it very difficult for you.”

Female assistant QS - 23 yrs

For those in departments or functions with less tangible outputs, their performance could not be fairly appraised. This applied mainly to women employees, who were more likely to be in support positions.

“My concern with the appraisal is that it’s fine if you’re a project manager and you have control over your project and whether it comes into budget or not, but if your doing business development you can go out to a 1000 clients a week but unless the business as a whole is doing well we wont win any work. So how on earth can you appraise what I am doing?”

Female business development manager - 29 yrs

Every informant had only been assessed by male managers. This had led to concerns that such managers may seek ‘male’ traits from those whom they were appraising.

“I think that managers assess people in terms of how they see successful managerial style, which in reality will mean who gets closest to their own style. It is a concern for women I think, because the male managers carrying out the assessments may overlook the particular skills that women bring to the job, and look for carbon copies of themselves.”

Female assistant QS - 23 yrs

The lack of feedback from the PASs was also of concern, as through the entire process only the assessor was likely to give any direct comments on performance. Moreover, there was no effective mechanism for the HR department to report on the subject’s score relative to his/her peers. Within Co.1, employees were often not informed of whether they had been allocated places on training courses they had requested as a result of identifying short comings in their own skills and knowledge.

“.... you get your assessment and you say, right I would like to go abroad, or I would really like some training on this, this and this. The way it seems to work is that if the person you’ve said it to is a pretty good manager, then he will make sure you get on the courses, but if you just write it on the personal assessment form then nothing happens at all.... I think that most people see it as a total waste of time.”

Female construction manager - 32 yrs

The only variation in approach was in Co.2, who allowed individual employees to choose their appraiser. Whilst this made the objectivity of the assessment questionable, the system was favoured by the informants, especially the women, as the assessor could be kept consistent, and could track their appraisee's career progress.

“I think that our system is quite effective because we get the chance to choose who we actually want to carry out the appraisal, so of course you pick someone who you are comfortable with.... so you can discuss things which are relevant to you. With keeping the same assessor, he knows which aspects of my career are important, and which require work.”

Co.2 female assistant QS - 22 yrs

A radical departure from these traditional systems had been piloted on managerial and professional staff by Co.4 following a recent take-over. This involved a psychometric test being carried out. All of those interviewed ($n=10$) thought that their descriptors were accurate. Several also commented that their line managers, who would usually carry out the appraisals, assumed an incorrect descriptor when asked to predict their employees' ideal managerial type. Thus, the informants feared that training and other developmental routes that line management had suggested for them in the past, had been based on assessments of their skills and abilities which did not reflect their actual needs.

Remuneration & conditions

There was a general view that the economic recession in the early 1990s had adversely affected salary levels. However, at the time of the interviews, all of the companies investigated had experienced an upturn in workload which had rekindled remunerative dissatisfaction. Several informants suggested that a cartel existed which kept salary levels low.

“All they say when I complain about my salary is that they pay the market rate, which is true really. I'm sure they all talk to each other you know, because when I have phoned up about jobs the salary scales are too close to be coincidence. All my friends that I graduated with earn within £1000 of me.”

Male assistant QS - 22 yrs

There was a general perception that salary levels were proportional to their experience within the industry.

“I get very unhappy at the way people say that so and so has more experience than you so they earn more. They may have more historical experience but they don't have same degree of responsibility that I have. It may have taken them 20 years to have learned what I have in 5.”

Female construction manager - 32 yrs

Within Co.1, employees had received a directive that their salary banding should be kept confidential. Hence, women had found it hard to compare their progression with their peers.

“We have been told not to divulge our salary levels. I think it should be our choice, it's my business who I decide to discuss my salary with and who I don't.... it makes it impossible to compare my salary with anyone else's. I don't know if I'm under paid, over paid or what.”

Female assistant QS - 24 yrs

Of greatest concern, however, were several cases where female informants had found that they were paid less than equivalent male peers.

“I can tell you that I have found out that my salary is only 75% of the guy's salaries. The only reason I know this was because one of them told me what he had been earning, I was shocked because going from being a graduate to working for [Co.1] I really didn't have a strong feeling for money, and I thought that what they offered was great. But they have been working in the industry for years and they knew what the going rate was and these guys in the same positions as me are earning a lot more than me now.”

Co.1 female construction manager - 32 yrs

Whilst instances of differential pay rates cannot be corroborated with quantitative salary data, some women with family commitments stated that they were offered lower salaries on account of the restricted flexibility.

“I suspect I am on slightly less than I should be, but equally, given the fact that my family commitments limit what I can contribute, but I am not going to rock the boat over it as I have to be away by 5 to get to the crèche.”

Female executive design manager - 46 yrs

Other women felt that their salary was restricted *because* of stereotyped views of personal commitments.

“I've heard comments like ‘he earns more because he's got a wife and kids’ but that's immaterial. When my boyfriend started out in the city, I could see people thinking, well you are fine for money now, you turn up in a nice car, your clothes are better, but just because we have got more money doesn't mean I shouldn't get pay rises.”

Co.1 female assistant construction manager - 25 yrs

Additional remunerative benefits

Other remunerative benefits promoted loyalty to the organisation. Benefits included private health care provision, overtime payments, profit related bonuses and share options. Many informants considered benefits carefully when seeking a new employer.

“Salaries are pretty standard in the industry so I think what attracts you to a company is the benefits, everything that goes with the job like company cars, health schemes, share options and that sort of thing.... I would say they’re worth about a third of my total package.”

Male assistant QS - 23 yrs

Share options were offered by Co.1 and Co.3 to encourage loyalty after a period of service. Within Co.1, they were held in trust for 3 years before being passed onto the employee as a loyalty incentive. This was acknowledged as being an effective way of promoting retention.

“Most of the people working for them have bought shares in them yes. It’s got be a motivation, actually feeling that you are working for yourself in a way, that you have a stake and an interest in your project doing well.”

Co.3 male site engineer - 22 yrs

Co.1 informants discussed company cars as providing a tangible demonstration of power and status within the organisation. This stemmed from job titles not inferring seniority. However, women that had confronted the stereotype of driving smaller cars had provoked resentment from their male colleagues.

“I used to drive a sports car, and I drove it into work on the first day and I got out of it and this executive said ‘well who the hell did you sleep with to get that, you are only a manager’. He didn’t even consider it might be my own car. In the end the director had me in and said that we can’t possibly have someone at my level driving a better car than the project managers, and to stop bringing it to work.”

Female construction manager - 24 yrs

Organisational communication

Formal organisational communication was universally criticised by almost all of the informants in the study. In particular, changes to HR policy were made regularly, but rarely explained or justified to operational staff. This had resulted in confusion over HR policy and low morale.

“Last year there was an uproar about this decision to change all of our terms and conditions to meet the [Co.1] terms and conditions.... there was no consultation, just a letter saying from April all of your terms and conditions are being changed to this, this and this. Please sign the bottom and send it back.... no one knew anything about it, there wasn't even a rumour about it.”

Female construction manager - 32 yrs

Poor formal communication had led to line management forming the communicative link between strategic management and the workplace. Managers visiting sites from the head office were expected to provide a link to the rest of the organisation. However, only in the smaller regional divisions where divisional directors had closer relationships with their sites, was communication seen to be effective. This issue was particularly salient for women, as they were less likely than men to find out about organisational issues during out of work social events.

“We were asked to identify areas where the company needed to improve and communication came out top of the list, but nothing has ever progressed. It's worse for us women because the men seem to pick up bits of information down the pub or whatever.... quite often I'll hear them discussing new jobs that have come up and new opportunities that I was never told about.”

Female assistant construction manager - 27 yrs

Human resource allocation

A function of HR policy was to allocate staff to projects, and to different parts of the business. However, staff allocation was seen as a political process within Co.1, related more to personalities than to an objective matching of staff skills and training needs to projects. Weekly senior management meetings were used to discuss staff transfers and were discussed at length by the Co.1 employees.

“I haven't got a clue how it's decided where you go. I just think they it was probably lets give this boy something in the south, which divisions are working down there, and then it will be well, he has to work away from home we might as well stick him in Scotland for a few weeks. Long term they know they can do this with the younger people, because they will go.”

Co.1 male trainee QS - 22 yrs

Women believed that divisional allocation was not analogous to the work profile of the organisation at the time of the interviews. Hence, they generally perceived that there were hidden agendas which explained divisional and project allocation. Opinions as to why such little regard was paid to employees' geographical preferences related to a perception

that the companies believed that they could derive more work output from employees working away from home.

“Sometimes its hard to see the logic when they are placing people. There can be a job down the road from your house, and they need someone from your level, and they will send you to other side of country and ship someone else over there. In the end it costs them more with 2 people on subsistence.... I would say it was because they feel you will work harder if you are away from home.”

Male section engineer - 30 yrs

Women generally believed that they had little say in where they were allocated.

“I don’t believe you get a choice. You either go or you don’t work for the company. There’s no such thing as ‘I’d like to work on this job’. If I had said no to coming up and working here I would have been laid off.... this guy from training came up and said ‘you start in Manchester on the 1st of May, it’s not a subsistence job, have you got any questions?’”

Co.1 female senior construction manager - 32 yrs

For the establishing and maturing groups, the importance of their needs being taken into account during decisions on staff placement were more important. They discussed the effects that career decisions to work away could have on their personal relationships.

“I think it’s the uncertainty that gets to you, particularly if you have kids. We were sat around last week talking about this, I mean, this job finishes in 2 months and we don’t know where we are going yet. We have heard on the grape vine that new job is starting in Leeds, but if I get sent there I don’t know what I’ll do about child care.”

Female sub agent - 32 yrs

Formal work practices

Female informants preferred clear and unambiguous work procedures.

“The directors came down to site the other day and asked me how I pay subcontractors’ claims. They told me not to pay unless they had been given an instruction. It’s confusing because they try and have a face for the public where they have good relationships with subbies, which is totally different from their internal face. It would be nice to see a bit of consistency.”

Female assistant QS - 23 yrs

Women’s preference for defined work practices was cited as an important factor in allowing them to demonstrate their professional competence.

“I think sometimes that I really ought to think about making a move, but I think no, because I know the system here. Knowing how things work helps me being a woman, because it helps to demonstrate my professional ability. I’d have to start the process off again if I moved.”

Female section engineer - 30 yrs

Men, however, tended to find formal procedures restrictive, and preferred a flexible approach to how they performed their professional roles.

“I think that the paperwork gets you down.... we have these great big thick safety manuals with loads of things to tick, dead boring and nobody takes any notice of it. In the end people just become blasé about it..... the thing that makes me dissatisfied with my work is on those occasions where I have been thinking that we are in a right buggers muddle because we are trying to work with systems that are like trying to run around in treacle. I think that the company needs to look at the way it does things, and try and allow a bit more flexibility.”

Male QA manager - 39 yrs

Organisational structure

Most of the organisations had removed hierarchical levels and flattened structures following the recession. Male Co.1 employees were opposed to what they perceived as superficial changes to the structure of their companies, as they were concerned that removing management levels had made it difficult for them to progress vertically.

“Over the past 10 years I have seen a move towards a flatter organisational structure. They have removed levels and tried to make the company leaner in terms of senior management, but I don’t think that people necessarily see themselves in different roles just because the company has re-defined them. There is such a big gap from senior manager to exec that it’s a big hurdle to get that promotion. The inevitable result is that people will end up stuck at one particular level.”

Co.1 male senior design manager - 48 yrs

Women, however, saw potential career enhancing benefits in the flattening of these structures, particularly in terms of communication and opportunities for lateral development.

“For me, the flatter structure provides an incentive for progressing without having to become a divisional director. So I think it’s a step in right direction.... If it’s seen as a re-grading to make it so you can’t progress any further, and you won’t get a better car, and you have to be a director before you get a BMW, that would be demoralising, but if flattening structures allow us the scope to develop horizontally, then this it’s a positive step.”

Co.1 female assistant QS - 23 yrs

Within Co.1, divisions had the autonomy to structure themselves in a way appropriate to their business needs. One division had developed a flat, virtually two layered structure with all management reporting directly to the divisional head. Women in this division preferred having direct contact with senior management. In the civil engineering based

companies (Co.2 & Co.4), site teams remained deep and hierarchically structured. Men favoured such structures because of the clear lines of responsibility and opportunities for development.

“If you look at a military establishment there’s a procedure there and it works. Look at the Airforce and the Navy and the Army. It works, it’s a proven way of succeeding, a very rigid hierarchy and you know damn well who you report to. If you step out of line you know that you will get it. That is how this company should work, so that we all know where we stand.”

Co.2 male assistant construction manager - 26 yrs

At an organisational level, individual project managers were likely to develop their own project structures and define roles and responsibilities within broad guidelines set out by the company. More importance was placed upon functional roles, although women were concerned by a potential lack of role definition.

“I am a surveyor, I don’t work for the project manager I work for my surveying exec, but he’s based in head office and only comes down once a month. The project manager might be my line boss on site, but I don’t have too much to do with him. It’s hard to know where you stand, and what your position is exactly under these systems.”

Female Site QS - 28 yrs

Co.1 had removed all titles below divisional director, and replaced them with a system of letters relating to salary grades, the individual managers being empowered to give themselves an operating title commensurate with their position. Men perceived such changes as a threat to their careers and status, whilst women tended to see opportunities created by these new regimes.

“I remember when they removed the title of senior executive I was quite bothered about this, not because of my external status because nobody introduced anybody to anybody as senior exec, it was just my internal status, I wanted my colleagues to know that I was at a senior level.”

Co.1 male executive design manager - 46 yrs

“Someone in Co.1 who is an executive and you think is really high up, is probably the equivalent to a surveying manager, so I think they tend to glamorise titles a bit more here.... I think that this re-grade is good in that respect that you can give yourself a title which reflects what you do.”

Co.1 female Assistant QS - 23 yrs

However, concerns were raised by men and women as to the possible motive for such changes. It was seen as an attempt to reduce salaries, or to appease employees who had not been promoted during the recession by changing job titles in lieu of promotion.

“In four years I have been called a sub-agent, a senior engineer, a section engineer, an engineer and a graduate engineer and all were effectively the same job, but I never bothered using any of them. Not once in that period of I actually been promoted, they have just changed my title to appease me.”

Male project manager - 32 yrs

Job title empowerment had also led to inconsistency in titles across different divisions. This made it difficult for employees to benchmark their progression against their peers.

“I don’t really know where I fit into the divisional structure. I know I am a design manager and a senior manager but I didn’t know there was an executive banding above that. I didn’t even realise that the guy that had enrolled me from my previous job, my colleague, was actually my boss. I thought we were at the same level but he was an executive and I was a senior manager. In fact, I’m not too sure who is above me and who isn’t.”

Female senior design manager - 48 yrs

Promotional policy

All of the informants agreed that a proven ability at the level to which they aspired, was a pre-requisite of promotion, and most felt that they fulfilled a role at a level above the one that they officially occupied.

“I do the work of a project manager. There’s a guy out there, a senior manager, and I’m not doing any work that is any different to him. I do work over and above the grade at which I am paid, but that’s the way it works, you have to prove that you can handle the next level before they will actually promote you to it, you always work at one level higher than you get paid.”

Male assistant construction manager - 23 yrs

Women believed that their need to spend a period of time demonstrating their ability was attributable to men not accepting their commitment or abilities. They indicated that they spent longer demonstrating their ability than their male colleagues.

“On site you have to prove yourself not only at the beginning of each project, but with every new sub-contractor that works on the job. It was really frustrating because there was a definite element of ‘does she know what she is talking about?’ As a woman you have to constantly prove that you’re twice as good as everybody else. You have to earn the respect that a male gets automatically.”

Co.1 female procurement manager - 29 yrs

There was also a belief that any change in responsibility mid-project may not be accepted by subordinates, particularly for younger members of staff. This contributed to the widely held perception that promotions were unlikely during projects.

“We were looking at switching my position on this site, but we decided that it would be too difficult because everyone’s subcontractors are always going to see me as an engineer. What we might try is just a fresh start on a new site in a higher position so I’ve got to wait for the next job.”

Female site engineer - 23 yrs

Most of the expanding stage group were working within a graduate training programme. Men complained that structured progression could potentially restrict their development within the organisation. Women, however, were in favour of them as they allowed easier benchmarking of their careers against peers, and more definition to their progression.

“I don’t mind being on the graduate scheme, I know that I’m being trained, I know what position and salary I will be earning, and I know that it’s basically the same for everyone in the company.... I will progress at the same rate as everyone else, regardless of my sex, and receive the same training package.”

Female trainee QS - 22 yrs

Three of the respondents were on accelerated promotion schemes at the time of the interviews. Two were at a senior and one at a junior level. The Co.1 scheme involved sending the graduates, some of whom did non-cognate degrees, around different departments on short-term placements to gain an overview of the business, before identifying an area for them to work within the company. The scheme also included a placement with the non-construction related parent company. Men resented such programmes.

“We have what they call an accelerated development programme. There are people who are picked to get the top very quickly. There are a number of people who have been hand picked at an early stage.... it’s a real cloak and dagger operation, we all know that it goes on but we don’t know anything about it. Suddenly they’ll be whisked away from their jobs to work on special projects.... they tend to be the real creepy people who would agree with anything for the sake of their career, but unless you’re chosen you don’t find out about it.... people should be promoted on the grounds of their performance in my opinion, not their potential.”

Male site engineer - 24 yrs

In the relatively stable environment of the head office, structures were described by men and women as ‘top-heavy’. This had led to an inevitable reduction in promotional

opportunities to senior management levels. In particular, there were concerns in all of the companies that middle and senior managers were being brought into organisations which restricted internal opportunities.

“What’s happened in [Co.1] recently is that they have started to take on people at a senior level. They all come in at senior manager which makes you wonder sometimes.... these people just glide in and fill these senior positions while the rest of us are stuck knowing that there are no spaces for us.”

Male building services manager - 28 yrs

Within Co.1, it was believed that this had led the company to institute a restriction on promotions during the recession.

“We have heard on the grapevine that there is a blanket ban on promotions. People have said things like there have been too many people to make up from senior managers to senior executives and we are top heavy with senior executives, but at the lower end of the scale I cannot see why making people up to manager is such a big deal.”

Co.1 female assistant construction manager - 26 yrs

Women also felt that imposed pre-requisites for promotion changed regularly, and that as a result, there was little point in working towards goals set by the organisation.

“At the moment the rule is that you must get international experience, last year it was we want women in the industry, next year it will be you must have an MSc to get on, a couple of years ago apparently it was we are getting rid of job titles anyway. You get different stories from the people in the office and different stories from the training department. You want to know exactly, you want it laid down there in front of you, certainly when you’re at trainee level, what you’ve got to do and then after that it’s obviously up to yourself to get involved in as many courses as you can or whatever.... I think that people are sick of having the goal posts moved.”

Co.1 female assistant QS - 22 yrs

Flexible and family friendly employment policies

Many female informants discussed the viability of structural policy improvements that could mitigate work/family conflict. However, most felt that career breaks were unlikely to be supported by their company, or felt that they weren’t feasible for the industry.

“I looked through the phone book the other day and out of 167 execs there are 3 women. Because there aren’t very many that have reached that level I don’t think it would be accepted for them to have a career break. The only difficult part of working in construction for me is that, because technology moves on so quickly, you can fall a little bit out of touch if you take time out to have children, and I think it would be hard to move back again.”

Female assistant construction manager - 26 yrs

Even maternity leave entitlement was widely misunderstood within Co.1, with many women unsure of their legal or organisational entitlement. Several women were concerned that using their entitlement may even jeopardise their careers.

“One thing that worries me is their attitudes towards maternity benefits and career breaks and those sorts of things. It’s something that I haven’t really discussed with them because I feel that it would be inappropriate at this level, as I may jeopardise my career.... I was hoping that they would have communicated it rather than me having to ask as I don’t want to be seen as the guinea pig.”

Female assistant QS - 25 yrs

Although part-time work was seen as a potential route back into the industry after having children, men felt that it was unsuited to the industry.

“I think that if you wanted to return to work on site part-time that you wouldn’t be able to. It just doesn’t work, you couldn’t be an engineer part-time I’m sure, it requires your full-time attention to deal with the problems that arise.”

Male design engineer - 30 yrs

Whereas women saw job sharing and flexible working as feasible, men were also negative towards such initiatives.

“If I could find someone that would do a half job share with me then I would consider it, but I don’t think it’s something that the company would ever consider. It’s a shame because my position is ideal for this kind of role as I’m usually working on several projects and so I could handle some whilst she could handle others.”

Female procurement manager - 29 yrs

“Flexi-time just doesn’t work in construction. Clients work around the clock, and businesses work around the clock, and we need to work around the clock.... the company needs to be able to rely on us to be there all of the time when we are needed.”

Male executive design manager - 46 yrs

7.5.2 Cultural Factors

Issues were categorised as cultural factors, if they contributed to informal aspects of the organisations which influenced men’s and women’s careers. It soon emerged that the large construction companies investigated all comprised several distinct sub-cultures. These existed at project, divisional and at organisation-wide levels. The informants identified with different levels of the organisational culture depending upon which aspect of their

careers they were discussing. The majority of the discussion below relates to Co.1, as a deeper cultural insight was gained due to the greater number of informants interviewed.

Organisational philosophy

Most of the female informants discussed the underlying culture of their organisation, in terms of how compatible it was to their own work ethics and approach. Of particular concern, was a perceived regression back to traditional contracting roles, and away from working under contemporary procurement systems. Women saw this as creating different attitudes under which it would be difficult for them to work.

“Co.1 are just not swinging far enough really in addressing changing the nature of the industry. Instead they are regressing back into the traditional contracting role, which is going back to their old builder role, which might be what they know, but is not what I want to be associated with.”

Co.1 female construction manager - 32 yrs

Co.1 women were particularly concerned that the company's image of being non-adversarial would disappear if the direction of the company regressed towards these traditional systems. They saw the realities of working for the company as opposing this image. Men, however, subscribed to such an approach as way of progressing their careers.

“I think our approach being hard nosed is justified, it's the way we are taught to be, and that's the way it ought to be. I prefer working under traditional arrangements. Yes they are adversarial, but that's one of the reasons I became a QS, I enjoy hard-nosed negotiation.”

Co.1 male assistant QS - 24 yrs

Women saw being allowed to adopt a fair and professional approach to their work as fundamental to them remaining with their company.

“[Co.1] try to sell themselves on being professional. That's the word really, professionalism, I would say it encompasses quite a lot of things really, but more than other companies, I think that [Co.1] tries to sell itself as being professional, listening to clients and providing a more flexible service, and that's why I joined them, on that reputation. If that disappears, I won't stay with them.”

Co.1 female assistant construction manager - 23 yrs

An aspect of the 'Co.1 culture' that emerged from informants working within the office environment, were a strict doctrines on workplace status, working hours and work practices. Non-compliance with organisational norms were seen as particularly damaging to careers.

“There is a girl in the office who had a problem because she came in late in the morning, and regardless of the fact that she had stayed until eight o’clock at night, the fact was she wasn’t in at eight o’clock in the morning meant that she wasn’t any good. She has an untidy desk and she doesn’t dress very tidily. Very simple things like that they don’t like. Directors get in early and people just race to get in first. You’d feel bad walking out of the office at half past five, but it’s because there are so many directors and they are all in glass fronted offices and they are always walking past as you are leaving. It’s just the [Co.1] culture I think, and as woman, you stick out anyway, so you’re best not to make it worse for yourself.”

Co.1 female trainee QS - 21 yrs

These cultures were maintained by the physical proximity of senior managers. This was believed to have contributed to an oppressive workplace environment.

“In every division the directors sit on your floor so its sod’s law that when they are walking past you will be chatting to someone. Our MD has a big glass window so he can look out and see what everybody is doing in the office. The plans of the offices mean that you can hear people but you can’t actually see them because the partitions are in the way. You feel obliged to sit at your desk and work all of the time and you just feel that everyone is desperately trying to get back out onto site again.”

Co.1 female assistant QS - 24 yrs

Organisational sub-cultures

Many male informants saw themselves as having a stronger identity with their division than their parent company. Such employees, were unlikely to seek lateral moves within the company, and were also likely to resent changes imposed by the parent organisation.

“There are very different cultures in different divisions. Some of the companies we have bought out, they think of themselves as a totally separate entity.... People tend to look after their own, you will never change that, and I think once you have foot in the door of a division you are better staying within it, and progressing up to regional commercial management before looking elsewhere in the company.... the problem if I moved now would be that I would be back to square one in the new division whereas now I run my own packages and they know what I am capable of.”

Co.1 male construction manager - 26 yrs

The commitment of the informants to the work ethics of their project team was the most marked of all the sub-cultures evident within the organisations. Here, strong teamwork and affiliation often grew out of the project environment.

“Things started falling behind and we were really up against it. We all worked so hard, I remember I used to sleep on the job, I was working so late there was no point in going home, and I was willing to do that for the project and because of my loyalty to the team. Nothing would have dragged me away in those days. Being part of a

team is what makes me come to work in the morning. I don't like letting people down. We are a project team and we work very hard. No-one likes this project but we do it because we are part of the team."

Female assistant construction manager - 24 yrs

Conforming to the sub-culture that developed within temporary project teams was seen by women as essential to career development.

"One of the first things I do when I start on a new project is spend a couple of weeks sussing out the team who I will be working with. You need to know how they tick, and how they work, because this will define the way that you will work for the next two years or whatever. I think as a woman you are expected to conform to their way of doing things, as opposed to imposing one of your own."

Co.1 female construction manager - 32 yrs

As such, women preferred smaller teams which allowed them to form closer relationships with their colleagues.

"It's a real advantage being the first one on site because everyone comes new not knowing where to go and they have to come via you.... Its a fairly small team and I get to see a lot of things, and have a lot more to do with the rest of the job and you feel like more of a unit.... people notice what you do."

Co.1 female strategic management trainee - 23 yrs

Women's perspectives on colleague attitudes

Gender could be seen to effect relationships with work colleagues. Most women discussed their definition of an 'organisation man', a stereotype which they found hard to conform to.

".... a successful [Co.1] person has been with the system all the way through, they are narrow minded, completely blinkered to the rest of the industry, to the economy, the industry itself and to other industries influences on our industry. As far as they are concerned it's the [Co.1] way and no other way counts. It's a very arrogant attitude and I don't think it's the way forward.... they pretend to be non-adversarial, it's like an advert to potential clients, but it's not true. Take my project manager, he's a shouter, aggressive, literally shouting at people to get things done. Sometimes he'll balls things up because his man management skills are so bad."

Co.1 female assistant QS - 24 yrs

However, male informants aspired to such attitudes.

"The senior people in [Co.1] have worked their way through, they are time-served men. They tend to be people that command respect, it's difficult to define. You need to be outspoken and loud, strong willed, clear, communicate well, make yourself heard, all positive attributes for working in this industry. I would say I am a company man. My wife says that I have [Co.1] running all the way through me because I put my family sort of one down from the company."

Co.1 male senior construction manager - 32 yrs

Within Co.1, those who conformed with the organisational expectations of its managers were given a name by other employees, which insinuated that they had been indoctrinated into the cultural fabric of the organisation.

“[Dedication to Co.1] is a basic pig ignorance, I suppose, of how to deal with people and situations. It’s just like bang it in, crash it in, don’t think about it, don’t think about the cost, just get it done.... where as we might say well that’s not the way to do it, we must do what the client wants, and keep to programme, the [dedicated Co.1 employee] will come along, and say, ‘we need a ceiling in here, just get the thing in. I don’t care how you do it, I don’t care what it looks like underneath, as long as it looks reasonably OK’. I never used to believe in the [dedicated Co.1 employee] thing until I worked with them, they are just hairy arsed builders!”

Co.1 female assistant QS - 24 yrs

The problems that women had with conforming to what they perceived as an arrogant management approach reoccurred in several of the other organisations. Women perceived that certain male employees became convinced that their company’s working methods were the most effective, which led to an unquestioning acceptance of these systems and procedures. Several male interviewees exhibited the traits described by the women.

“This chap I work with, he’s very assertive, and he dictates to people as such because he knows the [Co.1] ways of working so well. For example, he will know what a subcontractor has got to do and he knows Co.1’s stance and he will drum it into people, he’s just so determined and nothing else matters. It’s that level of single-mindedness that I aspire to.”

Co.1 male assistant QS - 26 yrs

Women appeared more aware of the potential to be indoctrinated into this culture, and actively tried to avoid conforming to the cultural expectations. This was demonstrated by their awareness of, and opposition, to the ways that the company operated.

“I try to learn from individuals rather than the Co.1 way of doing things, so I will look around the office and try and pick up on certain characteristics of individuals I respect and try and emulate them.... I think there are these [dedicated Co.1 employees] who just blindly accept their ways of doing things, they don’t know anything else and they don’t want to.... things don’t sink in with these people that we should maybe do things differently, they are just so blinkered.”

Co.1 female assistant QS - 32 yrs

However, rejecting the work ethos of the organisation was seen by some mature women as having adversely affected their careers in the past.

“There’s another woman who’s an exec here and I don’t know why she has made it quicker than me. It is a secret that has alluded me why she is at that level and I am not.... I guess her face must fit better than mine, she knew how to play the game, to conform to their expectations. I think I have suffered from my visibility in many respects, the way in which I have stood up for what I have believed in, which lets face it is no good for your career in this industry.”

Co.1 female senior design manager - 48 yrs

The majority of the women interviewed were at relatively junior levels within their organisation. As such, the main influences on their careers came from senior and line management. Shallower organisational hierarchies had left senior managers with the power to define workplace cultures.

“The director comes out of his office with a bee in his bonnet, he ‘F’s and blinds at his operational directors, they ‘F’ and blind at their executives, they ‘F’ and blind at their managers, they ‘F’ and blind at their assistants, the assistants hit the subbie. Not one man down that line thinks of doing anything else but going to straight to those below them. That’s where this attitude originates from.”

Co.1 male trainee QS - 22 yrs

Direct control of careers by directors had negative affects on women’s development.

“I remember when I first started in head office, one of the directors shouted me over and said ‘ere, who’s that bird over there, is she an agency worker’. He was referring to me as a ‘bird’ again a few weeks ago and I said to him ‘the bird has got a name you know’. He just stood and looked at me, I know he was winding me up to get a reaction, he just tries to provoke you.... I think some of the directors would be a bit wary of putting a woman in positions of responsibility because they are so used to the blokes being in those positions. A lot of the directors are very fierce blokes, they like to see that quality in the people following them up, something which is unlikely to be found in most of the women managers.”

Female project QS - 26 yrs

There were many examples of where divisional directors had exerted direct control of the careers of female employees against their wishes.

“The director looked at the project and decided that it was me that was going to go. I was upset because the client and the architect said they wanted to work with me. When I got back to head office I was told to go and talk to another director about design management and at the end of the chat he offered me a job.... I didn’t even know I was being interviewed.... I have just found out that there is a cross verbalisation between the divisional heads on Monday mornings where they talk about exchange of resources. This is where they get to know about people becoming available. The problem with him is that he will hang on to you regardless of what you are doing just to be difficult. And if he doesn’t like you then you’re out the door. I think that I will find it hard to get out of this division.”

Co.1 female senior design manager - 46 yrs

In particular, women accused senior managers of obstructing measures which they perceived as affecting the existing sub-culture of their division.

“A few women got together to attempt to arrange some kind of informal networking meeting, but we were told by the director to stop. It was perceived as a threat. We were only trying to bring something to the workplace instead of oppressive behaviour, but it was shot down in flames.”

Female construction manager - 32 yrs

Middle managers were key to maintenance of the divisional sub-cultures. Their role was in the way in which they interpreted and translated policy from senior management to the operating environment. These were project and contracts managers, who tended to be long standing employees, male and aged between 35 - 45 years. Many had been unable to progress vertically through a lack of openings within their organisation. They were seen by women as being loyal and indoctrinated into the organisation's work practices and ethos.

“If you cut my boss in half he would have Co.1 written all the way through him like a stick of rock. He's been here man and boy, has seen nothing else and doesn't particularly want to see anything else.”

Co.1 female construction manager - 32 yrs

Operational HRM was devolved to a site level in all of the companies. This made middle managers a significant group in defining women's career development. In particular, allocation of tasks by such managers had created problems for women, where they had either been given mundane tasks or were over-loaded with inappropriate responsibilities.

“My site manager asked me if I would temporarily look after the site safety inductions, the boring admin stuff. That was 5 months ago and I'm still doing it. There is so many other tasks that would better utilise my skills and experience, and I keep telling him that I'm finding it soul destroying, but it's the way that my manager sees the role for women on site.”

Female general foreman - 29 yrs

“I complained so much at the mundane work that I was given that in the end that they started to give me tasks, but then it got ridiculous, I had work coming out of my ears. In the end I just couldn't cope any more, I thought that I was going to have a nervous breakdown.... if your manager gets it in for you there's not too much you can do but grin and bear it.”

Co.1 female assistant construction manager - 23 yrs

Furthermore, these managers were also seen as promoting adversarial environments which some women found difficult to operate in. They would often encourage other project staff to test women in an informal entrance ritual, where they would have their competence questioned.

“The atmosphere on site is dictated by our project manager who on this project is very much ‘in with two feet and go for the jugular’. You can see it reflected the other managers.... I have found that quite often they’ll encourage some of the other managers to test me out a bit, see how I’ll take it. That’s why the first few weeks are often difficult on site, until you prove that you are capable.”

Co.1 female assistant QS - 32 yrs

Verbal praise and encouragement was virtually non-existent for women at a project level within Co.1, despite employees dedicating themselves to their project teams.

“I come in and work twice as hard as some of that lot just strolling around out there and I never get a thank you. This morning I was in at half eight because my alarm call didn’t work at the hotel and I got shouted at even though I’ve been in early every other day this month.... it makes you wonder why you bother.... I don’t feel that I have had any recognition since I started working here. Its always nice for someone to give you a pat on the back rather than only bolocking you when it goes wrong.”

Co.1 female building services manager - 28 yrs

However, the most significant aspect of middle managers’ responsibilities related to recommendations for staff movement and promotions. In all five organisations this was administered through the PAS. Women complained that their needs were not adequately considered by their male line managers in terms of recommendations to undertake formal training. Male middle managers had biased opinions of women’s training requirements. They offered them little assistance in developing their careers. Through the PAS, middle managers controlled intra-organisational mobility. However, their vested interest in maintaining successful project teams for their own career ends meant that they often restricted staff development by preventing such mobility.

“I wanted to move onto a bigger job to get experience of major projects so I mentioned it to my managing surveyor, but he said that he felt it wouldn’t be a good idea. I think that he felt he had a balance of people on the job and to lose one at that stage may have jeopardised the project, but at the same time, I missed out on a few good opportunities because of that excuse.”

Co.2 female site agent - 29 yrs

In contrast, most men were assisted by their line managers in developing their careers. A recurring theme in the data was that middle managers had become unofficial mentors to some male informants.

“There is this managing surveyor who has me under his wing who is now looking for a surveyor one step below him. He looks after me because he feels responsible towards me. I think if you want to get on in the company you have to get taken under someone’s wing.”

Co.1 male assistant surveyor - 23 yrs

Men saw such managers as a good source of contacts elsewhere in the industry, and many had found positions for their subordinates within other organisations.

“My old boss phoned up some of his mates when I was made redundant. This guy from Co.1 gave me a ring and invited me in for a chat and after an hour he offered me the job on the spot. Its who you know you know!”

Male assistant construction manager - 24 yrs

For women, finding a female manager to fulfil this role was difficult.

“I wish that I had someone I could ask advice from, just someone I could get on really well with informally that would listen to me and get to know me and give me a bit of advice really. Everybody needs some advice about things now and again. Its just some recognition that the way I am doing things is OK and that I am going in the right direction. Sometimes I go home at the end of the day with no-one to talk to and I feel so down, but I don’t know any senior women and the men either don’t seem interested or think I’m after something else!”

Co.1 female assistant QS - 23 yrs

Some male middle managers actively excluded women by organising social events involving traditional ‘male’ activities.

“I am about 400 miles from home here, and I sometimes feel quite lonely, but not once in that time have I been invited to 5-a-side football, or for a drink after work. They even ask each other if they are going for a pint in front of me. Sometimes I feel like asking them what is it about me that makes them want to exclude me, but to be honest, does drinking beer with 10 blokes that I spend all day with at work really appeal to me anyway?”

Co.1 female assistant QS - 23 yrs

Often, senior managers from head office would attend these social events, which were seen as essential networking and for informal communication, especially in finding out about new opportunities in other parts of the organisation.

Another group who adversely affected women's career opportunities, were their peers. A competitive culture appeared to exist within all of the companies, where employees competed with each other for promotions and other career opportunities. Most informants stated that they actively tried to develop skills, experience and contacts to further their careers in relation to comparable peers.

"I want to do the MSc because it will give me a better understanding of the way that buildings work as a whole. I am aware that the guy that joined at the same time as me has got an extra years experience and that means that he is always going to be ahead of me, but when I get my MSc, then it may give the chance to catch up."

Co.1 male graduate design engineer - 24 yrs

The result of this competitive rivalry, was that some women had their status or positions deliberately undermined by their male colleagues.

"I asked for the opportunity to do some international work but there's a guy there now who does it all, and he likes it and so he is determined to keep it that way so there's no opportunity to go in and say I'll do half and you do half. He knows that if I get this experience it will help me get my promotion and that's why he wont let it go, and he is so in with the boss that he is unlikely to make him share."

Co.1 female safety manager - 24 yrs

Women's visibility in the workplace meant that any development in advance of their male peers was likely to cause even greater resentment.

".... there was real deep resentment at the fact I had got promoted to section engineer and that I was a woman. A lot of people thought that they deserved promotion rather than me and lots of nasty rumours went about why I had got promoted and they didn't. All of a sudden after three years of having no trouble at all as an engineer, it took a lot of effort to do my job. It made my life very difficult."

Co.2 female section engineer - 32 yrs

The majority of women in Co.1 believed that men resented the fact that women were entering the project environment.

"We had been arguing about something to do with work, and no matter how hard I tried I could not get him to compromise. He came in and quite blatantly in front of the whole team said 'its a man's world, and if you don't f*****g like it, don't f*****g come into it. It just makes you more determined to stick with it to show prats like that they are talking utter c**p, because they are frightened, that's all it is, it's fright that their closed world may be changing."

Co.1 female assistant QS - 23 yrs

There were numerous instances of where men had deliberately tried to undermine their female colleagues. At one interview for example, a male colleague of the female subject

about to be interviewed commented to the researcher that she was difficult to talk to, and that no-one liked the woman manager concerned, and to be wary of this when he interviewed her. Several women believed that senior managers and directors felt under pressure not to promote women in front of their male colleagues.

Women managers exhibited a cautious and respectful approach in dealing with their subordinates, most of whom were experienced tradesmen working for sub-contractors.

“I think that you have to be very conscious of the fact that whilst I am managing the site, I couldn’t lay bricks to save my life. These people should be respected for their skills and if they know that you do respect them then I think that they respect you. The way I approach it is to take a long time sussing these people out, finding out what they are really like before I decide how to act with them.”

Co.1 female assistant construction manager - 23 yrs

However, very few women indicated that subordinates such as tradesmen had adverse reactions to them.

“Sometimes when I walk into a meeting with some of the subbies they look shell shocked to see a woman, and then they expect you to be a certain way with them, but once you get used to it you learn not to get intimidated by them. I actually think that the subcontractors are the easiest to get on with. They never give me any trouble at all. I deal with everyone from the client down to the labourers on site and of all these they are the easiest to deal with.”

Female sub-agent - 32 yrs

Several women even said that they used their sex to their advantage when dealing with subcontractors.

“If I was a man sitting there they would start ranting and raving at you but as a woman they don’t appear to be so stubborn.... as a woman I find that I can gain respect by being civil to them and trying to see things from their point of view, and I think they respect that I don’t have this big macho front to keep up.”

Co.2 female project QS - 30 yrs

A key figure in the project team discussed widely by the informants was the site secretary. However, in contrast to male tradesmen and operatives they were usually women, and were seen as being resentful of their female managers. There were many examples ($n=12$) of where secretarial and clerical staff had deliberately tried to undermine women managers by embarrassing them in front of their peers or refusing to perform administrative tasks for them.

“This secretary used to stab me in the back at every available opportunity. She was always telling the blokes things about me and making things up about me having affairs with people left right and centre. I tried everything with that woman but in the end I just gave up because she just had it in for me.... The women in the office, the administrators and the secretaries, regularly go out for a meal but they never invite me. Because I’m a manager they assume that I socialise with the men in the office I suppose, but I end up being the only person in the office that doesn’t socialise with anyone

Female assistant QS - 23 yrs

A final group with which professionals have to interact and work on a regular basis were clients. Major clients influenced who was to be involved in projects, but for women, gaining the trust of clients, or being taken seriously presented difficulties because of stereotyped attitudes.

“Some clients have a totally different approach with women. They feel more threatened than they would be by a guy. I have certainly found on a number of projects that the client just didn’t believe that Co.1 had put their best team on site, and that it was my capabilities that the client didn’t believe in.”

Co.1 female project QS - 29 yrs

Women in Co.1 felt that their organisation was too client focused in this regard.

“If a client turns around and says ‘we don’t want that team any more’ and Co.1 say ‘all right then’, and what they should be saying is ‘no, hang on, that is the team we have selected, they are good, they are A1 or they wouldn’t even be on that job, you accept them or you don’t come to us as a company’. But they don’t, they don’t support staff and I think it’s disgraceful. Co.1’s jobs are client based, that’s our main aim. I mean, you’ve got to bend over backwards for them, even if you think they are wrong. Sometimes we get really abused by clients.”

Co.1 female construction manager - 32 yrs

In particular, women were concerned by the effect that client attitudes may have on their own managers. The attitudes of client representatives such as resident engineers or clerks of works were seen as a particular concern.

“I couldn’t get on with the RE because he just hated women. The site agent was aware of the problem, I mean, he wouldn’t even allow me in the meetings. In the end he felt it was doing more harm than good me being there, but rather than address the problem, my manager requested that I be transferred to a different site.”

Female QA manager - 42 yrs

Informal communication

Site based employees perceived office based staff as holding information and power over them. Several informants described this an ‘us and them’ attitude.

“I think that people in head office try and protect their patch really. There’s a lot of ‘knowledge is power’ within the departments which is frustrating. They tell you as much as they think you need to know which usually isn’t enough.... I think there is a bit of ‘us and them’ between head office and the regions really.”

Co.4 female procurement manager - 27 yrs

In Co.1, this had led site based employees to rely upon a well established informal reporting system, where site based managers returning to the head office gathered information and then channelled it back to the site personnel to keep them informed.

“I soon found out that for communication you have to rely on the ‘Co.1 grapevine’. There are no official memos coming round or anything like that, so when we go to head office to go on a course or something we try and find out what we can and take it back to site with us.”

Co.1 male procurement manager - 29 yrs

However, women’s social exclusion had led to a tendency for them to miss information distributed via these mechanisms. This social exclusion was one way in which women were overtly discriminated against.

Sex discrimination and harassment

In the main, younger male informants indicated that they did not mind working with women. However, experienced male informants were more likely to resent women’s participation in the industry.

“There are times when the work force being male should mean that the management is male. I don’t like working with women on site, it has a disruptive effect. I sent an engineer home once for coming to work in a skimpy top and shorts, just think of the reaction of the men on site if they had seen her dressed like that!”

Male construction manager - 39 yrs

Three men even commented that their partners were unhappy with them working with women on site, because of the potential for sexual attraction between them.

“I would rather not have women working on site because my wife does not approve of me working with them. It’s not that she’s a particularly jealous woman, but construction is one industry where you wouldn’t expect men and women to mix in the workplace, and I think that’s one of the reasons why she doesn’t mind me working in the industry, and why she puts up with the long hours and me working away from home.”

Male site agent - 36 yrs

Resentment towards working with women was manifested in harassment and discriminatory actions directed towards them, of which there were many examples.

“There were a few guys at my last job that used to get me down. They had these rude calendars and I had asked them twice if they would take them down from the office wall but they refused. In the end I got so fed up I took them down and threw them in the bin, The guys all sided together and wouldn’t talk to me after that.”

Female construction manager - 32 yrs

“The language, it’s horrendous, and the crudeness is completely unnecessary and they could curb it in front of me. I have requested it through my line manager, I have said it to them in jest, you know what I mean, you do it in fun to start with and then you start, you know, if its offensive you start to say something. Swear words and that usually don’t worry me, it’s the crudeness about sexual things, and I find that offensive but they still do it in front of me, and they seem to think that it’s quite funny to do it.”

Female assistant QS - 23 yrs

However, many women saw harassment as having to be accepted as a part of working life in the industry.

“I’m not the sort of woman that would take a sexual harassment case to court. What happens happens, it’s only a bit of fun. They love undoing my bra jokingly while I stand at the photocopier or whatever, but it makes no difference, it’s got to be expected because this industry is so male dominated, and it always will be.”

Co.1 female trainee QS - 22 yrs

Many women felt that sexist attitudes were organisationally generated from senior levels within the organisations, as directors were often the most intolerant of women.

“I think with our director there is more picking on women than there is picking on men. The other day he was complaining that he was taking on more female graduates than male graduates, what’s the world coming to. There is just this misogynist attitude about some of the senior management which makes it OK to behave in that way to other managers in the division.”

Female assistant construction manager - 26 yrs

As was discussed in 7.3.4, women aged between 28 and 33 were concerned that their likelihood of having children may affect their progression rates through this period. For some women this had actually stopped them from marrying.

“I would think twice about getting married because I don’t think that they would take it very well. They would see it as a signal that my career was over.”

Co.1 female project QS - 28 yrs

Several other women said that their age had been used as an excuse to deny promotions or salary rises.

“I realise that probably the reason they put me on the lower level was because of my age, because I’m still relatively young, I might have all the letters after my name but I’m still in my 20’s.... I think that they just look at your age and say right, that’s a reasonable salary, but it isn’t, it’s frustrating when you look around this site at men that are older than me, earning more money with less responsibility. Experience is only as good if it is varied. If you have 10 years experience then it needs to be 10 years experience and not 1 year 10 times over.”

Co.1 female business development manager - 29 yrs

There were also a few isolated instances of prejudice against non-English employees. For women, this discrimination had a cumulative affect.

“Of course, it’s twice as hard for me because I’m Welsh. It’s always sort of taking the mick and whatever. I just don’t get bothered by it and in the end they find something else to start on you instead, but when you’re a woman and you can do your job, they’ll always find something else to get at you about.”

Female assistant QS - 23 yrs

Women’s line managers were usually the first point of contact for dealing with discrimination in the workplace.

“Things were getting very messy on site. This foreman had now been harassing me daily for months so in the end I actually put in an official complaint to my senior engineer. He told me that he had spoken to him and then told me to let it lie so it was like he got a slapped wrist and I got told to keep my mouth shut. I was told that, if the contracts manager got to hear about it, that he would sack the person straight away and that no-one would have anything to do with me again.”

Female section engineer - 30 yrs

Because incidents of discrimination were dealt with quietly within project teams, they were not widely discussed across the organisations. Most women believed that the discriminatory actions that they had faced were unusual, even though most of the informants described incidents of overt sexual harassment. Furthermore, despite the severity of some of men’s actions, women generally commented that they saw blatant actions as preferable to covert discriminatory actions.

“There is a guy on this site who thinks that women shouldn’t be allowed in the industry, no way should I even be here. He’s got nothing against me personally, that’s just his opinion, he says that I have done a good man out of a job. At least you know what you’re dealing with, as if people are up front then you know where you

stand. I just stay out of his way, that's the only way to handle him and he leaves me alone too."

Co.1 assistant construction manager - 23 yrs

Cultural change

Although many of the women remained sceptical of whether real workplace improvements were ever likely to occur in the industry, they tended to see themselves as more flexible and accepting of change.

"I am so enthusiastic about the changes that they have made recently but the blokes just seem to reject it. Admittedly a lot of them are the older generation, but a lot of the younger blokes don't take it on board either or they are reluctant. I think women are willing to adapt, but whether that is because you have to fit in and get on I am not sure, it's very subconscious."

Female assistant construction manager - 26 yrs

Co.4 had recently been taken over, and were going through a period of forced cultural change. The responses elicited from these respondents were more focused on the sudden change that was happening at the time of the interviews. Attitudinal differences were apparent when comparing the responses of four informants (two pairs of matching informants, two at a senior level with long service and two at a junior level in their graduate training period). When questioned about the effects that structural and cultural changes were having on the organisation, the graduate male junior manager commented:

"There are some people that you will never change. I know this director thinks that everything that the company do is right. We have all been sent on a two day course to try and change the working culture of the company, but to be honest it's not a two day course it's a two year rolling programme, and I am not too sure that it will work over that time span."

Co.4 Male site engineer - 23 yrs

His corresponding female pair had similar views about change, and the barriers to it:

"It's great, everyone from director level downwards has been sent on this course and I think that once everybody has had a chance to absorb the information they will start to treat people in the way that they need treating. But there are still the old type of site managers that think that the only way to earn respect is shout very loudly, and there will be a period where people listen and are more responsive to those who shout the loudest."

Co.4 female assistant planner - 23 yrs

Both of these respondents saw the need for change and seemed to have accepted it themselves, but saw particular groups of men within the company as potentially preventing

such changes. A senior female project manager with 20 years service with the organisation commented:

“We are going through massive structural change at the moment, and we all have to contribute by talking to people and influencing them. I guess I am a little worried about what people actually understand by cultural change because I think it’s about making informed decisions and leadership and actually physically launching yourself off in a direction. The problem is that most men in this company don’t think the same as me, they are too busy setting out that hole or going out in the middle of winter, freezing to death looking at concrete going off.”

Co.4 female project manager - 42 yrs

This senior woman’s opinion was diametrically opposed to that of a director with over 20 years experience with the company.

“As you work a long time in a company you get a big network of contacts, but I can see them being undermined by all these changes after the take-over.... I knew the old MD, I could talk to him about what happened on site 15 years ago but I can’t do that now, I’ve got no rapport with the new bloke.... What is being undermined is the cultural part of my 20 years, because power is obtained through information and knowing how things are done. The culture of the company, the values, are being undermined, and people who have been with the company for 20 years, are no longer valued in the same way that they were.... I mean you read the memos that the new MD sends out, he’s going to change the bureaucracy, the structures, all the things that our people value.”

Co.4 male associate director - 41 yrs

7.5.3 Summary

Both formal and informal aspects of organisations adversely affected women’s careers in comparison to men’s. However, several issues emerged as being particularly significant in defining gender configurations within the organisations investigated. The PAS in all of the companies was found to be inadequate for both assessment and administration of formal training provision. Devolution of HRM duties to line management de-valued it as an organisational function, and had led to inconsistencies in the provision of HRD. The result of this was that women suffered from unequal opportunities and resentment from colleagues.

Conforming to the various levels of culture within the organisations was seen as being essential within all of the companies, but was problematic for women as so many aspects

were male oriented, and they were excluded from the social activities through which many important cultural processes were enacted. Senior managers influenced strong divisional cultures, which were further reinforced by middle management with vested interests in keeping projects staff at lower levels to maintain their own careers. In addition, a competitive rivalry had developed between peers at a junior level because there were so many high achievers recruited to the organisations. Hence, women were undermined through sexist behaviour at all levels within the organisations. Thus, women felt it unlikely they would achieve parity of career progression until they formed a more significant proportion of the work force to create cultural change. However, men tended to reject changes to their organisation, and resisted measures taken to manipulate the prevailing organisational work ethos.

7.6 Non-organisational Factors Affecting Careers: Personal circumstances and external constraints

The personal circumstances and characteristics of the informants, and the issues lying outside of the labour market are considered both as mediating, and as strategic variables within the analytical model (Fig 7.1). When combined with the organisational experiences of the informants, these determinants can be seen to constrain the actions of the individual, but be dependent on their personal decisions.

7.6.1 Personal characteristics, skills, abilities qualifications & aspirations

Personal motivation, ambition and aspirations

Every informant was asked what aspects of their work they found the most motivating. These factors were categorised into intrinsic and extrinsic aspects of their professional work (Table 7.14).

Company	Career Stage	n	Intrinsic Factors		Extrinsic Factors	
			M	F	M	F
Co.1	Expanding	25	6	10	6	2
	Establishing	20	2	4	8	4
	Maturing	5		3	1	
Co.2	Expanding	4	1	2	2	1
	Establishing	4		1	1	1
	Maturing	0				
Co.3	Expanding	2	1	1		
	Establishing	4	1	2	1	
	Maturing	4	1	2	1	
Co.4	Expanding	6	1	2	2	1
	Establishing	1				1
	Maturing	3	1	1	1	
Co.5	Expanding	2	1	1		
	Establishing	1			1	
	Maturing	1		1		

Table 7.14: Time ordered frequency matrix: Unambiguously stated reasons for enjoying construction work.

Table 7.14 shows that women tended to be motivated by the intrinsic aspects of their careers. These were interpreted as those relating to their professional role, and the teamwork aspects of construction work.

“For me, the thing I like is making money, not for me, for the company in my professional capacity. You can always see how well you’ve done on a project by looking at the return, and if you’re happy with it, and the team is happy with it, and the client is happy with it, then that’s the name of the game.”

Female project QS - 26 yrs

Team work elements were seen as particularly motivating by female Co.1 employees.

“I am part of the team, I like completing a task, organising how we should do a task, getting a task done and working with everyone. I am a team player, and if I wasn’t I wouldn’t be able to hack it in this industry. You have got to work as part of a team, and you have got to have the support of your team. You don’t want someone saying do this, do that, you have to fit in and really enjoy the teamwork ethic. I think that as you get to more senior levels, your abilities as a team player get more important. The project manager, he’s a lateral thinker, an enabler, he’s a good team player, and I think that applies at a lower level to those out on site too.”

Co.1 female building services manager - 32 yrs

However, when promotion detached the informants from the technical processes that formed the inherently motivating aspects of their work, many expressed a subsequent reduction in the level of satisfaction that they derived from it.

“The problem is that as you move up in a company, you get less technical responsibility and involvement and more management. You become more removed from the site processes and I think that you end up not using your brain properly if you are not careful. I think that you must make an effort to stay in touch with the technical side of the job, as that for most people is why they joined the industry in the first place.”

Co.4 female project manager - 42 yrs

Men, however, tended to cite extrinsic factors as their primary motivation, particularly with regard to external recognition and remuneration.

“The thing that motivates me is the opportunities for promotion, to have people working for me is not the prime reason, ultimately it’s the financial rewards.... if two companies offered me a position, one with lots of training and career opportunities, and one with a £1,000 pay rise I would take the money every time.”

Co.1 male document control manager - 33 yrs

“You like to know where you are in a company, I mean I am looking for a promotion and if I don’t get it soon I’ll be off. I think if people gave you honest answers, no one really likes working in the industry, lets face it, it’s hard work, but the money’s not bad and I neither is the recognition.”

Co.1 male assistant QS - 23 yrs

Ambition

Younger women exhibited strong ambition characteristics.

“I can’t see any reason why as a woman I don’t have every opportunity to be successful in this company. The structure is there, and the opportunities are there, all I need to do is go out and grab them.... I am pushing my career and nothing else, so I expect to be regional commercial manager at 30 and MD when I’m 50. I think that I would need to make it to MD by 40 if I am to become chairwoman! Perhaps that’s a little optimistic, but I think that you need to aim high, and as things stand I see no reason why I can’t make it.”

Co.1 female trainee QS - 22 yrs

However, as they entered the establishing and maturing stages, women’s career motivation declined. Table 7.15 shows the informants’ self perception of their ambition levels by experience. Ambition can be seen to decline in proportion to experience, with few women remaining ambitious in their maturing career stage.

Perceived ambition levels >			1 - Very Low					2 - Low					3 - Ave					4 - High					5 - Very high												
Sex	Co.	n	<	6	1	1	>	<	6	1	1	>	<	6	1	1	>	<	6	1	1	>	<	6	1	1	>								
			5	-	1	1	2	5	-	1	1	2	5	-	1	1	2	5	-	1	1	2	5	-	1	1	2								
			y	r	s	y	r	s	y	r	s	y	r	s	y	r	s	y	r	s	y	r	s	y	r	s	y	r	s	y	r	s	y	r	s
Men	CM	20		1				1	1				3	2				7	3				1				1								
	QS	14						1	1				3	3				3	2				1												
	DA	3														1							1				1								
	SM	2																				2													
	SO	2													1				1				1												
Women	CM	14											3	3	1			3	3	1															
	QS	17	1						1	1			7	1				3	1				2												
	DA	3																1				1		1											
	SM	2														1						1													
	SO	5											2						2		1														

Table 7.15: Perceived ambition response frequency matrix: fulfilling aspects of work for experience, profession and sex (intrinsic motivators only). (Key: CM = Construction management (civil & building); QS - Quantity surveying; DA - Design engineering or architecture; SM - Senior management (overseeing); SO - Supporting)

Whilst men's ambition also declined, they tended to retain a generally positive outlook to their careers. This was reflected across all of the companies, where it was not until the maturing stage of the career that ambition levels fell significantly.

"It's inevitable that progression will slow down, but that doesn't mean that it will stifle my ambition. I think you have to remain realistic as to where you will reach, but at the same time strive to achieve the highest position you can."

Co.2 male section engineer - 30 yrs

Most women stated that they didn't consciously compare their career with their colleagues, primarily because they did not work with other women.

"I don't benchmark my career against anyone, it's just a self thing really. I'm not out to achieve position, just recognition for my ability really. Anyway, there is no-one within Co.1 that I can benchmark my career against because I am the only woman in the office. To compare myself with men would not give a fair comparison I feel."

Female senior services manager - 28 yrs

Women that did benchmark their careers against men within their organisation, tended to do so against senior colleagues.

"I know in [the Co.1 internal magazine], they were saying that one of the directors for one of the divisions is a woman. So I would hope that in a few years time that it would be a possibility for me too. Knowing that someone has made it to that level is a real motivator for me."

Co.1 female business development manager - 29 yrs

Conversely, men tended to benchmark their progression against their successful peers. They appeared highly competitive in comparison with women.

“There is a guy, 12 months younger than me, who is very bright, 1st class degree, and he’s pretty switched on. As long as I’m in front of him then that’s OK, but if he overtook me then that’s when the conflict would start.”

Co.1 male project QS - 28 yrs

Personal ability and managerial style

Men had generally higher self-perceptions of their ability than women. However, the types of ability to which the informants referred to were demonstrably different when the qualitative data was explored. For example, over two thirds of the male respondents discussed the importance of self confidence in their ability as a determinant of career success.

“We need to have a self-confident outlook, an ability to push ourselves forward and show off what we can do, as it rubs off on the way in which we manage those beneath us.... after all, that’s what management’s about, being able to convince people that you know better than them, and so you must be confident in your abilities.... My line manager is sharp, intelligent and he brings wit into it, and he gets you to do things without you realising you’ve been asked. He just oozes self confidence, like he always has the answer to everything that arises.... that’s worth more than a first class degree in this industry any day.”

Co.1 male assistant construction manager - 25 yrs

Technical ability, was hardly discussed by male Co.1 employees in relation to its importance in enhancing careers. Women, however, saw it as fundamental to successful career progression.

“I have been lucky in that I have worked with foremen who have taught me the practical side rather than pure management theory, because you must have an in-depth understanding of how things are done to get on in this industry. I couldn’t go in mouthing off telling someone to do something if I haven’t got the foggiest what they are doing. I think it’s true of all women in the industry, regardless of what they actually do, they need to be more nit picky in making sure they understand what’s going on.”

Female site agent - 28 yrs

Other gender differences concerned managerial style. Men believed that the nature of construction demanded a conflictual managerial approach.

“It’s OK saying lovely, all this partnering and all the rest, but I don’t see it working because people will still not trust each other because of the culture of the industry. It’s conflict all the time, it’s just built on conflict and aggression and you need to be

able to fit into that culture to survive.... I take the attitude that you must be firm but fair, I don't mind being aggressive and shouting if the situation warrants it."

Co.3 male construction manager - 28 yrs

However, the majority of women felt that adopting a 'male' managerial approach was counterproductive.

"I've seen women go in really aggressive, 'I'm as good as the men', it just doesn't work at all, it just gets people's backs up. They think 'what are you trying to prove'. And at the same time, if you were to go in all tetchy and upset when someone shouts because they have done something wrong, it's the same reaction. It's all about how you deal with people, getting the right balance, knowing how to handle people. I used to work with a woman that used to shout and scream until she was blue in the face asking them to do something and they just refused to do it. And this male manager, he would just go over and say 'look mate, come and sort it out', and they would go, 'all right then'."

Co.1 female assistant construction manager - 24 yrs

Experience

Almost every woman interviewed commented that a broad based experience was a prerequisite for rapid career development.

"I've been progressing my career by getting to work on lots of diverse projects. This wide experience I think makes the job more satisfying, and whilst it may not be progression on paper, a wide experience is worth far more in the long run.... I think that the people that are the most successful are those that can adapt very well to different disciplines, and can pull things together through the experience they have had in the past. If I can engineer a route like that for myself, in getting as broad an experience as I can, then I think that this will put me in good stead in the future."

Co.3 female section engineer - 27 yrs

A significant number of male informants ($n=16$) however, sought to develop specialist knowledge.

"I know that people come into the company thinking that they want to move around different departments, but I think that knowing the outcome of your actions is far more important than getting a wide but shallow experience. You really have to be on a project from start to finish to fully appreciate the outcome of your decisions, and that is how you learn, not by spending a few weeks here and few weeks there. You need to find your niche, and then stick to it, become really respected and indispensable for what you do."

Co.1 male assistant construction manager - 26 yrs

As was discussed in 7.4.1, women also tended to prefer smaller contracts where they felt they could get more responsibility and opportunity to develop a broad experience.

Conversely, men generally preferred larger projects which they saw as being more prestigious and better for their long-term development.

Qualifications

Women felt that higher academic qualifications would enhance their career progression and potentially lead to future opportunities in other companies. Within Co.1, higher degrees were seen as more significant than professional qualifications.

“I’ve done an MSc in Project Management. It was quite inspirational, it certainly changed my view of the industry, and the direction of my career. What’s more, I can tell that the company appreciate me having it, I’ve discussed it several times with directors.”

Co.1 female executive design manager - 46 yrs

In the other companies, post-graduate development was not as highly regarded. Co.4, was the only other company where there was an active policy to encourage post-graduate qualifications, where a few managers had been given the opportunity to do an MBA as part of an accelerated management development programme. However, in the other companies, women saw importance in gaining professional qualifications, because they were seen as potentially facilitating re-entry into the industry after a career break.

“I am putting all of my efforts into getting my RICS. The reason I want it is because it will demonstrate my experience if I want to come back after having children. At least if I have that piece of paper it will say to employers that I was competent at my job when I was in the industry, and even through my knowledge may be a bit out of date when I return, it will also show that I have the capacity to pick it up again.”

Co.2 female assistant QS - 26 yrs

In contrast, the lack of recognition for professional qualifications by companies had devalued them in men’s opinions.

“They don’t give you much incentive, I think it was something like a hundred pounds bonus and for the amount of work it takes it’s not worth it. They definitely don’t imply that you won’t get promoted until you get your exams or anything like that, so I’m not going to bother.”

Co.4 male project QS - 28 yrs

7.6.2 Life-cycle restraints

The construction professionals interviewed endured transient life styles, long working hours and high levels of stress. This had led to conflict between work and private lives.

Life-cycle priorities

As was discussed in 6.2.1, only two female and eleven male participants had children out of the 82 taking part in the study. Whilst this figure reflects the low mean age of those taking part, the disparity between men and women is indicative of the problems that women had found in combining their work and family lives.

“I don’t know why anyone would want to leave the industry to have kids, I mean, oh yes, four years at college, two years at work, get married and that’s the end of it. I certainly did not spend 4 years studying to give it all up.... if you’re the type that wants kids, you’ve chosen the wrong industry.... I’m pushing my career, no kids & no husband. My social life suffers enough from work at the moment without the burden of a family.”

Female assistant construction manager - 23 yrs

Women with children felt that slower progression was an inevitable consequence of having to balance work and family responsibilities.

“I have accepted that having a child is going to slow me down a bit, but it’s worth it not to miss out on the most important years of her life. Sometimes I look at people that I graduated with and see them doing so much better than me, but it’s down to personal choice at the end of the day, a decision that I made and one that I’m happy with in the long term, even if it’s a bit frustrating at the moment.”

Co.3 female assistant site manager - 32 yrs

However, for some women in the establishing stage, the realisation that their career development would be restricted by their sex had changed their outlook towards having children.

“If you had asked me five years ago the answer would have been that I’ll never have children, but I have realised that I will never make it in Co.1.... I look at the company, the pressure, the hours, the pay, I am not going to do it for the rest of my life. I would rather have a good life and be happy than become a complete career woman. I have already seen myself change to become harder than I used to be and I’m not sure if want to become hard and horrible, and I don’t want to end up being like that every night to my family.”

Co.1 female project QS -32 yrs

For a few men that had reached senior positions, finding a partner and having children was described almost as mechanistic process planned to fit in with their working life.

“I put my family sort of one down from Co.1, yes, I’m afraid to say that the project comes first, the MBA second and the family third. My wife feels that they should come first, and maybe they should come before the MBA, but definitely not before the project!... I think that you need to get a lot of experience before you can start to

prioritise your family. Get it under your belt at an early stage whilst you are still young free and single and worry about starting a family when your career is on track.... the problem is that you only get one crack at your career. You can always get re-married!”

Co.1 male senior design manager - 43 yrs

As such, male informants felt that a poor family life was a necessary part of maintaining their career in the industry.

“I would say that very senior management tend to be utter workaholics, work comes first and they openly state that. It has to be like that if I am going to maintain this sort of career progression, and it’s those that can’t give that level of commitment that tend to slow down in their thirties.”

Male senior QS - 28 yrs

Combining work and family lives

As was discussed in 6.2.1, only a quarter of the informants were married ($n=22$), two of which were separated. In addition two were divorced and another 18 had been in long-term relationships which had broken down as a direct or indirect result of their occupation. However, the reasons for relationship break down, were different for men and women. Men blamed the demanding and transient nature of the industry.

“My wife started to ask me when things were going to happen. She obviously wanted to do things for herself, she wanted to know the agenda, when we could have kids, when we were moving and when we were buying a house, when we were going to settle. I kept telling her that until you are at a pretty senior level you can’t make these kind of guarantees, but I have to admit that things became a bit strained, and we decided to split.”

Male assistant construction manager - 26 yrs

However, problems for women stemmed from the male dominated nature of the workplace.

“When I first joined the company, my two year relationship just fizzled out within weeks. He only became possessive when I started working, because he knew that I was working with men all day, in the end we just couldn’t carry on.... I think with retrospect it has worked out for the best in the end, because you can’t have the same line of conversation that I have with the lads here if you are married I don’t think.”

Female trainee QS - 22 yrs

Within Co.1, several informants even discussed a ‘divorce culture’ as having developed.

“Your not anyone in Co.1 unless you’ve been divorced. You look at the top directors and their wives have all left them at some point. Our project manager has just cancelled his holiday because he was told to, and his wife and kids went without him, so I suppose it wont be long before he joins the divorcee list!”

Co.1 female trainee QS - 22 yrs

However, despite the strains that working in the industry had on their relationships, the majority of men were supported in their career development by their partners.

“My wife is great, she’s so understanding. I’m supposed to have been decorating the baby’s room for months but I’ve been so busy that I just haven’t been able to get any time off to do it. It took her a bit of time to get used to it, but I think it says a lot about her, the amount she puts up with.... I think that ultimately my wife realises that it is the project that motivates me, the buzz. There has to be the crack, that little something that makes it all worthwhile. To find this you have to move around.”

Male senior QS - 28 yrs

Every man interviewed with children had partners who took on responsibility for child care.

“I’ve been on this job for six months now and I haven’t had a single day off apart from Sundays and every other Saturday. I requested a holiday last week but my line manager says that any of us will be lucky to get a break before September. With working away, I only see my wife and kids at weekends. I could maybe get back once in the week, but I think it makes it worse for the children because you get in and say hello, I’m going to bed. I am currently working practically every weekend, and so I have to confess that it’s my wife who takes on all of the responsibility for child care. I don’t want them to move with me because it would unsettle the kids too much, so that’s the way it has to be.”

Co.3 Male site manager - 32 yrs

The majority of women did not receive the same level of support, mainly because their partners earned higher salaries.

“My partner’s job will always come first because he earns so much more than I do. If we do decide to have children I will stay at home because he is fairly settled anyway. I turned down a fantastic move abroad because of this, but I think that it’s worth it to be with him, and to maintain the life style that we’re used to.”

Female construction manager - 32 yrs

For junior women managers, the cost of child-care provision was seen as an important potential factor preventing them from returning to the industry.

“I think that the company should consider child care facilities, or at least help us out with them.... they would be seen to be real leaders in the field then, and attract a better calibre of employee as a result. I think that the first company to implement child care facilities is going to attract a lot of women from other companies. There has always been a healthy exchange of staff in the past but for women I think that would be the deciding factor for those considering having children.”

Female assistant QS - 26 yrs

Thus, most women described a decision as having to be made between a work or family oriented life-cycle.

“Happiness is a decision, you know. Whilst I think that the decision not to have children has brought me heart ache, it’s the old cliché, life happens when you’re busy making other plans. It’s pointless regretting, and it’s a decision I may not make if I saw my time again, but as a woman in this industry it’s one you have to make.”

Co.2 female project manager - 42 yrs

“I have been discussing it a lot with my partner lately and we have decided that we do want to have children. I know I can’t come back into this kind of position so I may leave the industry all together and retrain. It’s sad to leave the industry in the end, but the fact is that it’s just not compatible with family life, or to maintaining a relationship.... Perhaps you could say I may be the first girl to manage to combine the two successfully, but I don’t see why I should battle against all of that every day just to prove a point. I might as well go somewhere where I can enjoy my job without all of the rubbish that I get thrown to me on a daily basis, and that means a move out of the industry.”

Co.2 female section engineer - 29 yrs

The two women with children had both returned to work on a full-time basis. Although at different hierarchical levels, both commented on the detrimental effect that having children had on their careers. One had maintained her site based career, but the stress had led to the break up of her marriage.

“It’s been really difficult because I have recently split with my husband. I used to pick my child up on Tuesdays, drop her off at a childminders for 3 days and then drive back on Fridays. In the end it drove me and my husband apart because he was unemployed at the time and I was working away with the baby, and the child minder’s fees used up nearly half my salary. By the time I got home I was tired and irritable and I lost out on a lot really. Now I get home to an empty flat and I have to make food for me and the baby and do the house work.... you are expected to travel, you are expected to do the hours, you are expected to manage and you don’t get any help from the tax man or financial help from the company. I lose half of my salary every week in child care so in reality I earn a lot less than the people I work with. I do get resentful that blokes with kids have their wives to do everything.... I would say that in this industry you have to make a choice between having a family and having a career.... they are aware that I have a child and they know it restricts me so it’s bound to affect my career. The only chance of promotion I have got is if jobs come up on the south coast because my parents can help out and look after my daughter, but I think I’ve lost my ambition a bit, it’s just too hard.”

Co.3 female sub-agent - 32 yrs

The other woman with a child was the most senior female participant in the study. She had her child late on in her career.

“Too my surprise and horror I found out that I was pregnant. I had a daughter about 18 months ago. I asked if I could come back 4 days a week which they agreed to, and I asked for a change in my core hours when I started full-time again to fit around my child care arrangements which they agreed to even though we never work core hours anyway.... my family commitments have slowed things down rather, I have no personal time and it’s almost more than I can handle now.... If it weren’t for my family situation then I would be more mobile. The fact that I am a mother is going to tie down my career, I have to accept that.”

Female executive design manager - 46 yrs

In addition, two women were pregnant at the time of their interview. Both wanted to return to the industry and had similar strategies for doing so which required the support of their husbands.

“I am due to have the baby just after Christmas and I haven’t approached them yet about how much maternity leave I can have. I don’t want much, just enough to recover really.... but I’m really worried about having to come back full time because the hours are so long and I don’t know how I will be able to cope.... My husband finishes earlier than me and he has said that if I want to go back to work he will support me by doing his share of the child care duties. I earn more than him at the moment so he may even stay at home and look after the baby.”

Female project QS - 28 yrs

Several women who wanted children commented that policy decisions had been made which prevented them from competing on equal terms. An example was a Co.1 directive for managers to gain international experience as a pre-requisite for promotion.

“The director said that we are a European company now so we want people with a broad base of experience, not just working over here. He wants all those going for promotion to get some international experience. Well that’s ruined my chances of promotion because I have commitments to my partner. I can’t ask him to pack his job in and come with me, and as for having children, well I wouldn’t want to bring them up in a different country.... I don’t think that they consider the effects of these directives on women at all.”

Co.1 female construction manager - 32 yrs

This was an example of where organisational policy acted in a covertly discriminatory manner.

7.6.3 Summary

Organisations were seen as tending to recruit high achieving graduates with similar attitudes towards career development. They tended to be ambitious and committed to their

careers. However, women aspired to lower levels than men, with many seeing themselves as leaving the industry in the longer term. This was attributable to a number of structurally and culturally defined reasons.

Whilst men appeared to thrive on the aggressive and conflictual nature of the industry, women preferred non-adversarial approaches, and in contrast thrived on the teamwork aspects associated with construction work. However, they were not always able to integrate effectively into their teams and there was also a degree of scepticism from male colleagues regarding their abilities. As such, they had to spend time proving themselves to their colleagues before they were accepted. Men sought extrinsic rewards such as salary increases and promotions and work on large and prestigious projects, whilst women were more interested in gaining a breadth of experience on smaller projects, and in gaining professional and academic qualifications which they saw as consolidating their positions, and as potentially facilitating re-entry to the industry following career breaks.

A significant issue was also the conflict of construction work with personal lives of the informants. The inherent demands of long hours and transient work patterns had led women to perceive there to be a choice to be made between having a relationship and children or a successful career. Men, however, generally had partners who supported their careers, which was reflected in the number who had children compared to women.

7.7 Career Strategies and Resolutions

As was discussed in 2.1.3, in addition to structure and culture, the third major component of careers is the individual actions of individuals. These are the decisions made in reaction to the structural and cultural career constraints, personal circumstances and the informants' personal skills, attributes and abilities. These were incorporated into the analytical model as strategic variables in an individual context. They include career strategies; long or short-term career aims and methods for achieving these aims; and the day-to-day career decisions taken to circumvent obstacles placed in the way of their development.

7.7.1 Career strategies

The informants generally perceived that promotions were rarely offered, but had to be sought. Table 7.16 shows the frequency of strategies adopted and advocated by the informants for achieving promotions. Each strategy is addressed in turn below.

Popular generic career strategy descriptors																
			Active requests		Threaten to leave		Inter organisational mobility		Zig zag approach		Intra-company mobility		Oversees experience		Other career enhancing strategies	
Sex	Yrs Exp	n in sample	Used	Advo	Used	Advo	Used	Advo	Used	Advo	Used	Advo	Used	Advo	Used	Advo
Women	0 to 5	18	X	X	X	X	X	X		X	X	X	X	X		
	6 to 10	13	X	X	(X)	X	X	X		X	X	X	(X)			(X)
	11 to 15	5		X	(X)		X	X	(X)	(X)	(X)	X		(X)	(X)	
	16 to 20	3	(X)	X		(X)	X	X			(X)	(X)				
	20+	2		X			X	X	(X)	(X)	(X)	(X)				(X)
Men	0 to 5	18	X	X	(X)	X	(X)	X		X	X	X	X	X	(X)	
	6 to 10	13	X	X	X	X	X	X	(X)	X	X	X	X	X		
	11 to 15	6	X	X	X	(X)	X	X		X	X	(X)		X	(X)	
	16 to 20	3	X	X			(X)	X	(X)	(X)			(X)	X		(X)
	20+	1	(X)	(X)			(X)	(X)						(X)		

Table 7.16: Cross-case-ordered variable by variable matrix: Reported strategies (used and advocated). (Key: X= cited unambiguously by several informants; (X)= cited unambiguously by one informant; Blank= no unambiguous reason given; Used= Strategy used by informant; Advo= Strategy advocated by informant).

There was a general belief that the industry as a whole responded to requests for promotions as opposed to recognising employee abilities.

“No-one’s going to sit around and hand you a successful career on a golden platter. I’ve got to go out there, I’ve got to chase it, make myself known. I could probably sit back and wait and in the end I may progress but at the end of the day I want to be a success.... the doors don’t open as you walk towards them, you have to give them a push.”

Male project manager - 32 yrs

However, many informants believed that there was a need to be more proactive in requesting promotions. Around two thirds in the establishing and maturing stage informants had threatened to leave their employer in order to gain a promotion. A common strategy was to find positions to use as a tool to negotiate a promotion or salary increases.

“You are never appreciated in this industry until you leave. I had been offered a new position in a different company, more money and a bigger car. I walked in and told them straight, here’s my offer letter and they’ve offered me a couple of thousand

more, a better car and more responsibility, and if you can't better it then I'm off. They bettered it on the spot."

Co.4 male contracts manager - 40 yrs

Most informants advocated inter-organisational mobility to gain promotion. These employees admitted to using their present employer to further their own careers.

"I can see myself developing a bit further in Co.1, there is plenty of scope within the work I am doing now, but I think it is acknowledged that to get on you need to work for more than one company, get a broader experience, it can't be good only to know one way of doing things."

Co.1 male assistant QS - 25 yrs

Some informants discussed remaining in one organisation for a long period, as indicative of having low ambition.

"I think that the problem is, that if you started as a student here, you would find it very hard to wash that off, even if you've been 3 or 4 years with the company. People will still look at you in those eyes, and you will find it hard to get on as a result. You tend to find that those who stay in companies for a long time aren't ambitious."

Co.1 male construction manager - 26 yrs

However, although most men advocated inter company mobility, women were more likely to have used it as a strategy. However, their motivation tended to be to seek companies which would offer them a work culture more compatible with their own needs.

"I hear that the reason that people go to [a well known competitor] is more than a money thing, they like people that know Co.1 because they work the same way. I think they have a lot of the good things of Co.1 but they have got rid of the old 'shout and it will happen' sort of attitude. From what I hear it sounds like a pretty good company to work for."

Co.1 female procurement manager - 27 yrs

"I have been banging my head against a wall for too long now, I know I won't get my own project in this company. I've decided to find myself a new position where I won't face this continual questioning of my ability, and no chance of me getting promoted. You can only see so many people leap frog you before you have to say that enough is enough."

Co.2 female section engineer - 32 yrs

A related strategy was where employees left their employer, with a view to returning in the future in a more senior position (see also 7.3.5). This was seen as an effective way of avoiding a career plateau. Informants termed this strategy the 'zig-zag' approach.

“People say that it’s hard to progress in Co.1 unless you leave the company, do two years with another company and come back to a higher level, so ‘leapfrog’ over other people. I had a word to a director about what his views were on people leaving the company and his view point was that it’s great if you go and do something else and come back, it’s an open door really. As long as you leave on a good basis I think that it can only do you good to get some different experience in other firms.”

Co.1 female assistant QS - 25 yrs

Generally, employees felt that it would be easier to move to a smaller company from a large employer where a considerable promotion could be achieved.

“When I decided to ask for a transfer I went to see the director and explained to him why I wanted to leave. He understood that I needed to get my career sorted out and he respected the choice I had to make and I left on good terms. I have kept in touch with him over the years as I want to move back there in the future in a more senior position.”

Female section engineer - 26 yrs

Some male informants felt that their employer offered better opportunities, and so preferred to move laterally *within* their organisation. However, other motives for seeking intra company mobility included securing geographical stability or for making limited career changes.

“Co.1 works in two ways, the big company that works everywhere, and the regional company that works in a certain area, and that’s the bit which suits me. What’s the point in working for a company the size of this if they can’t offer some kind of choice of where you can work, and that’s why I’m going to try and get into a regional side of the business, for the stability.”

Male assistant construction manager - 25 yrs

“I decided that I would never be given the chance of getting my own job, and that I would never do well as a QS in this company. I asked for a move about 12 months ago to marketing and 12 months later a space has been created for me.... it took a bit of persuasion, but I think that I have got talents that are wasted in quantity surveying.... but I have no interests in leaving the company, and they know that.”

Female trainee QS - 22 yrs

However, intra-organisational moves were often resisted by senior staff, especially for women.

“Co.1 won a job just down the road from where I live and I mentioned that I would like to be considered for it in my appraisal. It’s a much bigger job than I’m used to, but I have always felt that if you’ve got the opportunity to broaden your horizons then you never know where you might be able to end up. I know it’s not that simple for the company because if I leave then they have to find someone to replace me, but I didn’t expect their reaction, they wouldn’t even entertain the idea.... if a director

likes you, he will hang on to you just to stop others from using you, regardless of what you are doing.”

Co.1 female project QS - 28 yrs

Perhaps the most significant intra-organisational move was to work overseas. The international expansion of three of the companies investigated, and the apparent focus of the organisations in encouraging staff to gain international experience, had led to informants considering this experience as a route into senior management. However, there were concerns regarding the potential difficulties that they would find on returning to the UK, and that a potential lack of support may lead to feelings of isolation.

“I think that there a lot of people that go abroad who feel very isolated. I know a guy that worked in America for 3 months and he hasn’t been paid a penny and he’s been having a lot of trouble communicating with the UK to get it sorted out. I bet when he tries to come back he will find it hard too, as there is no vacancies in this division at the moment.”

Female assistant QS - 32 yrs

Those that had worked overseas had varying experiences. Whilst men tended to seek further international opportunities, women had found it isolating and disillusioning. Integrating into foreign workplace environments was seen as being particularly problematic for women for both social *and* professional reasons.

“I went abroad at the first opportunity but the experience was an appalling one. I was very lonely as a woman, because I think its hard to go out and talk to someone sitting on a stool next to me in a bar and get to know them. I met plenty of sleazy men out there but no nice women that I could be friends with.... there was just no one to talk to outside of the working day.... also, I think that outside of Britain there is a professional rejection of women working in the industry. Yes, it’s male dominated over here, but in Germany I think there were even less women surveyors.”

Co.1 female assistant QS - 25 yrs

The most radical long-term career strategy was where informants had decided to make a career change. Almost all of those advocating occupational mobility were women, who cited the incompatibility of their working lives with personal commitments as their primary reason for taking such action. A transition into consultancy was seen by many women as a career route which would allow them to mitigate the problems of work/family conflict, whilst remaining in their chosen profession.

“I suppose that by the time I will have children I plan to be able to work from home in consultancy. Maybe I should start planning it a little bit more effectively than I am at

the moment, and that will probably mean going into a PQS firm where maybe I can have a little bit more control over things.”

Female assistant construction manager - 23 yrs

Specialist and support functions were seen as offering a work environment more compatible with combining family responsibilities, and women saw these areas as potentially offering them the opportunity to remain in contracting.

“They asked me if there were any areas of the business that I would like a placement in and I chose Health and Safety. I felt that the progression through site engineer, site agent, site manager was very broad and I wanted to specialise in something without having to spend 12 hours a day on site taking all the flak. I could see me in two years time not seeing the point in going into work every morning.”

Female safety manager - 24 yrs

Despite the acknowledgement by the majority of the informants that it was necessary to be proactive in seeking promotions, around a third of women took a passive attitude to developing their careers. They believed that they could do little to influence their own career development, and generally had a lack of confidence in their abilities.

“I have got to bide my time. I’m only just 42, I’ve got a good job now, I’ve got a degree, and I’ll just take it as it comes until such a time when they think I ready for something better. I see myself as being able to go higher, but it’s whether others see me as being able to do that. I’m happy to wait until someone sees me as being capable.... I think that it is more important than going in at too high a level and having to, lie to get a job, tell fibs, you know. I know my limitations and I would rather grow within a role and develop and then each day is more rewarding because you are achieving something better.”

Co.3 female QA manager - 42 yrs

Several women had turned down opportunities for senior positions because they were concerned that promotion would lead to higher levels of work related stress.

“When I first came, a senior engineer left and they couldn’t find anyone to replace him for months and months. In the end they had to increase the salary to get someone.... the guy that got it could have basically named his price. I could have applied for the job, but no amount of money is worth the kind of hassle that he gets in that position, some things are just more important than securing a higher salary.”

Female section engineer - 30 yrs

Experienced women commented that it was important to remain realistic about opportunities in the industry for women, and to maintain a pragmatic outlook.

“I speak to so many woman trainees who are out to change the world and it just makes me cringe. I have got to know a bit about rugby and enough to know what I am talking about when I talk about cars. Learn to speak to anyone about whatever

they want to speak about if you want to survive. As a woman that's what it's about, survival and grabbing the opportunities that are presented to you.... I think that by own strategy is to try and get as much experience as I can. I think that if I have these skills then it should put me on an equal footing with people coming into the organisation, but I never would think I have the same opportunities as men.”

Co.1 female assistant QS - 32 yrs

7.7.2 Implementing career strategies

Informants gave insights into a variety of strategies for maintaining a high profile within their company, and for developing good relationships and networks of contacts necessary for achieving vertical advancement in the industry.

“I have always found that if you work out on site, make sure you always come back once a week and show your face around the division, because if you don't you'll be forgotten about and you'll never get anywhere. I try to get into the head office every time I can. I'm in there next Friday to do a talk to the other graduates, I'll go in and see my director for a bit and try and get myself noticed. I can always find an excuse to come for a visit.”

Co.1 male assistant construction manager - 24 yrs

Networking strategies ranged from simple informal discussions between like-minded colleagues, to developing contacts which may lead to career opportunities in the future. However, for some women, informal networking proved difficult because they found it hard to form the informal relationships required with men.

“I know there are other women at my level in the company, but I haven't met them because you are always too busy dashing off to the next meeting or what have you. I do see it as a good way of making contacts and I would do it if I had time but that's the way it is.... the problem is that it's hard to develop the kind of relationships with men where you can keep it informal without creating rumours, I've found that one of the hardest things being a woman in this industry.”

Co.1 female executive design manager - 46 yrs

Furthermore, women tended not to form such relationships with other women in case they drew attention and further isolated themselves from their male colleagues.

“I did work with another woman on a project, an assistant construction manager, and we got to know each other quite well, but in the end the men on the site began to resent our friendship. I don't know why it worked out like that but we both agreed to keep a low profile in terms of doing things together, which is a shame because I really liked her.”

Female assistant QS - 25 yrs

Women were also excluded from social events which offered opportunities for networking. As was discussed in 7.5.2, several commented that they did not wish to socialise with men, as they looked forward to leaving their male environment at the end of the day.

7.7.3 Coping strategies

Most informants described the particular personality traits required to survive and be successful in the industry. A good sense of humour and resilience were described as being essential by the majority of female informants.

“I think it’s weird but most people in the industry tend to have very similar personalities. They tend to be objective, good multi-taskers, they think ahead, have the ability to fight fire with fire. I think that if you have these abilities then you will find it easy to cope.... to survive you need to have a good sense of humour if you are a woman. You need to mix with labourers, and if you take it all too seriously you are wasting your time because obviously you don’t have the character for it. If you can give as good as you get then that’s what it comes down to.”

Co.1 female assistant construction manager - 30 yrs

Only inexperienced women interpreted this requirement as a need to be aggressive.

“A lot of people say that it’s your own personality that drives you, and I don’t disagree with that, but I also think that there is a need to be aggressive, unfortunate but part of the job. It’s no good trying to talk your way out of situations, you need to be there, in with both feet if you know what I mean.”

Co.1 female executive design manager - 26 yrs

“If someone is giving me hammer and tongs, then I will give them hammer and tongs back. I will fight my corner and prove my point.... you always get comments, even my line manager makes comments. But if you make it clear to them that you’re not changing, and tell him to stop being so petty then he’s fine. Everybody asks me what it’s like being a woman on site but I can honestly say that you become immune to it in the end. I’ve learned to act like a man to make myself heard.”

Female project QS - 26 yrs

Women that showed perseverance, despite men’s intimidation, were occasionally rewarded by begrudging respect from their male colleagues.

“In the end the foreman that had been causing me problems left to go back up to Scotland. When he left he actually come up to me and said, ‘you’re a hard, wee bitch’, that’s how he put it, and everybody tried to get to you but you stuck by your guns and you do a really good job and I can’t congratulate you enough. It’s a shame that he didn’t do that three years ago really, when I was close to jacking it all in.”

Female section engineer - 30 yrs

Within Co.1, the removal of titles meant that women could effectively use a title which correlated with their position. Many used this to convince male colleagues that they were more senior than they were.

“Most people here think I’m a senior manager and I’m not going to tell them otherwise. I’m always invited to senior management meetings so as far as I’m concerned that’s my recognition. I appreciate that budgets are tight and they can’t give me the salary, but I have to deal with some high powered people, so I need a position that does not make me look the lowest of the low or I will not get accepted.”

Co.1 female construction manager - 32 yrs

Most believed that as they developed expertise, then this would demonstrate a commitment to their careers and adverse reactions would reduce as a result. In the ensuing period, women had learned ways to placate men exhibiting sexist behaviour.

“It was difficult on site because they used to bring their nudey calendars in and leave copies of ‘Penthouse’ and ‘Club’ on my desk. The way I used to handle it was to turn over the calendar on the first day of every month and say ‘right boys what do you reckon?’. It was all very ‘cor blimy your tits are looking nice today’, but at least there wasn’t any politics being played.... there is no point as a new trainee and as a woman coming in thinking that you are going to change the world, it’s never going to happen, you should except the industry for what it is, and learn to cope with it.”

Co.2 female site engineer - 23 yrs

There was consensus by all women that third party intervention should be avoided when resolving workplace issues.

“The rule is that you never step over people’s heads if you have a problem. I would never go to my boss, I always try and deal with the problem first.... You must always fight your own battles, and don’t expect the personnel people or your boss to fight them for you. The worst thing I ever did was make a complaint about my line manager. Lots of nasty rumours went around about how I got my promotion and some of it was quite hard to take. In the end I took it to the very top and it all got very, very messy.... they spread all these rumours and sprayed my name all over the men’s toilets and things.”

Female sub-agent - 32 yrs

Accordingly, most women confronted sexist behaviour themselves, or put up with minor harassment.

“Last week I was talking to this guy and he kept looking at my boobs the whole time I was talking to him. He kept asking me ‘what do you think, what do you think’ but I didn’t answer him, until in the end I said ‘I don’t think they speak you know, you would be better asking my face instead!’”

Co.1 female construction manager - 32 yrs

A final issue was how women with relationship and family commitments had developed strategies for combining their work and personal lives. Several women had developed flexible relationships to cope with working away from home.

“I have always kept my work separate from my private life. My current partner, we are not a close couple, he doesn't come and visit me, we don't spend Christmas together, we don't go on holiday together, we live more or less separate lives and that's the way I like it. If I have to fly up to Scotland for a couple of weeks it doesn't matter, he is totally flexible, which gives me the flexibility to remain in this side of the industry.”

Female project manager - 42 yrs

However, the majority of successful women had decided that a single life was preferable, and had made a conscious decision not to enter long-term relationships.

“Having been separated for a couple of years now, as well as several other failed relationships, I think that I have faced that with a career like mine, I am destined to be single really. It's just too hard to hold down a relationship when you only see each other every other weekend.”

Female building services manager - 32 yrs

7.7.4 Summary

The majority of informants were proactive in developing their careers. Strategies to secure promotion included threatening to leave having found alternative positions, actual inter company mobility, and a 'zigzag' strategy of returning to their original company having left in the past. Male informants, however, believed that a single organisational strategy offered the best opportunities for career development, particularly because they could use their working knowledge of the organisation to further their positions. Many strategies were used to help the informants to combine work and family lives, although most women still believed that family and construction industry working lives remained incompatible. Consultancy was seen to offer a more stable environment whilst still allowing them to utilise the skills that they had acquired in the past. However, most women went to great efforts to integrate into their work environment, and tried not to associate with other women in case this isolated them further. Resilience and even being able to put up with harassment and intimidation were cited as qualities required to survive in the industry. However, many used time away from the workplace to cope with the inherent strains of their male dominated work environment.

7.8 Career Expectations, Opportunities & Threats

Most of the informants discussed how they felt their career would progress in the future, and what their employer could do to increase the likelihood of retaining them. Because so many variables outside of the informants' control affected careers, few felt able to make long-term predictions. The resultant effect of the strategies discussed in 7.7, have been coded as perceptions within the analytical model, grounded in the individual context. As such, they represent predicted career outcomes, and the culmination of the interrelationship of the other analytical categories which have preceded them.

7.8.1 Future career expectations

The informants were asked to forecast their likely future career achievements. Table 7.17 summarises where the informants assumed they would work five years from the interview.

Likely status in 5 years >			Different industry			Different profession			Different organisation			Current organisation		
Sex	Co.	n	Expand	Establish	Mature	Expand	Establish	Mature	Expand	Establish	Mature	Expand	Establish	Mature
Men	Co.1	25	1	1		2	1		3	4		6	4	1
	Co.2	4							1	1		1	1	
	Co.3	5										1	2	2
	Co.4	5							2		1	1		1
	Co.5	2										1		1
Women	Co.1	25	3	2		5	3		2	2	1	2	2	2
	Co.2	4	1			1	1				1			
	Co.3	5								1		1	1	2
	Co.4	5				1			1	1		1		1
	Co.5	2				1								1

Table 7.17: Determinants frequency matrix: Likely occupational status in 5 years from interview.

Table 7.17 shows that in the short-medium term, men predicted that they would remain with their current employer, and women were more likely to make a professional or occupational career change. Whilst very few men ($n=11$) planned to leave their current profession or the industry, 14% ($n=6$) of women stated that they would leave the industry or profession within the next five years, and 29% ($n=12$) of women predicted that they would leave contracting. Most were in their expanding or establishing career stage. Thus, around 43% of the women were considering a career move away from contracting. Some 24% ($n=10$) of women believed that they were likely to have to leave in order to combine

work with their family lives. Accordingly, they tended to advocate a transition away from site based roles which were seen as incompatible.

Over 38% ($n=21$) of the informants who predicted that they would remain in contracting, believed that they would not be with the same employer in five years. There was no clear gender differentiation here, but many qualified this prediction by saying that it was possible for the company to retain them if their career development improved. Overall, Co.1 had a proportionately lower predicted retention rate than the other organisations.

7.8.2 Career threats

Men tended to cite a lack of promotional opportunities, particularly through the middle management levels, as the most likely reason that they would leave their current employer. Women's reasons, however, were more varied, and were likely to be related to avoiding attitudinal barriers to their development. Thus, male informants perceived career threats as originating from the recent economic recession, whereas women's reasons concerned the nature of the industry and the attitudes within it (Table 7.18).

Sex	Key determining factors >		Family / personal responsibilities			Lack of promotional opportunities			Instability and/or insecurity			Cultural incompatibility			Other		
	Co.	n	Expand	Establish	Mature	Expand	Establish	Mature	Expand	Establish	Mature	Expand	Establish	Mature	Expand	Establish	Mature
Men	Co.1	25			1	4	5	2	1	1		1		1	1	1	
	Co.2	4	1				2								1		
	Co.3	5			1		2								1		1
	Co.4	5				2					1	1		1			
	Co.5	2							1			1					
Women	Co.1	25	8	5	1	1	3		2			3	2		1	1	
	Co.2	4	1				1					1				1	
	Co.3	5			1		1			1				1	1		
	Co.4	5	2			1						1					1
	Co.5	2	1					1									

Table 7.18: Determinants frequency matrix: Unambiguously cited threats to career development

As was discussed in 7.5.1, men saw a reduction in vertical promotional opportunities as likely, due to the flattening organisational structures and the recessional economic climate.

“The problem is that as the industry has been in recession for so long that they have got rid of lots of layers that they don't think are necessary. This means that loads of guys at the bottom are going to have to stick around a lot longer waiting for

promotion... there's lots of different projects going on which I think would be more beneficial, but I am worried that I'm not going to get those opportunities because of this structure."

Co.1 male senior project QS - 28 yrs

Furthermore, the implications of organisational change, and particularly that which threatened the work ethos and procedures used by the organisation, were also cited by men as a major threat to their careers. Thus, men's concerns were focused on the potential effect that change would bring to their organisation, and a reduction in opportunities created by the cyclical output of the industry. Women perceived a greater variety of issues as potentially threatening to their careers. Several discussed the experiences of female colleagues that had encountered difficulties, and this knowledge had left them sceptical about the future prospects for their careers.

"A friend of mine in a different division, she is one of the most intelligent women I have ever met, she can take so much on board so quickly but for two years she has had no promotions. She could give any of the executives a run for their money, but they just won't promote her. If they aren't going to promote *her*, then what's going to happen to me?"

Co.1 female assistant construction manager - 26 yrs

The industry's failure to facilitate women's reintegration into the workplace following career breaks, and other flexible work practices to assist them in the combination of work and family lives, was seen as making it unlikely that those with children would maintain their careers.

"I think my biggest concern is that they bring someone else in to replace me whilst I'm on maternity leave, and that there isn't the work for me when I return... I really love the job that I'm doing, and I love the people that I work with, and I'm willing to sacrifice salary and everything for that, so I hope that my position isn't jeopardised in the future."

Female project QS - 29 yrs

However, women's principal concerns related to strong beliefs that they would never be accepted as equals by their male peers. This was perceived as being out of the control of organisations at a policy level because of the strong sub-cultures at divisional and project levels.

"They may be saying the right things as a company, but I just have a feeling that there are still people at a higher level who don't think that women are capable. The reason is that they don't think that we are capable of shouting and acting in a way

that they still think is appropriate, but the thing is that most women don't think that that way of managing *is* appropriate. It doesn't matter what the company does, if you are put onto a site with a poor team then you are never going to do well. I think that at a project level there are people that don't agree with women working in the industry, and there is nothing you can do about it."

Co.1 female assistant construction manager - 26 yrs

The majority of men also felt that no matter how well women performed, they would never be accepted by the site based workers.

"I don't think women can succeed in the industry because I think there are too many traditional stigmas, they are seen as a threat to our working style, I mean, we can't even swear openly. Maybe as our generation of managers comes through they will be accepted but I think that it will take a few years yet.... if I complain I get listened to, but if a woman complains people will just think she is a moaning cow or just weak.... I'm afraid that many people in the industry think that a woman's place is in the home. I have worked with some excellent women, and they might come out with something brilliant and impress everybody and they will think brilliant, but the next day it's forgotten, where as if it were me, everyone would still remember.... it's an industry problem, not a Co.1 problem."

Co.1 male assistant QS - 32 yrs

Within Co.1, women believed that a decision to diversify its work force had been taken without considering the implications, particularly in the resentment that it had generated from men.

"The push towards increasing the number of women *should* be a positive factor, but it does worry me that it may create resentment from some of the men if they push it too much. You would have thought that before recruiting loads of women, that they would have spent time actually thinking about the implications.... as an industry, we are totally unprepared for employing anyone with needs that differ from the men's that have dominated it for so long.... I didn't ask for an easy ride into this company, and for that matter I don't think I've had one, but this backlash against us really concerns me."

Co.1 female assistant QS - 25 yrs

Many women believed that they would not be taken seriously in the future as a result, particularly in the site environment. Many commented that they were not trusted with responsibility, or that their credibility was continually questioned, which posed a significant career threat.

"Although there are opportunities for career development, I just can't see the men taking a woman seriously and actually giving me the chance of more responsibility.... they seem to think that I'm not capable of doing as much as the men, they take one look at me and think she is a girl, she can't do anything. That's

when they really start giving you a hard time, not just taking it out of you, but in taking liberties.”

Co.1 female project QS - 28 yrs

7.8.3 Career opportunities

Work force profile

Not all of the data indicated negative prospects for women in the industry. The changing nature of contracting, increasing work loads and improving professionalism were seen as offering potential opportunities. In particular, skills shortages caused by the industry's recruitment and retention problems were assumed to offer potential opportunities for women.

“What happens in 10 years time when all of those people who have been here for 15 years leave? There will be no-one to come through and fill these positions, because so many will have left because of the poor opportunities. If all of these articles that we read in the trade press are true, we should see skills shortages and therefore more opportunities for those of us that have stayed in the industry. I think that the problem is that currently they just don't believe that its going to happen, not whilst the workloads are so low anyway.”

Female assistant QS - 25 yrs

Most believed that the increasing number of women would also improve opportunities.

“When I first joined the company I was one of the first women in a management position, but now I know of many. There are women trainees joining all of the time, and this can only be a positive thing for the company.... things will change given time, when women have reached sufficient numbers to be able to exert influence by their sheer weight of numbers, and when people begin to realise that putting men and women together leads to a fantastic scheme.... I can see the day when every team will include a woman, and I think that is when we won't be seen as oddities, but will at last be able to integrate fully with the men.”

Female executive design manager - 46 yrs

Over half of the women ($n=34$) believed that changes in the work force profile may also lead to attitudinal change. In particular, this was believed to be likely when current middle management made way for a more accepting group of younger managers and professionals in the future.

“I think that once the current 'old school' type of manager retires in about ten years time, that we will start to see real change in the industry. My generation do not have a problem working with women, and as they come through to take over the senior positions attitudes will change.... so you could say that the next ten years are crucial because the presence of women must continue to increase so that a real change can be

seen, and so that some of the senior positions can be infiltrated, positions where women will have real influence.”

Co.1 female construction manager - 32 yrs

Structural opportunities at an organisational level

Each informant was asked to define the experience, skills and characteristics required for a successful career in the industry. Differing perceptions emerged from the informants from Co.1, Co.4 and Co.5, to those from Co.2 & Co.3, the latter having bureaucratically structured career development paths, with functional responsibilities in multi-layered hierarchical management structures.

“I think I have the qualities to be at a much more senior level, I have seen people get there and that has shown me that you can make it at an early age within the company.... respect is gained through promotion, reaching a level which stretches you, but at which you can demonstrate competence in your specialist area. You create opportunities yourself by demonstrating that you command respect for your knowledge and ability.”

Co.2 female site engineer - 23 yrs

Co.1, Co.4 and Co.5 used flatter matrix-type structures. Their employees saw opportunities as being for those who had gained a breadth of experience.

“Success is when you are satisfied with what you are doing. I don't mind whether I move laterally or upwards as long as I am satisfied and I enjoy the work.... I want to get a broad experience, I just want lots of variation, I'm not too bothered about position at this stage, because by demonstrating that you have a varied experience, the promotions will come later on.”

Co.1 female trainee QS - 23 yrs

In order to gain this broad experience, the majority of men felt that a single organisational strategy was preferable, but with regular intra organisational mobility. Women, however, advocated a 'zigzag' strategy, largely because they felt that the situation may improve for women in the future.

“I am going to leave, but that's not to say I won't come back, and I will be watching the company very carefully. Who knows, I may return on the board in the future!... everyone knows that for women, its the only way to get on in this company, to leave and then come back.”

Co.1 female personnel manager - 25 yrs

Co.1, and Co.4 were wholly owned subsidiaries of larger international organisations where construction was only part of the their overall business. Many women saw potential opportunities for lateral moves away from construction in the future.

“I feel that moving to [the parent company] maybe a way to develop my career. The personnel director said it was possible depending on what sort of field you wanted to go into.... that’s one of the things that attracted me to Co.1 in the first place.”

Co.1 female trainee QS - 23 yrs

Co.4 had recently been wholly taken over by a large multinational organisation. Their female employees were looking forward to the prospect of opportunities being created as a result.

“We are now a very small cog in their wheel, and it will take them time to look at us in detail but I am sure they will and when they do their might be some positive changes.... I think that quite a few people are a bit worried about what the future might bring, but I have to admit that that the company needed to change its structure.”

Co.4 female assistant planner - 23 yrs

Culturally defined opportunities

Women felt that increasing levels of professionalism within the contracting environment created potential opportunities. They perceived improved career opportunities arising from procurement systems which promoted attitudinal change.

“What I have noticed is the way in which the company like to give their staff a broad role, I am getting good experience swapping from a construction management role into a project management role working much closer to the client. It’s a tremendous opportunity for me to really move on in the industry.”

Co.3 female senior construction manager - 32 yrs

Unlike the majority of men, women relished the change that the industry was acknowledged to be going through at the time of the interviews, because of the potential cultural effects that this was likely to have.

“A lot of the older generation are reluctant to change so I think that women are more willing to adapt. What they want are people that are flexible, not just in terms of where they will work, but flexible in terms of wanting people that will listen to others and let them put their views across.... if I compare myself to the other construction managers on this job, I think that many people prefer to deal with me because I am so flexible.”

Co.1 female assistant construction manager - 26 yrs

As well as their acceptance of change, around 30% of the women felt that there were *some* inherent advantages in being a woman in male dominated environments, particularly in developing harmonious working relationships.

“My boss likes the fact that he has got a woman as his QS because it thinks it looks good to potential clients. He always brings me along because I’m chatty and don’t mind flirting with the clients.... I can win us repeat business.”

Female Project QS - 30 yrs

Many women also commented that they didn’t have a large ‘ego’ to protect. This made it easier for them to work as part of a team.

“I find site meetings hysterical when the first person comes up with an idea and all the men have their own egotistical say, and that’s taken 3 hours when it could have taken 10 minutes. There are so many egos on site, whilst I think that for women we can admit when we are wrong, and actually give sub-contractors credit for being specialists in their field.”

Co.1 female assistant QS - 23 yrs

Several expanding stage men also believed that more women in the industry would improve their work environment.

“The shouters tend to get on in Co.1 because the louder you shout the more people notice you, but I think that when they see women in the team it calms them down a bit, maybe it’s the shock factor of seeing a woman on site.... women are a great leveller, they tend to fill gaps in the team because they pay more attention to detail.... You can see the difference in people when a girl comes onto site, they are completely different mannered, it’s a much nicer atmosphere, more polite.”

Co.1 male assistant construction manager - 24 yrs

7.8.4 Summary

Men tended to assume that they would remain with their current employer, whereas women were more likely to feel that they would make a significant career change, either to another industry or away from contracting to another sub-sector of construction in the next five years. Of the remainder, half felt that they would work for another employer. Thus, construction companies are likely to face considerable difficulties in retaining women in the future. Whereas men’s concerns related to declining promotion opportunities, and changes to the industry which threatened the existing cultural environment, women believed that construction companies had looked to women to solve an impending skills crisis without considering the implications of this to employment patterns within it. However, there was a belief that as the industry embraced the improvements that work force diversification could bring to the industry, then opportunities for women may improve for them in the future.

7.9 Chapter Summary

In this chapter, the principal career determinants emerging from the analysis of the informants' career accounts have provided a rich impression of the factors which shape the differential career dynamics emerging from Chapter 6. The diverse nature of career determinants, combined with the relatively free-form data collection instrument, provided no logical framework to classify and interpret the informant's career determinants. Hence, the analytical framework (Fig 7.1) has been developed from the hierarchical index system developed within NUDIST, to provide a systematic codification and representational tool to allow the phenomena influencing careers to be established.

By addressing the issues in the logical order suggested by this model, women have been shown to be disadvantaged at virtually every stage of their careers. The factors leading to the disparity in men's and women's career progression include: ingrained attitudinal and behavioural actions on behalf of their male colleagues; structural constraints that have developed in response to the dynamic environment in which the industry operates; the incompatibility of women's wider societal responsibilities with the construction workplace; and women's own inability to break down the workplace factors which maintain the current gender imbalance in career progression.

The workplace that emerges from this distillation of relevant issues, is one in which the strong construction culture prevents women's progression. Rather than mitigate these obstacles, women's career actions appear to reinforce this situation by conforming to male oriented work patterns and promotional requirements. That is, to succeed in the industry, women have to exhibit male traits and deny their personal needs. This process is reinforced by structural systems which maintain male power, autonomy and control via HRM systems which are easily manipulated. Accordingly, to understand the patriarchal nature of the organisations, the interaction of structure and culture on women's careers, and how action reproduces and counteracts these career determining issues, theory development is required which applies existing knowledge to the issues emerging from this analysis.

CHAPTER 8: DISCUSSION AND GROUNDED THEORY DEVELOPMENT

In this chapter, the results from Chapter 6 and Chapter 7 are combined and analysed, and theories developed to explain the phenomena emerging from the study. Conceptual explanations for the key processes defining differential developmental patterns for men's and women's careers are constructed within eight interrelated paradigm models, before being combined into a single theory which takes account of the complex interaction of structure, culture and action in defining career dynamics. Finally, the findings of the study are related to each of the five research propositions, and the extent to which each has been addressed is established.

8.1 Introduction

The research design involved two concurrent comparative analyses of women's careers from different perspectives - their physical progression dynamics and their subjective careers. The progression analysis (Chapter 6) showed evidence of gender differentiated career progression within the interview sample, with women having slower overall vertical development. Reasons for this progression disparity (Chapter 7) stemmed from various aspects of the internal and external labour markets, and women's wider societal roles. In this chapter, the interrelationships of the informants' career determinants are explored, in order to explain the career patterns emerging from Chapter 6.

8.2 Theory Construction

Theory building relies upon general constructs that act as categories for storing information (Miles and Huberman, 1994). Linking such concepts into a conceptual network develops a framework for the main areas of study, which facilitates their analysis. As was discussed in 5.2.4, a well constructed GT should be induced from diverse data, make sense to those who are practising in the area, be applicable to a variety of contexts, and should provide control with regards to action toward the phenomenon. Accordingly, by relating findings to each other, to the original propositions, and then back to the original data, paradigm models

have been developed which are faithful to the phenomena under investigation. These theories are developed for each category of the analytical model (Fig 7.1)¹. Their combination provides a theoretical framework of influences and outcomes which explain differential retention between men and women.

By developing a theoretical causal framework through the axial coding process (see 5.2.4), the resulting theories are not mutually exclusive, but closely interrelated with the other sections of the analysis. Accordingly, there are many overlaps between the phenomena and causal factors within the eight sub-theories which contribute to the final GT. However, the inter-dependency of the components of the final GT makes it more likely to reflect the complex underlying social processes which have determined the informant's careers. This ensures that the research remains faithful to the phenomena under investigation.

8.3 Discussion of Results

In this section, the key findings which have contributed to theory construction are disseminated from the career determinant accounts. These findings are then incorporated into paradigm models developed during the axial coding process. These models have been grounded within the original data to ensure their applicability to the careers of those interviewed.

8.3.1 Entrance to the industry

An immediate concern emerging from the data was that the construction industry was not the primary career choice of several male informants (7.2.1). Rather, many men who tended to have been advised by close friends or relatives who worked in the industry, perceived that the industry tended to attract low achievers, and hence a lack of competition for promotion was seen as a positive incentive for them to join it (7.2.4). In contrast, women, who tended to be high academic achievers, were more likely to have made a focused career choice, having been the subject of targeted recruitment initiatives aimed at

¹ Two paradigm models have been developed for organisational career determinants to take account of both structural and cultural aspects of the participating companies.

attracting women to the sector. The level of promotion of professional and managerial careers had increased recently, the majority of women who had entered within the past 5 years having been influenced by marketing literature and insight courses. This suggests that such campaigns are effective in attracting women to construction.

The different career choice influences of men and women had resulted in them entering the industry with different knowledge of careers within it. Men had an in-depth knowledge of the structural opportunities and the less tangible cultural aspects of working in the industry gained from friends and relatives, and so few expressed regrets in terms of their career choice (7.2.4). Women, however, were unlikely to have been positively influenced in their career choice by such advisors, and most had chosen their career *in spite* of the negative influence of these groups. Their career choice had been based upon professional careers advice and literature, and so they tended to have been attracted to a particular career path. As such, they had knowledge of the industry which was restricted to the nature of their chosen professional role (7.2.2). This had resulted in expanding stage women having a lack of cultural insight, and so they entered the industry with a sanitised view of career opportunities within it (7.2.3). The realities of working in construction had led many women to regret their career choice, and to feel resentful of those who influenced their entrance to it (7.2.4). Maturing career stage women, who were likely to have entered the industry following advice from friends and relatives, did not express such regrets, as they had gained a cultural insight from these career choice influences (7.2.4).

Previous research which has suggested that the image of the industry does not reflect the realities of working life within it (see 4.4.2) is not supported by this study. In contrast, the concerns from younger women were that promotional campaigns were *overly* effective. Career opportunities had been oversold by targeted programmes aimed at emphasising the positive aspects of the industry. The lack of similar responses from women in the maturing career stage reinforces this finding, as they were not subjected to such campaigns. Several informants suggested that the industry's orientation towards graduate entry, made a sandwich placement period essential to provide such an insight into the industry (7.2.3).

Study on a construction degree course represented women's first experience of working in a predominantly male environment. Construction higher education was discussed significantly more by women, who valued academic qualifications as a tangible demonstration of their ability (7.2.3). The only women who experienced problems with their educational environment were maturing stage informants who went to university in the late 1960s and early 1970s (7.2.3). None of the younger female respondents described feeling isolated or persecuted, as the education environment was seen as not being as male dominated as the industry itself. Some women did not even realise the extent of the male domination until they entered employment. Thus, rather than education acting as a gate keeper to the industry (see 4.3), it merely formed a transitional stage for most women. This suggests that women's experiences during the education system should not remain the focus of research on women in construction.

A final issue emerging from this section was that certain career paths were seen as being more suited to women. Despite the majority of entrants coming from vocational degree backgrounds, professional roles were defined by employers (7.2.2). An internal status was attributed to construction professions, with the commercial role of quantity surveying being seen as the most appropriate for women both by employers and the female informants themselves (7.2.2). The progression analysis showed women were proportionately more likely to occupy such roles (6.1.2), and that these women progressed more rapidly than their peers on other career paths (6.4.9). However, although construction management was rated as a low level career choice (see 7.2.2), it actually provided the greatest overall career progression opportunities if men are included in the analysis (6.4.9). Moreover, professions that were distanced from direct management of the construction process, had less inherent motivational qualities, which influenced long-term retention (7.4.1). Thus, women's long-term commitment to the industry may be influenced by career choice options made for them by employers. The findings from this section have been built into the GT paradigm model in Fig 8.1.

Paradigm Model 1: Entry to the Industry

Causal Conditions

- Women have opportunities over-sold to them through targeted recruitment campaigns aimed at attracting them into the industry.
- Women are unlikely to be advised to join the industry by their friends and family.
- Women tend to have a poor initial understanding of the culture of the industry, structural constraints and the other inherent difficulties of working in the construction environment.
- Women tend to enter occupational roles which support operational management positions, as opposed to front-line managerial positions themselves.

Phenomenon

- Young women become disillusioned with their career choice more rapidly than men, and seek to leave the industry early on in their development.

Context

- The industry has targeted the recruitment of women because of the threat of the impending demographic trough, without consideration of the barriers that they may face within it.
- Female role models are unlikely to be involved as career choice influences to provide first-hand insights for women.
- Women tend not to have a cultural insight into the industry from a close friend or relative as those did who joined the industry in the past.
- Women entrants tend to be ambitious and high academic achievers. Thus a lack of progression quickly leads to dissatisfaction.

Intervening Conditions

- Construction higher education provides a sheltered environment and an unrealistic interface between career choice and working life within the industry.
- Women experience a range of gender specific structural and cultural barriers to their development.
- Organisations define the functional roles of their employees, with little regard for the content of degree courses. Women are guided towards commercial and supporting roles.

Actions/Interaction Strategy

- Faced with unexpected barriers to their progression, women seek to leave contracting in their early career stages, to move to another sub-sector of the industry or into a different industry altogether.

Consequences

- Younger women will move to professions that they consider to offer them better career opportunities.
- The industry is unlikely to retain recent women entrants who are motivated and career minded in the future if those currently working in the industry are not seen to be successful.
- Previous action research aimed at attracting women to the industry, although successful, has failed to explore their experiences in the industry. Furthermore, research that has focused on the higher education system, has failed to address the most problematic career stages for women, which appear to be in the first few years of their development.

Fig 8.1: Paradigm model 1: Entry of women to the industry

8.3.2 Entrance to organisations

As was discussed in 4.3, the transition from higher education into paid work is more problematic for women, partly because of employer perceptions of women's societal roles being incompatible with working life in the industry. Similarly, the careers data show that women had experienced additional barriers to both their initial employment, and

subsequent inter-organisational mobility. Female expanding-stage informants sought developmental opportunities in addition to a satisfactory remunerative package (7.3.1). As such, both the reputation of the companies, and the abilities of the interviewer him/herself, were important in attracting high calibre entrants. At a graduate level, all of the companies sought applicants with strong academic capabilities (see Fig 6.9). Co.1's training programmes, for example, had a reputation for offering graduates a high degree of responsibility and autonomy, which attracted ambitious, high achieving candidates who sought rapid career progression (see 6.1.2). Many informants believed that academic ability was becoming a more important determinant of gaining entry organisations (7.3.5). However, this also contributed to the development of a competitive workplace environment, which has other implications discussed later in this chapter (8.3.5).

The informality of the recruitment process formed a particularly significant barrier with a prevalence of 'head-hunting' and other informal mechanisms which rendered traditional methods of replying to advertisements and making speculative enquiries ineffective (7.3.3). HRM departments were seen as mere gatekeepers to be circumvented through networking. The subordinated role of the HRM department in all of the companies formed a recurring theme in the data. Recruitment was handled by operations staff, and so inconsistencies in approach were common within all of the companies (7.3.4). Whilst male informants used contacts to gain employment (see Table 7.4), women were disadvantaged through having less contacts through their career choice influences (7.3.3; 8.3.1).

As was discussed in 8.3.1, employers of the women that did find positions in large companies, had firm ideas about which sectors of the business would be most suitable for them. Many female quantity surveyors, for example, had been advised against management and engineering roles. As such, selection was partially dependent on the assumptions which underlie gender, with women being asked to conform to particular organisational roles deemed suitable for them. The role of the quantity surveyor is particularly interesting in this context, as it was described as being distanced from the physical aspects of construction work, and as lacking management authority, as the QS usually supported other management functions. As such, it did not to offer as many opportunities for vertical progression (see 6.4.9).

Previous research has shown contractors see external recruitment as a last resort, as new employees entering organisations tend not to be able to work effectively within the organisation's culture (see 2.3.3). However, the informants believed that despite reduced workloads, all of the organisations recruited externally for middle-senior levels. The subsequent lack of promotional opportunities contributed towards the competitive workplace environment (see 8.3.5), and led to increased organisational mobility. Women exhibited a greater propensity for organisational mobility in the progression analysis (6.1.2). This may be as a result of differential career development opportunities, as although salary and remuneration became particularly important for those in their establishing stage, women preferred to apply to organisations with a good reputation for HRD (7.3.2). In contrast, men's priorities were almost exclusively focused on securing the best possible remunerative package, and establishing a level of responsibility which was required to secure rapid promotion. The use of organisational mobility, and then returning to their original companies (known as the 'zigzag' strategy), was surprisingly encouraged by senior managers as a way of broadening experience (7.3.5).

Despite the increased likelihood that women would change their employer, the devolution of HRM responsibilities to operational managers had led them to be confronted by a more rigorous recruitment process in comparison to men (7.3.4). Poorly trained operations staff used more rigorous and scrutinising approaches when interviewing women and, the level of scrutiny increased in relation to the seniority of the position applied for. HRM departments had little influence or control over recruitment beyond a graduate level. Employers were accused by women of blocking the entrance of people and ideas that were seen as different and/or unsettling to the organisation.

The expanding career stage provided the most problematic stage for women in terms of gaining access to organisations. Particular problems were apparent when women applied for positions aged in their late 20s to early 30s (7.3.4). Here, women faced discriminatory questioning during the recruitment process, and felt that companies would not wish to employ them if they had a long-standing partner or were married, because of the likelihood that they would take a career break in the near future. This was supported by the

progression analysis for Co.1 informants, where the differential between men's and women's tenure reached its maximum level at this stage (6.3). However, despite the difficulties that women faced, within Co.1 there was a perception that the company had an affirmative action policy. This was because they were seen as recruiting a disproportionately high number of women. Women resented this male perception as they felt that it undermined their credibility (7.3.5).

Women who did find positions in the establishing stage, were less willing to negotiate over low initial offers (7.3.4). This may explain ensuing pay differentials between men and women (see 8.3.4). Furthermore, in the maturing stage, whilst men sought broader opportunities as a result of fewer promotional opportunities, women sought job and geographical stability. Several women indicated that they would compromise their remunerative package to achieve this, which may also contribute to women's lower salary levels in comparison with men's. These processes have been conceptually linked within the GT paradigm model in Fig 8.2.

Paradigm Model 2: Entrance to Employment and Organisations

Causal Conditions

- HRM in construction companies is devolved to operations management, which had devalued it as a developmental function.
- Stereotyped expectations are made of women's career and personal priorities by male managers with recruitment responsibility. Such managers have stereotyped views of the types of people that they wish to recruit who must conform to organisational norms.
- Women seek a broader range of criteria from their prospective employers than men in order to develop the experience to secure their long term career.

Phenomenon

- Women find the process of entering organisations more difficult than men, both in terms of their initial entry to employment, and in their subsequent attempts to move between different organisations.

Context

- The industry has traditionally used informal recruitment and selection process. These favour applicants with existing contacts within, or experience of working for the companies to which they are applying.

Intervening conditions

- Through the recession, recruitment has been reduced, thereby increasing the significance of informal recruitment methods.

Action/Interaction strategies

- Women sought training and developmental packages, or the opportunity to secure job and/or geographical stability. They exhibited increased occupational mobility in pursuit of this aim.
- Men used networks of contacts to secure positions and good remunerative packages.

Fig 8.2: Paradigm model 2: Entry of women to employment and organisations (continued over-leaf)

Consequences

- Entry to employment will remain more difficult for women, as they will experience rigorous and discriminatory recruitment practices, particularly in their late 20s to early 30s where ingrained opinions of women's likelihood of having children are at their greatest.
- The industry will miss out on potential women entrants, who will be put off joining the industry by the discriminatory recruitment process.
- Women will continue to underachieve, working in organisational roles which do not offer the greatest opportunities for promotion.
- Women's willingness to compromise, in terms of remunerative packages, will lead to gender differentiated salary levels later in their careers.

Fig 8.2: Paradigm model 2: Entry of women to employment and organisations

8.3.3 The context of a career in construction

Women's under-achievement in comparison to their career expectations (see 8.3.1), had polarised their views on the effect that the nature of the industry had on their careers. Women's concerns focused on the problems presented by the transient nature of construction projects and the long-hours culture which had developed within the industry. This made project based work incompatible with a fulfilling family life (7.4.1). When combined with the apparent male scepticism of women's vocational commitment (7.3.4), most women believed that personal sacrifices had to be made in order to remain career focused, and hence, have their career aspirations taken seriously. All of the participating companies expected employees to balance their work and family commitments without any structural assistance, or flexible work practices. Accordingly, many women had opted for career paths which provided greater stability in terms of hours and location. This may explain women's apparent acceptance of being placed in commercial roles as opposed to construction management positions (see 7.4.1).

Cyclical demand for construction work, and hence professional skills, had several effects on career perceptions. Promotions granted during the boom period of the late 1980s had left many professionals in middle management positions working in roles subordinate to their capabilities. Few promotional opportunities existed within the resulting top-heavy management structures (7.4.2). Furthermore, the informants perceived that HRD had been curtailed during the recession. One effect of this was that opportunities for intra-organisational mobility had been restricted. This was attributable to individual divisions,

that were operated as autonomous profit centres, not wishing to take on additional staff when work loads were in decline.

Redundancy was seen as a negative, but inevitable aspect of working in the industry. Women felt markedly less secure in their positions than men in terms of job stability (7.4.2.). These concerns were justified by the increased likelihood of them being made redundant in comparison to men (6.5.1). Moreover, whereas men blamed redundancy on bad luck, women were likely to perceive losing their job as a reflection of their own abilities. This formed a recurring theme in the data, where the term 'luck' played a major part in the informants' social perception, as it was attributed to positive and negative career determinants originating from market factors. However, it was also gendered, as the way in which women used the term denied their own influence on their career progression. This finding supports the phenomenon discussed in 3.5.3, where women have been shown to circumscribe their achievements by reference to their sex.

Many informants believed that 'success bred success', in that working on a successful project was likely to lead to them being allocated to others likely to be successful, and vice versa. Moreover, a successful project team with a track record of completing projects to time and to cost targets, were assumed to be likely to bring about the type of project culture required for continued success. Hence, project success emerged as a principal determinant of career achievement (7.4.2). However, in terms of the type of project that facilitated rapid progression, there was a dichotomy of opinion between men and women. Men preferred large prestigious projects which usually required well defined tasks within large teams, whereas women preferred to work on small schemes where they could develop and demonstrate technical expertise across a broad range of functional duties (7.4.1). As such, they preferred to develop a broad based experience by undertaking a variety of roles. The progression analysis confirmed that women were more successful when working on smaller projects, whilst men were more successful on projects over £20m (6.4.6). Furthermore, Co.1 women had embraced the concept of 'rounded managers', the combination of management and commercial roles to manage packaged work arrangements (see 7.4.1). This allowed them to develop complimentary management and financial skills and broadened their experience. Men, however, rejected this initiative, preferring to retain

the professional divisions within project teams. This phenomenon was also repeated throughout the analysis, where men rejected change which questioned the established delineation of responsibilities and hence, established organisational power structures (see 3.4.2).

All of the informants believed that a period of site based experience was a pre-requisite for successful long-term career development, as higher levels of responsibility were given to junior staff in site based roles (7.4.1). However, most men saw office based work as preferable in the long-term because of improved promotional opportunities, and the possibilities to network and to have regular contact with senior management (7.1.4). In contrast, women preferred site based work, which offered them the opportunity to prove their ability and commitment to sceptical male colleagues. The physical aspects of site based work could be expected to have presented a significant barrier for women. However, office based women found their work environment more problematic, where a stressful and isolating environment was compounded by strict behavioural expectations and inflexible work arrangements (7.5.2). The oppressive nature of the head office was maintained by divisional directors and senior managers who retained direct control of operational staff (7.5.2). However, despite the majority of women wishing to remain on site (7.1.4), men were more likely to be allocated to site based roles than women (6.1.2). This suggests that the companies specified roles according to prescribed gender roles, as opposed to personal preference. Only in the maturing career stage did women's preference for site based work decline, as most sought geographical stability by this stage (7.4.1).

The majority of those interviewed dealt with sub-contracted work forces, which distanced the informants from the technical aspects of construction work. However, technical knowledge and direct control were highly valued by women, which was reflected in their reluctance to request their subordinates to carry out tasks for which they did not have an in-depth technical understanding (7.6.1). However, the further that the informants were promoted, the more management oriented their positions became. Accordingly, they were less likely to perform tasks directly related to their profession, and so lost a sense of professional identity. Some women sought to avoid management positions on this basis. This may have contributed to the apparent segregation in gender configurations within the

organisation (see also 2.3.2). These processes have been conceptually linked within the GT paradigm model in Fig 8.3.

Paradigm Model 3: The Context of a Career in Construction

Causal Conditions

- Site based roles were acknowledged to offer greater scope for gaining responsibility, rapid promotion and development in the early career stages.
- Expanding stage women resented the isolating, rigid and oppressive nature of the office environment. They preferred to work in more flexible site based positions.
- Expanding and establishing stage women preferred to maintain a close proximity to technical work, and their chosen professional role. This stemmed from both the intrinsic satisfaction associated with such work, and a perceived need for them to demonstrate their ability in the site environment to sceptical male colleagues.
- Organisations retained a high degree of control over which area of the business, and even which career path their professional employees would follow.

Phenomenon

- Gender configurations within the organisations were partially attributable to women actively avoiding senior management positions in order to remain in operational positions within project teams, and to organisations allocating women to office based support positions.

Context

- Site based experience had been marketed by the organisations as a pre-requisite to reaching senior positions in the head office environment.
- The transient and unstable nature of the industry made the combination of work and family lives problematic. Thus, women in their late establishing and maturing careers stages, with family/relationship commitments often sought supporting office based roles.

Intervening Conditions

- Organisations prescribed gender roles, in that they allocated female staff to office based support positions, and men to site based positions offering better early career opportunities.

Action/Interaction Strategy

- Most women sought technical involvement and the opportunity to develop a broad based experience, at the expense of their personal lives and other out of work commitments. Accordingly, they embraced initiatives such as the 'rounded manager' concept, and preferred to work on smaller projects where they could gain experience in many technical and managerial functions. These offered fewer promotional opportunities.
- Women sought to prove their professional identity by maintaining a close physical proximity to their technical work, and so avoided management positions on this basis.
- Men sought large project based experience, where they could derive greater responsibility through functional specialism within narrowly defined roles. They then sought office based positions where more senior management opportunities existed.

Fig 8.3: Paradigm model 3: Context of construction careers (continued over-leaf)

Consequences

- Women will not progress through mainstream management career routes. They are more likely to work in commercial and office based support positions which lead to fewer promotion opportunities and to slower development.
- Career minded women are likely to continue to perceive that total work commitment is required, to the detriment of their personal lives. Such women may present this impression if asked to act as role models for other women beginning their careers or considering careers in the industry.
- The organisations will continue to allocate women to office based positions, despite their preferences. This will contribute to women's continued under-achievement, and make it difficult for them to demonstrate their competence in the site environment.
- The misconception that women prefer to work in sheltered office-based environments in contracting, is likely to increase the level of discrimination and harassment levelled against them, as they are not given the chance to prove their abilities to sceptical male colleagues.

Fig 8.3: Paradigm model 3: Context of construction careers

8.3.4 Organisational factors underpinning career development and retention: structural career influences

For analysis purposes, structural aspects which emerged as defining careers have been discussed separately from cultural issues. Although there is a significant interrelationship between the effects of structural and cultural factors, their separation allowed an insight to be gained into how organisational policy and structure define career dynamics at an organisational level through the HRM procedures that they generate. These formal aspects extend beyond the physical nature of the structure of the organisation, to embrace the systems, policies and rewards used to control and develop careers.

Organisational structure

The companies all used organic, matrix type structures at project levels, where hierarchical distinctions between positions were not always well defined. A greater dependence was placed on functional responsibility than rigid reporting structures, and so criteria for promotion were not always clearly specified (7.5.1). This approach was also beginning to be reflected in the overall organisational structures. Co.1 and Co.4, for example, had removed middle management levels to flatten organisational hierarchies. These companies had developed flexible structures to accommodate cyclical economic conditions and fluctuating HRM requirements. This had led to dynamic and complex structures which epitomised the 'adhocracy' organisational typology characterised by changing titles, shifting responsibilities and a frequently changing internal shape (see Mintzberg, 1979).

Male employees resented the regular changes to project structures and hierarchies, believing that they had impeded their career progression. However, women saw the new matrix structures at the organisational level as career enhancing, with the potential to gain early responsibility and benefit from intra-organisational mobility. This was reflected in the career progression analysis (6.3; Fig 6.21), where women's vertical progression in Co.1, who had adopted such a structure, was more rapid than men working in the other companies. Moreover, for those who had embraced the flatter structure, vertical progression was not seen as a priority, especially in later career stages. Most of these informants sought lateral opportunities or different functional responsibilities. Thus, their retention could be secured without the need for vertical promotions.

The deeper multi-layered hierarchies in Co.2 and Co.4 encouraged employees to seek status through vertical promotion. However, moving from the organisational to the institutional system presented transitional difficulties. These occurred because the task of the managers changed from adapting the activities of the organisation to its operating environment, to operating at a strategic level. Women entering the strategic environment faced additional resistance from their male colleagues resentful of their achievement (see 8.3.5). Thus, networked structures had definite benefits for women.

The careers accounts indicated that in the companies studied, the 'career launch' occurred during the late twenties, where informants make their choice of whether to adopt a family or career oriented life style². It is at this stage where organisations offer employees autonomy and power at a project level. However, this early responsibility and recognition inevitably leads to a slowing down of their progression in their early thirties. At the time of data collection, this plateau period had been lengthened by a lack of promotional opportunities due to low output of the industry, shifting responsibilities and the frequently changing internal shape of the organisations. These organisational features are characteristics of adhocracy structures, and had led to low morale and career dissatisfaction.

² See 2.1.2 for a description of the career launch.

Another symptom of the adhocracy structures, was the variability in job titles, which meant that they did not necessarily infer seniority within the companies studied. Male respondents held sceptical views of recent job title changes, which they saw as a way of appeasing employees in lieu of promotions (7.5.1). As such, they viewed changes to organisational structures as threatening to established frameworks, and as a potential cause of role ambiguity. In contrast, women preferred to be empowered to decide on their own operational titles. The only negative aspect of these changes for women was that it was difficult for them to benchmark their progress against their male peers. This was because employees were told not to divulge their salary grade, and so employees had no way of accurately comparing their progression with their peers. This had elevated the role of company cars as a key indicator of status within the organisation. However, many women had opted for smaller cars (in return for a salary increase), as men resented women who chose larger models. This gave the impression that they were at a lower hierarchical level, which in some cases had undermined their professional status.

Another criticism levelled at matrix structures was that the employees were unsure as to whom they should pledge their loyalty (7.5.1). At a site level, project managers tended to define project structures, which left employees with divided loyalties towards their functional and operational superiors. Unclear lines of responsibility had contributed to confusion over individual roles for men and women. Thus, at a project level, and particularly in site based roles, women preferred structures with clear reporting lines.

Promotion

The informants perceived there to be pre-defined rules and required behaviours for achieving promotion. These were intangible, changed regularly and were gender differentiated. Within Co.1, recent promotions had tended to be within divisions, and had not involved relocation. Thus, an internal vertical linear development pattern emerged for younger employees, with an associated limitation in the scope for inter-divisional mobility (see 6.1.2; 7.7.1). According to the informants, inter-divisional promotions were resisted by senior divisional management, seeking to maintain strong sub-cultures and divisional performance from existing staff.

Conflicting information was given by directors, line managers and training departments with regards to the particular knowledge and abilities required for promotion. Regularly changing requirements for promotion were resented by women, who preferred to develop along pre-defined career structures, such as were used on graduate training programmes. This was supported by the negligible disparity in progression whilst women remained on such schemes (see 6.3). Whilst HRM departments advocated loyalty and succession management, middle managers were actively recruited from other companies to fill vacant positions. This was seen as restricting opportunity by the junior management group, and had contributed to a competitive culture which existed within all of the companies. As such, career development was effectively used as a means of control by the companies, and informants seeking promotion were usually offered positions in smaller divisions that the company felt would benefit from their major project experience (see 2.2.2). Other informants expressed concern over a 'blanket ban' on promotions instituted by companies during the recession (7.5.1). This was assumed to have been imposed because of the influx of managers from other companies to middle management positions (see 8.3.2).

Within all of the companies, women experienced difficulties in gaining promotion during projects as their new positions were not accepted by other project staff. There was a general unwillingness to promote women to levels of senior responsibility in operational positions. All of the women that had reached senior positions had done so by taking support positions as opposed to mainstream project management roles. These included health and safety, personnel or business development posts (7.5.1). For women who remained in the project environment, they fulfilled a role at least one hierarchical level above that to which they officially occupied (7.5.1).

Training provision and professional development support

Notwithstanding graduate trainees' opinions (7.5.1), HRM departments were seen as administrative departments, dealing solely with payroll and legislative issues, as showing little active interest in individual career development patterns, and as being powerless to instigate training opportunities (see also 2.3.3). The delegation of the HRM function to line management had led to many career development problems, as line managers were unwilling to allow their staff time away from their projects to attend courses, and women

were seen as a low priority in terms of management training. An anomaly was Co.3, in which the training department was more supportive and consistent. Employees in this company exhibited demonstrably improved organisational loyalty (see Fig 6.11). However, the general lack of involvement with HR departments led informants to seek advice from line management. This had disadvantaged women who found it difficult to form bonds with male managers who could act as career facilitators (7.5.1). For women in the expanding stage, obtaining informal advice was even more problematic, as they were trying to appear competent to male colleagues sceptical of their ability. Only one organisation had used mentoring (Co.4), which was seen as positive by men and women (7.5.1).

Relatively few informants were full corporate members of professional bodies, or were actively working towards membership. This demonstrates an inadequacy in relying upon professional institution membership data as an indication of women's representation in the industry, upon which many previous studies have relied (see 4.2). However, women were more likely to be professionally qualified, or working towards professional qualifications than men (see Fig 6.17). They saw it as providing a potential route back to the industry following career breaks, and as supporting their claims to professional competence. Support from companies for gaining professional qualifications depended upon the value attributed to specific bodies by the companies concerned. Civil engineers and quantity surveyors were generally supported by their employers, with training agreements and mentoring systems being used by the majority of the companies (7.5.1).

Performance appraisal & performance management

Performance appraisal systems (PASs) formed a significant determinant of careers. Negative aspects in all five companies included: a lack of objectivity (particularly in the potential for prejudices of line management to lead to poor appraisal scores for women); a lack of role specificity (particularly the lack of applicability to non-projects based staff where the majority of women worked); and a lack of feedback from the training department following submission of the appraisal to head office. Each of the five companies used an appraisal format which measured performance against personal development goals. They de-contextualised the specific roles under consideration, and so

were seen as inappropriate for assessing training needs and outputs. They were particularly ineffective in monitoring the performance of those in support positions, the majority of whom were women (6.1.2).

However, of greater concern was the discriminatory way in which the organisations suppressed women's contribution through the appraisal systems (see 3.5.4). Every female informant had been assessed solely by male managers, which had led to concerns that they would look for typically 'male' traits from their appraisees. Stereotyping and other biases of those carrying out appraisals had led to differential evaluation standards, and by assessing performance against ambiguous competency levels, women were marked down by unscrupulous line managers who felt threatened by their presence (7.5.1).

Of even greater significance was that in all of the companies, the PAS was also the vehicle for assessing training needs. Women were disadvantaged by obstructive male managers who did not adequately consider their training needs, or who prevented them from taking time away from the workplace to attend training courses. The inadequacy of the reliance on line management to assess training needs via the appraisal system was succinctly demonstrated by employees from Co.4. Line management assessments of career development and training needs contradicted psychometric test assessments of female employees, which were acknowledged to be accurate by the women taking part. This had confirmed suspicions that male managers had little concept of the abilities or developmental needs of their female employees (7.5.1).

Many employees deliberately conformed to the behavioural expectations of their managers to gain higher appraisal scores. Hence, rather than test the skills or knowledge of the informants, or the outputs that they had achieved, the appraisal systems merely encouraged employees to reproduce a particular behavioural approach. This propensity of employees to try and emulate their appraiser's work style, was seen by women as a significant barrier to future cultural change within the organisations (7.5.1). Career management had effectively become a 'weeding-out' process, which sought to establish which employees would fulfil organisational needs, rather than making the most of their individual abilities (see 2.2.2). Thus, women were oppressed by the systems designed to facilitate staff

development. This made the PAS pivotal to the reproduction of gender configurations within all of the organisations studied, and particularly Co.1.

Human resource allocation

Whilst the industry was seen as inherently geographically unstable, the rationale behind staff placement at divisional and project levels was rarely explained, and was perceived by women as being made as a political process, rather than as an economic/operational decision (7.5.1). Those without families were less concerned with where they worked (7.4.1), but men were also generally more flexible than women because they tended to have supportive partners who took on domestic responsibilities (see 8.3.6). However, travelling and working away from home were major factors militating against women's equal participation in the industry. The majority of women were allocated to national divisions, whereas three quarters of the men were regionally based (see 6.1.2). Women's geographical preferences did not appear to be considered, and their divisional allocation was not seen as being analogous to the work profile of the organisation (6.1.2). Divisions were also seen as restricting staff mobility by retaining employees even if it was in the individual's interests to work in other areas of the organisation (7.4.2).

Geographical instability could be seen to have a marked effect on women's personal relationships. By comparing status with divisional company (6.1.2), women could be seen to be less likely to have long-term relationships when they have a high degree of geographical instability. In the national divisions, 50% of the women were single compared to 17% of men. However, in the regional divisions, only 16% of women were single. Thus, it is unsurprising that HR allocation was believed to have a significant impact on staff retention within all of the companies (7.5.1).

Remuneration

From the literature, it can be seen that the limited effect of salary in retaining staff (2.3.1), may be due to the likelihood that salary increased with experience as opposed to hierarchical position. The companies had expectations of the age that employees had to be to reach certain positions (6.2.1). Several informants even believed there to be a cartel operating between large contractors which sought to keep salary levels at a comparable

level (7.5.1). Remuneration was only important to the retention of establishing stage informants (7.5.1). Benefits levels were used to differentiate companies from their competitors, as they could have such a marked effect on take-home pay (see 2.3.1). This may explain the resentment from informants of companies taken over by larger organisations who had changed salary and benefits packages (see 7.5.2).

As was discussed above, a culture of secrecy had developed over salary levels in Co.1, with employees being encouraged not to divulge their salary band. This had made it difficult for women to benchmark their salary levels against their male peers (see also 8.3.3). However, the largest disparity in pay rates appeared to be in the establishing career stage, where most women believed that they were under paid in comparison to their male peers. This may have been because of women's unwillingness to negotiate salary levels (see 8.3.2), but there were also concerns that salary was dependent upon the flexibility of employees (7.5.1). This potentially disadvantaged those who were restricted by their personal commitments, although some women believed that they were paid less *because* they had no dependants to support, or because they had high-earning partners (7.5.1). This interest in female employees personal circumstances formed another recurring theme during the analysis.

Work practices, procedures and organisational communication

Gaining an in-depth knowledge of structural systems was seen as key to career satisfaction and development. This favoured employees with longer service, who in the context of those interviewed tended to be men (6.1.2). Knowledge of bespoke systems were also seen to lead to non-transferable skills which reduced the marketability of staff to other employers. Several of the employees who had returned to their original employer had done so to return to familiar operating procedures. This was cited as explaining the popularity of the 'zigzag' career development pattern (see 7.7.1; 8.3.6).

Many female informants discussed their frustration and dissatisfaction with the informality and inconsistency of operating procedures. This had contributed to them facing ambiguous targets for performance, making it difficult to assess whether they were fairly rewarded. As was discussed in 3.5.4, female engineers tended to progress in parity with men where

bureaucracy controlled the actions of employees. Similarly, women preferred clearly defined organisational procedures in the companies studied (7.5.1). This was particularly relevant to organisational communication, for which employees relied upon informal contacts to relay details of HR issues and opportunities arising within their organisation. Line management were key to this 'communication grapevine'. However, the process relied heavily upon employees having contacts to transfer the information on to them. Women were disadvantaged by this because most information was passed on during out of work social events, from which they were excluded (see 8.3.5). These processes have been conceptually linked within the GT paradigm model in Fig 8.4.

Paradigm Model 4: Structural Organisational Processes

Causal Conditions

- Flatter matrix type structures were prevalent at both organisational and project levels. Although they had positive effects in terms of creating lateral developmental opportunities, they promoted informality in career structures and organisational processes. Thus, women preferred bureaucratic systems to be maintained at a workplace level.
- The organisations could be described as 'adhocracy' structures, characterised by changing titles, shifting responsibilities and a frequently changing internal shape. Communication was left to informal mechanisms reliant on individuals maintaining a wide network of organisational contacts.
- Middle management had retained control and autonomy over staff development issues at the exclusion of HRM departments. Through their control, HR allocation was carried out regardless of personal needs. Women were placed in national divisions, which was problematic for combining work and family lives.

Phenomenon

- Women found developing their organisational careers within operating frameworks which favoured male career patterns and needs, problematic. The informality in structural systems maintained women's career under-achievement.

Context

- Internal promotional opportunities were restricted due to the recession, and continued external recruitment to middle management roles.
- Staff responsibilities and other structural conditions were defined by male line managers without formal HR training or experience. HRM departments acted as administrative service departments wielding little organisational power.
- The performance appraisal system was used as the principal mechanism for monitoring performance and assessing training needs. It was used as a vehicle to undermine women's contribution and development, by male managers who: gave lower appraisal scores; made unfair assessments of women's training needs; or by restricted intra-organisational mobility.

Intervening Conditions

- Flexible structures and the removal of job titles had led to role ambiguity and inconsistencies in the structure of companies. Furthermore, a lack of tangible status indicators had raised the profile of company cars within Co.1. However, women were resented for having large cars, and opted for smaller vehicles to the detriment of their organisational status.
- Women faced additional resentment from men when they reached positions of power and influence. They were particularly visible under flatter structures where few senior positions existed.
- Conformity in salary levels across different companies made increasing remuneration a poor retention strategy. This had raised the profile of career development as a retention tool. Hence, career development was effectively used as a means of control by the companies.
- Organisations took into account the personal commitments and situations of employees before deciding upon remunerative levels.

Fig 8.4: Paradigm model 4: Structural organisational processes (continued over-leaf)

Action/Interaction Strategy

- Men resisted structural change in an attempt to maintain the current informality which supported existing power structures within the organisations.
- Men who had a thorough understanding and control of organisational systems and procedures which would promote their own careers, showed little propensity for organisational mobility. Hence, their continued presence maintained the informality of work systems and the under-achievement of women.
- Women worked towards tangible demonstrations of professional competence such as qualifications to enhance their credibility, or looked to move to different organisations.
- Other women progressed their careers by entering supporting roles which had less scope for reaching senior positions within the organisations. Whilst these offered greater opportunities at junior levels, this was not the case at senior levels within the organisations.

Consequences

- Organisational change will continue to be restricted by structural mechanisms, which promote the reproduction of existing attitudes. This will maintain the patriarchal nature of construction organisations.
- Men's rapid progression will continue to be facilitated through compliance with organisational expectations.
- Women who eventually discover that salary levels and progression dynamics are inferior to those of their male peers are likely to leave organisations or the industry.

Fig 8.4: Paradigm model 4: Structural organisational processes

8.3.5 Organisational factors underpinning career development and retention: cultural career influences

All of the companies investigated comprised distinct political sub-cultures at organisational, divisional and project levels. Furthermore, bespoke professional sub-cultures existed *within* team sub-cultures. Aspects of these cultural sub-systems which influenced gender disparity in career progression are explored below.

Organisational philosophy

Within the organisations, power was wielded by reference to a set of commonly held values. The companies saw themselves as adaptable, autonomous and creative. Employee compliance relied upon their commitment to such values. This type of organisational culture, has been shown to be applicable to organisations exhibiting traits of the 'adhocracy structure' (8.3.4; McDonald and Gandz, 1992). Such traits are also found within 'power cultures' (see 2.1.3), which exhibits senior management autonomy, informal work practices, informal communication, politics and competition. These five aspects of culture formed recurring themes throughout the data in various forms and at various levels.

Power cultures are usually found in organisations smaller than those investigated. However, the culture of the companies relied upon a central power source (the divisional directors) who were given considerable independence, including financial autonomy, and HRM decision making. Functional and specialist power was devolved from these individuals via informal communication and working practices. This divisional structure has been shown to be the most successful for large construction companies (see 2.3.2). However, under the power culture, the organisations formed cultural systems that simultaneously promoted co-operation (between members of project teams), and competition (as rivals for limited promotional opportunities). Thus, they became an arena for conflict between the power and interests of their members.

A consistent set of value systems were reproduced at every level within the organisations. Prominent amongst these values was the work ethic which defined the commitment, dedication and approach to work, both as a means to reward and as a means to an end in its own right. The work ethics of the male informants reflected the work patterns and attitudes of senior managers. Accordingly, ambitious employees arrived early, worked late, sacrificed their holiday entitlement and social lives for the company, and exhibited aggressive management behaviour. Moreover, most men subordinated their family and personal lives, which had the effect of gender differentiating the ability of employees to comply with the organisational doctrines on work commitment. Women's rejection of this work ethos reflected a more general rejection of the conflictual work culture. Many discussed how they actively sought to avoid conflict or attempted to resolve such situations (see 7.6.1; 4.4.1).

Organisational sub-cultures

Cultures and sub-cultures exist at different levels within an organisation (see 2.3.1). They were apparent within the organisations at a macro level in terms of the overall organisation; at a meso level in terms of operating culture of the divisional companies; at a micro level in terms of individual project teams; and at an individual interactional level with peers and subordinates. All affected women's acceptance and career achievement.

At a macro level, the image portrayed by the companies was at odds with the informant accounts of the organisational philosophy. Far from pioneering management professionalism, many informants talked of Co.1 as regressing back to a 'builder' role in recent years, and away from contemporary management procurement systems which it had pioneered in the past (7.5.2). With this regression came a return to adversarial attitudes and conflict, and a reinstatement of some of the values that the industry has sought to eradicate. Women's rejection of adversarial procurement systems was indicative of a wider preference for increased professionalism, which recurred throughout the analysis (7.5.2).

The meso level was defined by the strong divisional cultures, some aspects of which contradicted the aspirations and philosophy of their parent companies. Divisional loyalty was valued in all of the organisations, which may explain the resentment of inter-divisional mobility. Senior divisional management was seen as deliberately preventing intra-organisational development in an attempt to further maintain their divisional sub-culture (7.5.2). These divisional directors were described as 'old school managers', who maintained a rigid head office culture by maintaining a close physical presence over their departments (7.5.2). Their control ranged from defining working hours to even specifying the tidiness of employees' desks. Of concern for women was that some directors appeared to have negative views of women's role in the industry. Women accused such men of preventing any actions by employees which threatened their divisional sub-culture or personal power base (7.5.2). They replaced lost members of organisational groups with people exhibiting similar attitudinal traits and behaviours as themselves. This prevented changes in the dynamics of the communication patterns within their work group, and maintained operational working arrangements and sub-cultures. This homosocial reproduction reinforced male domination within the organisations. By effectively acting as 'gate keepers' to their divisions, divisional directors could stifle the effect of policies aimed at creating structural or cultural change within the organisations.

The organisational cultures were maintained at a micro level by male middle managers. This group comprised mainly men who had reached career plateaux caused by a lack of promotional opportunities, but who were unable or unwilling to seek alternative

opportunities in other companies. Women were perceived by this group as competition for the limited promotional opportunities available. Many of the women felt that male middle managers deliberately tried to restrict their development as a result (7.5.2). They maintained adversarial work environments, by supporting junior male managers likely to conform to the divisional culture by acting as unofficial mentors and requesting that certain team members move with them to different projects. However, they did not afford such support to women, who were overloaded with work or given mundane tasks to perform. Several women described themselves as feeling treated unfairly by such men, or as peripheral members of project teams (7.5.2).

Middle managers were supported in this discriminatory behaviour by a range of structural mechanisms (8.3.4). Key amongst these was the PAS, which had given middle managers, with hidden agendas to prevent women's equal participation, a tool with which to manipulate HR decisions. Hence, this group's subordination of women was supported by the structural mechanisms designed to safeguard their interests. Differences in the power of these managers between the companies was evident, as the more static the structure, the more patriarchal the hierarchy, and the more control they wielded. Within the most bureaucratic of structures (Co.2 and Co.3) women's careers were even more marginalised. Thus, flattening structures had improved opportunities for women through a reduction in middle management control, despite the related negative effects of informal operating procedures.

Even at a level of personal interaction, women were not treated seriously by men, and were undermined by male colleagues resentful of women's intrusion into their environment and of the added competition for limited promotional opportunities (7.5.2). Women's visibility (as usually the only professional women in the workplace), increased the level of isolation and resentment that they encountered. In Co.1 male graduates tended to be ambitious and hence, resentful of colleagues who were promoted ahead of themselves. Shallow hierarchies had not reduced competition between peers, as they then competed for lateral development opportunities. Women who were promoted ahead of their male peers were seen as the beneficiaries of affirmative action policies. Thus, women believed that senior managers had found it difficult to promote women in case it damaged workplace morale.

Further, the informal nature of communication (see 8.3.4) meant that networks of organisational contacts were essential in order to glean information of strategic policy decisions, new project opportunities and internal vacancies. However, women's social exclusion, particularly from out of work events, prevented them from gaining such knowledge.

Forming good relationships with operationally powerful people was much easier for women. These included those in first-line supervisory positions who have considerable control over workplace operatives. Women found site operatives and foremen to be supportive and respectful of them once they had proven their professional competence. Some women even found the attitudes of this group paternalistic towards them (7.5.2). However, because operatives and tradesmen changed frequently on site, women found that they continually needed to re-develop good working relationships throughout the project's duration. Along with the time spent developing technical knowledge, this was time consuming and detracted from their other duties, and from working to develop their careers. In addition, women also faced resistance from female clerical and administrative staff. Most women had found that female secretaries had refused to do work for them and had complained to male managers over trivial matters.

At each of the three cultural levels identified above, gender can be seen to be embedded within the practices and relationships within the organisations. Thus, the companies' cultures were gendered. As was discussed in 3.5.3, Maddock and Parkin (1994) examined gender cultures found in the workplace. Two of their classifications succinctly describe the cultural environment within the companies investigated: The 'locker room' culture - an exclusionary culture where overt sexual references are made to confirm the dominant male heterosexuality and male bonding through sport and other male social activity; and the 'smart macho' culture - where economic efficiency is sought at the expense of employee welfare and development. Those not able to manage long hours are discriminated against. The applicability of these cultures are described below.

The Locker Room Culture

Assessments of the compatibility of employees to conform to cultural expectations were made on arbitrary assessments of personality, interests and willingness to conform to organisational doctrines. Construction and management were defined by men as masculine activities, which demanded considerable commitment to the success of their project, but little towards subordinates (7.5.2). As such, the dominant culture was one of exclusion and conflict, where power was wielded through aggression and control as opposed to consensus management.

Men's compliance with the 'locker room' culture had led to behaviour which undermined women's confidence or isolated them in the workplace. Despite most women indicating that they made considerable efforts to integrate into their project teams, male colleagues resented their equal participation. Over half of the women interviewed complained of a lack of verbal praise and encouragement from their managers. Many women expressed fears of embarrassing themselves in front of their colleagues, because actions were scrutinised by male colleagues. Other women described how they had their ideas ignored, and then subsequently adopted by male managers. Their exclusion from social events such as after-work visits to the pub, five-a-side football competitions or watching sporting events further marginalised their workplace position. However, women who had adopted male management approaches had their authority rejected by their subordinates.

Typical 'organisation men' (see 3.4.2) had developed their careers through a single company over many years. Women described these men as 'shouters', who enjoyed drawing attention to their own abrasive management approach. Junior male managers exhibited similar attitudinal traits which conformed to those of their senior colleagues. Conversely, women had consciously tried to avoid such indoctrination. This was reflected in the informants' descriptions of successful 'organisation men'. Men described them as professional, loyal, time-served and strong willed, whereas women used descriptors such as arrogant, hand picked, technologically inept and narrow minded when describing the same individuals. However, women's rejection of the dominant management style further marginalised their positions.

Men held stereotyped view of women's commitment believing that women would leave the industry to have children in the long-term (see 8.3.2). Through the recession, as promotional opportunities had become more restricted, women had found that the level of discrimination against them had grown (see 4.6). Men appeared to test women's resilience to intimidating behaviour and harassment. This formed an entrance ritual to project teams, where women would face a daily questioning of their professional competence, sexual innuendo and deliberate attempts to undermine their authority (7.5.2). Women spoke of a 'pack' like mentality amongst their male colleagues, with different forms of discrimination such as age and racial prejudice having a cumulative effect. This interplay of several forms of discrimination made women's positions difficult to maintain.

The source of much of the discrimination stemmed from those in the establishing and maturing career stages. Younger men were not as resentful of working with women, and some even perceived a better workplace atmosphere when women were present. However, as women progressed vertically expanding stage men became less accepting as they viewed female colleagues as competitors. Thus, women were only likely to be accepted if they were in junior positions and did not push themselves forward for promotion.

None of the women who had experienced discrimination and harassment said that they had been supported by their employer, and women that had complained to senior managers found that problems were only resolved on an informal basis (7.5.2). However, few had complained to senior management, because they believed that this would exacerbate poor treatment directed towards them. However, the career progression analysis showed that after 11 years of experience, women with longer service had better overall career progression than their male pairs (see 6.3; Fig 6.21). This equates to an employee reaching 33 years of age. This was assumed by women informants to be because employers were likely to assume that women may have children until this age.

The Smart Macho Culture

Workplace integration depends on the readiness of the dominant group to accept others into their environment, and the willingness of the actor to conform to organisational and behavioural norms. Problems with conforming to the work ethos of the organisation were

cited as particularly significant to women, who often found themselves trying to comply with work practices which conflicted with their personal needs. The 'smart macho' philosophy valued a single-minded approach towards achieving organisational goals through long-hours and the exclusion of personal commitments. Male managers were resistant towards changes to the way in which the companies operated, and so success for women depended upon their ability to conform to male employment patterns (7.5.2). Thus, whilst the ethos and cultures of the companies had not been developed specifically to exclude women, they have developed in response to it being almost exclusively male, that is, that they were shaped by gender processes. To succeed, women were forced to adopt a career primary outlook, incompatible with fulfilling personal lives.

Overall, the synergy of the locker room and smart macho cultures reproduced attitudes and a structural environment which undermined women's achievement in the construction workplace. Women generally believed that their increased representation in the industry, needed to be matched by employment policies which facilitated their employment. Accordingly, it was perceived that the 'smart macho' culture, would be easier to break down than the 'locker room' culture, which actively undermined women's participation and development. These processes have been conceptually linked within the GT paradigm model in Fig 8.5.

Paradigm Model 5: Cultural Organisational Processes

Causal Conditions

- The recruitment of ambitious high achieving graduates had led to a competitive work environment.
- There had been a regression back towards adversarial and macho managerial styles and values, largely driven by economic trends.
- Male managers controlled workplace culture at different operating levels created through the divisional/project structure of construction companies.
- Senior managers retained direct control of HRM issues under flatter structures. They had ingrained attitudes and stereotyped assumptions regarding women's ambition and occupational motivation.
- Career development at a project level was controlled by middle management, who perceived their own positions as threatened by new entrants to the company.

Phenomenon

- Construction organisations militate against women's equal participation and achievement through the maintenance of a workplace environment which excludes and undermines women through the synergy of discriminatory 'locker room' and exclusionary 'smart macho' cultures.

Fig 8.5: Paradigm model 5: Cultural organisational processes (continued over-leaf)

Context

- The recession had led to a reduction in the available opportunities for promotion, which, combined with continued external recruitment, had led to a competitive environment developing.
- Women's minority status increased their visibility and the resentment against them.

Intervening Conditions

- The recession had allowed companies to select high academic achievers from graduate entrants. Falling workloads had further restricted opportunities for advancement. This had contributed to the competitive workplace culture, and further isolated women as potential competition for promotional opportunities.

Action/Interaction Strategy

- Men maintained power through their knowledge and control of structural systems, and resisted change to procedures which threatened their organisational power. Their control of recruitment and staff appraisal maintained such systems.
- Women were forced to comply with male oriented work practices which further maintained the existing sub-cultures and led to difficulties in them combining work and family roles.

Consequences

- Senior managers will continue to retain staff that preserve the sub-cultural environment and prevent the attitudinal change required for acceptance of women as professional equals.
- Women will continue to experience overt discrimination via the 'locker room' culture.
- Women will continue not to be able to conform to the 'smart macho' culture, which demands a total commitment to work, because of their life-cycle responsibilities.
- Women's social exclusion will continue to reinforce their under-achievement. It did not allow them to develop the networks of contacts required for a successful organisational careers. This will maintain the male domination of senior positions within the companies and the other cultural mechanisms identified above.

Fig 8.5: Paradigm model 5: Cultural organisational processes

8.3.6 Individual characteristics and circumstances as determinants of careers

As was discussed in 2.1.1, there is a need to understand the nature of the subjective careers of the informants, if the factors defining their career dynamics are to be understood. The effect of personal circumstances on career progression and work motivation was a significant area emerging from the study. However, in many cases, women's careers had dictated their personal circumstances.

Career anchors, ambition, morale & motivation

As was discussed in 2.1.2 'career anchors' form fixed conceptual points that become a guiding focus for the individual's life and career, and which define the way in which people describe self images caused by changes in their internal career. Their importance to understanding subjective careers is that they attach the individual to their perception of their own abilities, needs and values. Women's career anchors, in descending order of importance emerged as: technical and/or functional competence (7.6.1); security and

stability (7.3.2); managerial competence (7.5.2); and professional recognition (7.2.2). For men, they were: external recognition through managerial competence (7.6.1); autonomy (7.9); technical competence (7.3.2); and seniority (7.4.1). As such, men and women anchored their career perceptions and aspirations against different conceptual points, and had differing career priorities.

Men's career anchors were related to external recognition of their achievements, and comparative assessments of their progress against their colleagues (7.6.1). Although women chose role models to aspire to, they did not see themselves as competing against their colleagues (7.6.1). Rather, they frequently stated that they only remained within the industry for the intrinsically satisfying aspects of their work (7.4.1). As was discussed in 8.3.3, women preferred site based management roles for this reason, as they could remain close to their chosen professional role. Professionalism was seen by women as defining their occupational status in this regard. Men, however, defined their status in terms of job titles and promotion. This may explain why women were more likely to pursue professional qualifications (7.4.1; 6.1.2), and men's resentment of empowerment policies to allow employees to decide their own titles (8.3.4).

The structural and cultural barriers that women faced (8.3.4; 8.2.5), had left them demoralised through poor treatment, poor teamwork and a lack of career opportunities. Hence, women were less ambitious than their male pairs (see 6.1.2 and Figs 6.16 and 6.17). Women's ambition declined according to their career stage, with those in their establishing stage demonstrably less self-motivated than expanding stage informants. The progression analysis showed greater career mobility amongst women in the establishing career stage (6.1.2), and lower ambition when they had worked for a greater number of previous employers (Fig 6.18). Hence, lower morale had caused higher turnover of women. In the longer term, many women stated that they would leave the industry, or move to a sector offering greater stability and security.

Experience and qualifications

Differences of opinion emerged between men and women over the type of training, project exposure and knowledge that were required for successful career development. Most women believed that it was best to develop a broad experience. This extended to gaining experience of different company procedures and operations through inter-company mobility (7.3.3). However, the progression analysis showed this strategy not to be as effective as remaining within a single organisation (6.4.7). The frequency of inter-company mobility declined with the amount of experience that the informants had gained (6.1.2). Thus, maturing stage employees are unlikely to require the same degree of effort to retain as those in the establishing stage.

In terms of academic ability, the standard of the employees recruited by employers was high, with most having achieved an upper second or first class honours degree. The sampling procedure did not allow any indication of whether there was disparity in the academic achievement of men and women. However, within Co.1, a masters level qualification was seen as an organisational requirement for rapid career development (7.6.1). The career progression analysis (6.4.5) supports this perception, as those with higher degrees had progressed more rapidly than those with only first degrees. However, achieving a part-time masters level qualification was acknowledged as being difficult as the organisations offered little support in terms of time off for study. Women in particular found it difficult to find the time to work towards such qualifications, and so were disadvantaged by their life-cycle restraints.

Life-cycle restraints

Many of women's career determinants stemmed from the incompatibility of construction work with a fulfilling family life. Most women cited this as the single greatest factor militating against them developing their careers within the industry. Women were less likely to be married, have a long-term partner or to have children (6.1.2). Most had experienced difficulties in maintaining long-distance relationships with their partners which they had experienced because of the long hours and transient nature of their work (7.6.2). There were many instances of divorce and relationship breakdown amongst the informants. Some of the men even indicated a willingness to sacrifice relationships in favour of work. Even those with family commitments subordinated them in favour of their

work (7.6.2). Women were equally likely to have suffered the break-up of a long-term relationship, but this stemmed from their partners being wary of them working in male dominated environments, because of the harassment and discriminatory treatment that they encountered from their male colleagues (7.6.2). Knowledge of these difficulties had dissuaded many women from marrying during the early-mid stages of their careers, where they assumed that they would need to move company frequently. Where women had long-term partners they were less ambitious (6.4.8; Fig 6.19), and those with family responsibilities had accepted that slower progression was an inevitable consequence of having to balance their responsibilities (7.6.2). In contrast, men had generally supportive partners, and perceived no need to have to make a decision between a work or family oriented lifestyle (7.6.2). The progression analysis showed that married men progressed more rapidly than married women (6.4.8).

Most women believed that greater assistance in combining their work and family lives would attract high achieving women and promote the retention of those already working for their company. However, men believed the nature of construction work, which demands full-time attention to projects, made job-share and part-time work difficult (7.5.1). Thus, the organisations studied did not accommodate child care facilities, flexible working hours or career break programmes, and part-time work was almost non-existent. Some of the companies even appeared to make the combination of work and family lives problematic for women, by placing them in the national divisions (see 6.1.2). A correlation existed between the personal circumstances of the informants and their divisional allocation, as those in national divisions were less likely to have partners (6.1.2).

Clearly, women had developed different ways to deal with work family conflicts. For example, some of the men who experienced such conflict refused to relocate, where as women avoided parenthood. The two women that had taken time out of the industry to have children had been severely disadvantaged in terms of career, and had not been supported by their partners. Other women, however, planned to have children *because* they believed that they couldn't succeed in the industry (7.6.2). It is surprising considering their non-traditional career choice, that women still perceived themselves as being responsible for child care. Several women suggested a need to compensate their non-

traditional career choice by retaining responsibilities for domestic duties. These processes have been conceptually linked within the GT paradigm model in Fig 8.6.

Paradigm Model 6: Individual Characteristics and Circumstances of the Informants

Causal Conditions

- Construction work, and particularly site based roles in the national divisions, was seen as demanding and time-consuming and impinging on social activities and family responsibilities.
- The majority of men had supportive non-working partners who took on the responsibility of child care and other domestic duties.
- Men saw flexible working practices and organisational support as unfeasible because of the levels of dedication required to work on construction projects.

Phenomenon

- Women perceived that they had to make a choice between a career or a family oriented lifestyle. Men were more likely to successfully combine their work and family lives.

Context

- The 'smart macho' culture had led to long hours and transient life-styles which were accepted by those working in the industry.
- Women tended to be allocated to national divisions which led to them having transient life-styles or having to travel long distances.

Intervening Conditions

- Women's career anchors and motivation was likely to be oriented towards gaining intrinsic satisfaction from their work as opposed to external recognition. This required remaining in project based work from which they derived the greatest satisfaction.

Actions/Interaction Strategy

- Women were forced to adopt career primary outlooks to avoid male stereotypes about their future progression, or to choose to forego a successful career in order to have children.
- Those wishing to combine work and family lives are forced to move to office based positions, which although offer the opportunity for them to maintain a successful career, do not afford the same progression opportunities.

Consequences

- Women's career motivation will continue to decline in proportion to their length of experience, as the salience of family issues becomes more significant to their career outlook.
- Women will become demoralised as they realise the inherent difficulties of combining their work and family lives.
- Women will seek a career change to a sub-sector of the industry which allows them more stability and the opportunity to combine their work and family responsibilities.
- Only women with high ambition and a career primary outlook will reach senior positions.
- Few women are likely to remain in site based positions and reach high profile project management positions.
- The supporting positions to which women move offer less scope for vertical progression, which will contribute to their being fewer role models for other women in the future.

Fig 8.6: Paradigm model 6: Individual characteristics and circumstances

8.3.7 Resultant career strategies

The strategies and the rationale behind their use have been grouped under two generic headings. Firstly, career coping strategies are considered (the way in which they dealt with the every day factors which impeded their careers), and secondly, career strategies are explored (the way in which the informants planned to develop their career in a way which is compatible to their individual needs).

Coping strategies

Most of the women interviewed worked in exclusively male work environments, and suffered from loneliness and a lack of female companionship. Women had found it hard to integrate into their project teams, and thus, were isolated from their colleagues. Many of the women discussed a need to be 'thick skinned' in ignoring verbal insults and behaviour from their male colleagues which continually challenged their professional credibility (see 4.6; 7.7.3). Very few felt able to confront these attitudes directly, assuming that any attempt to take action would provoke worse behaviour towards them (7.7.3). Instead, women had learned to be resilient, to play down their achievements and to appreciate their time spent outside of the workplace (7.5.2). Women talked of requiring a high degree of single-mindedness (7.2.4), and of a need to focus on maintaining their positions (7.4.2). Thus, whilst men could expend their energies in improving their careers by using the formal and informal mechanisms available to them, women's efforts were spent *coping* with their workplace environment. This had left most women assuming that they would *never* manage to emulate men's progression in construction (7.7.1).

Career strategies

In terms of short-term development goals, there were clear differences between men and women from different career stages, in terms of how they expected to progress. During their expanding stage, men saw themselves developing their careers through frequent intra-company mobility. They envisaged rapid development through a transient life-style working in national divisions on prestigious projects (7.4.1). This gave them the opportunity to gain valuable experience on larger and more prestigious projects. Because they were unlikely to be restricted by family and other personal commitments, they were

likely to accept the divisional and project placements that they were allocated. Women in this stage, however, focused on developing their career in such a way that they could combine their work and personal lives in the longer term. Most believed that they would need to make a limited career move away from contracting work in order to combine their work and personal aspirations (7.7.1). Hence, their primary concern was to develop the experience which they felt would facilitate transition to a more stable part of the industry in the future. This may explain why more women pursued professional qualifications (see 6.4.5).

Globalisation of the industry had also led to international opportunities. However, female Co.1 employees felt that they were being forced into such work by a company directive under which any manager wishing to reach a senior management or a directorship level required at least two years international experience. There were concerns from women that working away from the UK would lead to further isolation, and that it may jeopardise their position in the UK, particularly in terms of finding a position upon their return (see 4.6). The resulting strategy of the majority of the informants was not to request an international placement before a substantial amount of domestic experience had been gained, and a wide network of contacts developed to facilitate their transition back to the UK. However, by the time the requisite experience had been gained, many women had also developed personal commitments which restricted their opportunities to work overseas. Thus, the directive by Co.1 to gain international experience had led some staff to seek opportunities in organisations where they felt that such experience wouldn't be a pre-requisite for reaching senior positions (7.7.1).

In the establishing career stage, the competitive culture had led to the majority of establishing stage employees to seek vertical advancement, which made the establishing career group the most difficult to retain. This was indicated by the highest number of inter-company transitions occurring in this career stage (see 6.1.2). For this group, remuneration and promotional opportunities were seen as increasingly important, and so there were also marked changes in the strategies advocated. Priorities were re-focused towards ensuring that personal development needs were met within the scope of work that the organisation could offer, or through seeking opportunities in other organisations. Contacts were

increasingly important, both in securing the divisional and project placements, and in seeking positions within other companies.

However, although men could be assumed to be advantaged in terms of inter-organisational mobility due to the increased likelihood of them having and using networks of contacts, women were more likely to exhibit such mobility than men. Moreover, women showed less organisational loyalty in comparison to men in general (see 6.1.2; Fig 6.11 and 6.13). Over half ($n=22$) of the female informants were actively seeking employment in either other organisations or away from contracting. The high number of informants' advocating inter-company mobility as a strategy was reflected by their occupational profiles. Only two Co.1 employees, and six other respondents had over 10 years continuous service within their organisation, and despite the young mean age of the sample group (28 years), only 36% ($n=18$) Co.1, and 56% ($n=18$) other informants had only worked for their present employer. However, women had worked for more previous employers (1.25) than men (0.95). Thus, despite advocating inter-company mobility as a strategy, fewer male informants said that they were actively seeking other positions.

The progression analysis showed that men's strategies were justified in terms of securing rapid career progression. Organisational loyalty had led to more rapid career progression than regular inter-company mobility (see 6.4.3; Fig 6.27). As such, the informant's perceptions did not necessarily match the reality of the effect of such strategies. Loyal managers were better placed for internal succession, and indicated higher ambition scores. Those exhibiting low ambition were almost exclusively in the group with five or more previous employers, who tended to be women. An exception was, however, informants who advocated leaving their employer, with a view to returning to a more senior positions in the future. This 'zigzag' strategy was encouraged by employers, but required an extensive network of contacts, and the maintenance of good relationships with ex-colleagues. Employees were aware of organisations which offered similar working cultures and methods as their own, but with greater financial rewards. These organisations offered an easier transition in terms of utilising the knowledge gained with their previous employer in a new organisational setting. Women experienced problems in using the

zigzag strategy, as they were unable to use informal contacts in pursuing rapid career development (7.3.3; 7.7.2).

Of particular concern was the number of women with long-term strategies to leave the industry. The broad base of construction degree courses and management experience was seen as basis for inter-industrial transition. However, most informants preferred limited career moves to supporting functions or consultancy, which were seen as offering stability and greater professionalism. This wastage of employees may be unnecessary in the context of the personal needs of the informants, as some in national divisions wished to move to regional divisions and vice-versa. Thus, whilst there was often a conflict between individual needs and the perceived priorities of their division, it is possible that this may not be in conflict with the overall needs of the organisation, if HR allocation was handled more effectively.

Finally, the maturing stage informants had re-focused their career priorities. They sought the opportunity to broaden their experience, to work on exiting or innovative projects, or to secure job and geographical stability. For this group, the most appropriate opportunities were lateral moves within their organisation. However, there was also a “comfort factor” in that informants preferred to work within cultures, systems and procedures within which they had developed an in-depth understanding over many years service. Moving to employers in different geographical locations was difficult for those with family and domestic commitments. Thus, men’s and women’s strategies converged in the later career stages. These processes have been conceptually linked within the GT paradigm model in Fig 8.7.

Paradigm Model 7: Career strategies

Causal Conditions

- Women's careers were undermined by male colleagues, who used a range of overt and covert actions to undermine their careers.
- Women's exclusion had adversely affected their organisational development because of their exclusion from social events by their male colleagues.
- There was a misconception amongst women that inter-company mobility would facilitate rapid career development.
- Women had to expend efforts in coping with barriers to their continued presence in the contracting environment. This gave them less time to spend in proactively developing their organisational careers.

Phenomenon

- Women's career strategies centred on inter-organisational mobility within a multi-organisation framework. Men's were more likely to be focused on proactive intra-organisational career development within their existing organisation.

Context

- Organisational loyalty was more likely to facilitate rapid vertical career progression than inter-organisational mobility.
- Companies encouraged junior employees to experience work for other organisations and then to return to their original employer in the future.

Intervening Conditions

- HR allocation did not represent an optimisation of organisational and individual needs. Staff allocation was based on senior management preferences.
- A requirement for a period of international experience was a prerequisite of a successful career, regardless of employees personal situations or personal preferences.

Actions/Interaction Strategy

- Many women planned to combine their career with having a family later on. Hence, their priorities were to secure the necessary experience and qualifications to return to the industry, as opposed to seeking vertical progression. This invariably required inter-company mobility to more stable positions within the industry.
- Men, preferring to develop their careers in a familiar cultural and structural environment, sought intra-organisational development in order to further their careers.

Consequences

- Women will continue to experience greater dissatisfaction through geographical instability and will become disillusioned with their careers.
- Women will seek inter-company moves, limited career changes away from contracting, or complete occupational moves away from the industry.
- Men will remain within companies where they had a good understanding of structural and cultural systems, and hence greater control of their careers. Although this will make men easier for organisations to retain, it will have the effect of further ingraining existing cultures, which lead to women's under-achievement.

Fig 8.7: Paradigm model 7: Career strategies

8.3.8 Future career expectations, opportunities and threats

If the industry and its organisations continue to operate in their current form, and the rate of post-recessional change is maintained into the next millennium, there are likely to be positive and negative implications for women's future careers in comparison to men's.

Career opportunities

The companies studied had undergone a period of significant organisational change over the last 20 years. They had shed labour and restructured in order to cope with changing technical and managerial demands, fluctuating markets, new procurement routes and contractual procedures (7.8.3). Women embraced the opportunities that this recent structural change had presented. Recent innovations such as increased use of management procurement were seen to have created a better working environment through a reduction of macho, adversarial attitudes, and hence, an increased level of professionalism was seen as transcending the industry (7.5.2).

As markets changed, women perceived structural benefits from the changing nature of the industry, in terms of the opportunities created by the expansion of companies into new markets. This was because women perceived there to be considerable scope to gain variation and increased satisfaction through broadening their experience (7.8.3). Similarly, recent take-overs in the industry and ownership of contractors by non-construction organisations were seen as providing scope for moving outside of construction (7.8.3).

In addition to the potential structural improvements derived from change in the industry, some women believed that a slow, but tangible cultural change was occurring within their organisation. These women believed that the critical mass argument (see 4.3) may create a real change within the organisations (7.8.3). They believed that the culture of the industry may change as current expanding stage men were more willing to accept women reaching senior positions (7.5.2). This was confirmed by some expanding stage men, who stated that women's presence in construction project teams improved working relationships and group cohesion (see 8.3.5). Some women believed that these men may help to make the

industry a more accepting environment when they reached senior positions later in their careers.

Career threats

Many women believed that a decision had been taken to attract and employ more women in construction without adequate consideration of their particular needs, or the consequences of this strategy (7.9.2). They believed that they had been attracted merely as a way of the industry avoiding skills shortfalls, and that this had a negative effect on their acceptance and subsequent career development (7.5.2). This had increased the resentment directed against them by men already concerned by changes to the industry, and a lack of vertical promotional opportunities under de-layered structures which had generated a competitive culture (7.8.2). In contrast to the women's attitudes discussed above, a significant number of women were concerned that male graduate entrants were quickly indoctrinated into the existing workplace culture, and so merely perpetuated the patriarchal culture which existed within the companies.

As was discussed above, attempts by men to exclude women had led to them having to expend their efforts in coping with their environment as opposed to developing their careers through networking and seeking opportunities for promotion. Women were concerned that the competitive market in construction would lead the sector to regress back to adversarial contractual methods. They felt that this could strengthen the adversarial environment, and lessen the possibilities that structural support initiatives would be developed in the industry. Furthermore, women saw the continued de-structuring of the work place as potentially leading to greater informality in work procedures and HRD mechanisms within organisations. These changes were seen as likely to increase the significance of the cultural aspects determining careers, which were the primary cause of the disparity between men's and women's progression. Men's concerns also related to the changing structural circumstances under which they worked. However, this was because they saw recent changes to the structure of organisations as restricting opportunities, and as threatening their power base, maintained through a familiarity of systems and procedures.

Resultant career expectations

Of those women interviewed, 43% were seeking to leave contracting, 14% were seeking to leave the industry altogether and 38% believed that they would be with a different employer over the next 5 years (7.8.1). The nature of the organisations, being geared towards male life-cycles, was believed to be likely to militate against their equal progression in the future. Women felt that the industry was unprepared for employing them, both structurally and culturally, and there was a general consensus that the industry had not considered the implications of work force diversification, particularly in providing the structural support and cultural change necessary to ensure their retention. This is supported by the literature (see 4.6). Several women knew of female colleagues who had experienced difficulties in returning after career breaks (7.8.2). These experiences had led many to believe that there would never be real parity of opportunity for women wishing to combine work and family lives, despite the UK signing up to the Social Chapter (see 4.6).

Most women did not wish to compromise their work ethics or adopt male characteristics in order to succeed. They saw the need for a work environment where they could compete with men on equal terms at a structural level, as offering the potential for women to be accepted at a cultural level in the longer term. However, a major barrier to this was believed to be the complacency of organisations following an over-supply of construction professionals during the recession. These processes have been conceptually linked within the GT paradigm model in Fig 8.8.

Paradigm Model 8: Future Expectations, Opportunities and Threats Perceived by the Informants

Causal Conditions

- Men perceived recent changes in the participating companies to threaten the structures and cultures which had reinforced their power and domination.
- Women perceived existing male oriented work practices and cultures as causing discriminatory behaviour from their male colleagues which adversely affected their career prospects.
- Women saw structural change as offering the potential to improve the cultural environment of their organisations in the long term.

Phenomenon

- Women embraced the structural organisational and industry-wide change which had affected the industry since the recession. Men opposed such changes and sought to maintain existing hierarchies and work practices.

Fig 8.8: Paradigm model 8: Future expectations, opportunities and threats (continued over-leaf)

Context

- Large construction companies were seen as having restructured following the economic recession of the early 1990s, by de-layering structures and creating informal work practices.

Intervening Conditions

- Women informants perceived a gradual regression back towards conflictual methods which favour male management traits and work ethics. This threatened the continued inroads that women were making in the industry.
- A negative aspect of the de-structuring of contracting organisations was a related increase in male organisational power through a related increase in the informality in organisational operating procedures and HRD.

Actions/Interaction Strategy

- Women sought work in companies offering contemporary procurement systems and organic structures under which they could utilise their management skills and develop laterally.
- Men attempted to maintain structural conditions which maintained their domination. They resisted change initiatives likely to formalise HRM within their companies.

Consequences

- Without rigorously enforced equal opportunities policies, the current culture, intolerant of women's participation in the industry, is likely to be maintained. Women are unlikely to progress at the same rate as their male colleagues as a result.
- Women are likely to leave organisations that do not offer an equitable workplace environment and provide workplace flexibility to allow them to maintain a fulfilling personal life.
- The industry is likely to experience skills shortages, and other competitive disadvantages created through the continued lack of recognition of the benefits that a diversified work force could bring to the sector and its organisations.

Fig 8.8: Paradigm model 8: Future expectations, opportunities and threats

8.4 A Grounded Theory of Gender Differentiated Career Development in Large Construction Companies

Although theories exist to explain the differential career progression between men and women in male dominated occupations, none have been developed to explain such disparity in construction organisations. This section constructs such a theory, by integrating the emerging findings from the eight GT paradigm models.

8.4.1 Requirements of the theory

To propose a single theory to explain women's careers in construction would oversimplify a complex and dynamic process which is influenced by a potentially infinite number of cultural, structural and action determined variables. However, to include the full range of factors affecting women's careers would unduly complicate any model, and limit its effectiveness in terms of developing practical strategies to address the issues emerging

from it. A theory is required, therefore, which is generally applicable to the majority of cases, but which takes account of as wide a range of causal factors emerging from the study as possible. By conceptually viewing career development as resulting from the mutually reinforcing dimensions of structure, culture and action, the actor is seen as operating within pre-existing structures and cultures, but as being able to influence the creation of cultures and structures anew, or of reinforcing existing ones. By adopting this theoretical perspective, a GT focusing on the interrelationship between personal strategy and career opportunity has been developed.

The organisations studied have emerged as both structurally and culturally male. As such, a theory of women's career development must present a view of the organisation as gendered, and as being shaped through gendering processes. The eight emerging phenomena extracted from each of the paradigm models for the conceptual analytical areas developed in 7.1.1 are incorporated within this theory as causal, contextual and consequential factors arising from the theoretical proposition in 8.5.1. Together, they form the four components of the theory, which explain the gendering differentiated career progression within construction organisations.

8.4.2 Theoretical proposition

The theoretical proposition below has been developed from the foregoing discussion and paradigm model construction:

“Men and women working for construction companies experience disparate progression dynamics. This stems from the differential effect of structural organisational factors which restrict opportunities, an incompatibility of construction work with women's expected societal roles, and a culture which militates against women's participation through the maintenance of an exclusionary and discriminatory work environment.”

The social processes which have emerged as determining this process are described below. This GT incorporates all of the findings from the paradigm models developed for each

section of the analytical model (Fig 7.1.1). The locations of each emerging phenomenon within the theory are denoted by their chapter heading number within each component of the GT.

8.4.3 Component 1: The development of a competitive sub-culture

A lack of promotional opportunities was attributable to top-heavy management structures. These had developed partially as a result of re-structuring to more shallow hierarchies where managerial layers had been removed, and also because the companies had continued to recruit externally to middle management positions rather than promote from within. Accordingly, a competitive sub-culture had developed, where managers competed for limited promotional opportunities. These problems had been further intensified by the recession, as low economic output had reduced workloads and hence, promotional opportunities. Companies had a greater choice of potential staff, and showed a propensity to recruit high achieving graduate employees, who were inevitably more ambitious. This made entry to organisations more problematic for women, who faced rigorous recruitment procedures and prejudice from the operations management with HRM responsibility (8.3.2).

8.4.4 Component 2: Structural constraints and cultural values

Recent promotions had tended to be within divisions, and had not involved relocation or intra-organisational mobility. This had resulted in an internal vertical development pattern for younger employees, with an associated limitation in the scope for inter-divisional development. Employee preferences for vertical development patterns were further reinforced by the PAS, which emphasised the development of the skills and experience necessary for hierarchical promotion. HRM issues were controlled in an informal manner by senior and line management without formal training in HRD (8.3.4). Senior divisional managers prevented lateral staff mobility between operating divisions in order to maintain existing sub-cultural environments, and middle managers used their autonomy and structural mechanisms (such as the PAS) to restrict opportunities to women, and to maintain existing hierarchies and work practices (8.3.8). When combined with the

competitive culture, this resulted in animosity towards women, who were seen as threats to the limited promotional opportunities available.

8.4.5 Component 3: Discriminatory mechanisms and behaviour to support cultural values

Resentment against women was manifested in overt and covert discriminatory behaviour towards them. These actions ranged from harassment and bullying (the locker room culture), to a culture of long working hours and geographical instability which made it difficult for them to combine work and family roles (the smart macho culture) (8.3.5). In responding to such actions, women had to focus their efforts on dealing with barriers put in the way of their continued presence within the organisations. In contrast, men could concentrate on proactively developing their careers through the informal mechanisms available to them. These were based around social interaction, largely taking place outside of work, from which women were also excluded. Poor formal HRM support, a lack of provision of family friendly working practices, and poor organisational communication all contributed towards the male orientation of structural career development opportunities.

8.4.6 Component 4: Actions taken in response to organisational constraints

The barriers identified above had a significant impact on women's career strategies. Most women believed that a choice had to be made between a having a successful career or a family oriented lifestyle (8.3.6). For those who chose to pursue their career, some actively remained in functional positions from where they could prove their competence to sceptical male managers (8.3.3). However, most believed that progression would be slow for those that remained within a single organisation. This had led to increased inter-company mobility for women in comparison to men. However, the benefits of this strategy were misconceived, as vertical progression was shown to be more rapid if construction professionals remained loyal to their employer. Thus, a self-perpetuating cycle had developed where women focused efforts on coping with their environment, whilst men concentrated on progressing more rapidly. Through their progression and informal interactions with senior management, men had the potential to increase their organisational

power, with which they could maintain women's under-achievement. The only way for women to break this cycle was for them to leave their organisation, which actually led to slower progression, lower ambition and to fewer reaching senior positions (8.3.7). This led to there being few senior women to act as role models for potential women entrants. Hence, this process contributed to women's under-representation as well as their under-achievement. The alternative, for those who became disillusioned with their careers, was occupational mobility to another sector (8.3.1). Thus, the processes identified resulted in wastage of women professionals from the industry, as well as staff turnover from organisations.

8.5 Summary: Fulfilment of the research propositions

The GT in 8.4 resulted from a refinement process, under which the interrelationship of the emerging phenomena were established, to provide a comprehensive theory to explain the gender differentiated progression dynamics found in construction companies. This section now relates these theoretical explanations to each of the original propositions, to establish the extent to which they have been addressed.

8.5.1 Proposition one

The first proposition of the research predicted that "*Obstacles to women's career progression are more numerous and difficult to overcome than men's*". The investigation of this proposition has revealed that women encountered a wider range of structural and cultural factors which adversely affect their careers than men, as well as being restricted through stereotyped expectations of their personal and domestic responsibilities. These affected the actions that they could take to mitigate the other factors. This contention is supported by women's apparent disillusionment, and subsequent wish to leave the industry.

Barriers to women's careers began when they entered organisations. Difficulties stemmed from the informal nature of the recruitment process, and the prejudice of the managers who acted as gate keepers to an all-male industry. As women progressed, a need for

geographical stability became more significant, and for those attempting to simultaneously maintain family and working lives, the process became unmanageable. Even the progression of women adopting a career primary strategy, remained behind that of men's. The effect of this was disillusionment, poor retention and hence, a lack of role models for attracting other women to the industry in the future.

8.5.2 Proposition two

The second proposition was that "*Men's and Women's career progression rates and opportunities are differentially determined by the structure of the industry and its organisations.*" The investigation of this proposition revealed that the structure of construction companies had a strong gender differentiated influence on career progression and retention of their employees. Women found the nature of the industry and its work practices incompatible with a fulfilling personal life. They found that the structure and operating procedures militated against their progression and acceptance. The structural aspects of working life in the industry were characterised by inflexible work practices which demanded a total work commitment. Recent changes to organisational structures, job titles and descriptions, had altered the potential developmental opportunities available to employees, but had done little to improve women's careers. This was because obstructive attitudes towards structural change had maintained organisational power structures and operational control. This had reduced the impact of what may otherwise have been a career enhancing policy for women professionals.

The companies had developed into 'adhocracy' structures, which valued commitment and flexibility, regardless of the personal sacrifices that employees were required to make. Employees did not conform to the rationale behind flatter, networked organisational hierarchies, and viewed restructuring as restrictive to their career opportunities. Accordingly, career progression remained perceived in terms of vertical progression, as opposed to being laterally defined. However, there was also a perception that the few vertical promotional opportunities that did exist tended to be filled by external appointments as opposed to in-house staff. As such, companies were seen as not conforming to the ethos of succession management.

The root of many of the emerging problems appeared to be that the responsibility for dealing with HRM had been devolved to line management. Such managers had vested interests in restricting the lateral mobility of their operational staff to protect their own positions through the maintenance of successful project and divisional teams. The main structural tool with which they managed staff development was the PAS. This was used to promote the reproduction of existing attitudes and behaviours which militated against women's participation, by encouraging staff to behave in a way deemed suitable by such managers. This structural mechanism had maintained attitudinal norms through the creation of a cultural dynamic equilibrium.

8.5.3 Proposition three

The third proposition was that *“Men's and Women's career progression rates and opportunities are differentially determined by the culture of the industry and its organisations.”* The investigation of this proposition revealed that the organisational culture of construction companies forms the most significant determinant of gender differentiated career progression. Distinct sub-cultural environments existed throughout the organisations taking part. These were maintained through the autonomy and power of directors and their senior managers. These individuals preserved a 'smart macho' environment valuing dedication, commitment and long hours, and discouraged the participation of non-traditional entrants to the industry. All of the companies exhibited traits of 'power' cultures in defining these environments.

Senior managers promoted those with a similar work ethos to themselves, whilst isolating those who did not conform to the behavioural norms expected by the organisation. Their control of the sub-cultural environment was facilitated through the structural framework outlined above, under which senior and middle management operated with the considerable autonomy inherent within power cultures. The informality and lack of role specificity created by adhocracy structures had led to a culture intolerant of those who deviated from organisational norms. This 'locker room' culture led to the professional credibility of women being undermined, and their contribution disparaged.

Women's visibility inhibited them from forming strategic alliances with their female colleagues, and so they were left to deal with harassment and discrimination in isolation. Taking action in response to the treatment that they received merely provoked further retribution from their male colleagues. Furthermore, women's social exclusion and their inclination to take advantage of time spent away from their male colleagues reinforced their workplace marginalisation, as they could not develop the networks of contacts required for successful organisational careers within the industry.

8.5.4 Proposition four

Proposition 4 was that "*The actions of men and women in response to labour market and non-labour market determinants of careers, reproduce gender configurations within construction organisations.*" The investigation of this proposition revealed that the actions of women in response to the structural and cultural obstacles to their careers has had little effect on gender configurations within construction companies. This is because women face a fundamental choice of whether to confront such barriers (which risks further retribution and marginalisation), conform to male life-cycle patterns (which strengthens existing structural and cultural barriers and does not guarantee equality of opportunity), leave their organisation (which leads to poor opportunities for succession management and slower vertical development); or leave the sector (which reinforces male stereotypes of women's occupational commitment to the industry). Thus, in each case women's actions reproduced the attitudes, and structures in need of change.

Women who remained in the industry were forced to adopt time-consuming strategies merely to prove their commitment and maintain their positions in the industry. For many women, career motivation declined in proportion to their experience as the salience of family issues became more prominent, and the scale of the organisational barriers confronting their development were realised. This polarised career choice for many women who, rather than see their career progression slow down, decided to move to another sector of the industry or to another profession. Women sought career changes to sub-sectors which allowed them more stability and the opportunity to combine their work and family

lives. Women that had reached senior positions had done so through working in support positions peripheral to the main production related professions, or through developing their careers in other sectors such as consultancy. Such career paths were unlikely to lead to boardroom positions.

8.5.5 Proposition five

The fifth proposition was that “*Opportunities for women in construction companies can be improved through HR policies which provide a more equitable working environment for women.*” The potential consequences of not retaining women is that construction companies will experience skills shortages, and other competitive disadvantages. However, men’s opposition to change is likely to maintain existing hierarchies, work practices and cultures. Thus, steps which organisations can take to create a more equitable work environment for women, and increase the likelihood of their retention, must be capable of producing *cultural* change within the organisations.

Although structural improvements may be helpful in the short-term, they are unlikely to have the long-term effects required to significantly improve women’s careers. The industry’s attempts to attract more women should be moderated until the culture of the industry and its organisations have been developed to facilitate their employment. Such changes should not just be confined to the development of family friendly employment policies, but should also be oriented towards the manipulation of existing sub-cultural environments. The investigation of this proposition is concluded in Chapter 9, in which recommendations are developed to address the barriers to women’s careers emerging from this chapter.

CHAPTER 9: IMPROVING CAREER OPPORTUNITIES FOR WOMEN THROUGH HRM POLICIES

This chapter addresses the fifth proposition of the research, to establish whether HRM policies can be used to improve opportunities for women in the industry. It identifies potential HRM policies to address the phenomena within each of the paradigm models formulated in Chapter 8. An integrated package of soft HRM policies are suggested, which are based on informant recommendations and established policies taken from other sectors via a benchmarking exercise. Feedback was collected on the likely effectiveness of the recommendations in retaining employees using a postal questionnaire which was sent to the original interviewees. The statistical significance of the discrepancy between men's and women's rank ordering of the recommendations is calculated to establish whether there is a need for gender specific initiatives. The final HRM framework is capable of being tested as to its practical effectiveness in reducing women's turnover.

9.1 Introduction

Initial interest in this research from the participating companies stemmed from a practical need to develop HR policy which promoted the retention of their female employees. However, the informants willingness to participate stemmed from a need to improve their own career development. These needs are not necessarily mutually exclusive, as they can be merged through practicable HRM strategy aimed at optimising opportunities for women within the scope of the organisations requirements. As was discussed in 5.3.4, GT methodology is appropriate for developing change within organisations, as it should provide control with regards to action toward the phenomenon. However, developing initiatives to address gender imbalance in career opportunities identified within Chapter 8, poses a fundamental difficulty. This is, that cultural change is required if there was to be any real improvements in women's careers and retention (see 8.5.5). Simply imposing structural solutions to current problems is likely to generate resistance to change within the organisations.

During the interviews, each informant was asked how their employer could increase the likelihood of retaining them. These informant recommendations were enhanced with initiatives emerging from a benchmarking exercise, which identified transferable initiatives from both the construction industry and other male dominated sectors (see 9.3). Soft HRM strategies emerged as offering potential solutions to the problems that women face, by focusing on individual career needs and development (see 2.2.1). However, as was discussed in 4.5.3, a potential problem of developing protective policies for women is that they may be interpreted as exclusive. Policies that are not perceived as part of general organisational aims, may be perceived as only having benefits to minority groups, and are likely to be rejected by the majority group. Hence, there is a need for the recommendations to provide positive benefits to both men and women. Accordingly, the recommendations below have been designed to provide general HRD and retention benefits, whilst addressing the specific needs of women within them.

9.2 Recommendations

The recommendations below comprise a selection of the informants' suggestions, together with initiatives drawn from the literature and from a range of other male dominated sectors where women have made considerable progress in addressing their historical under-achievement (see 5.4).

9.2.1 Attracting and recruiting women to construction

Most women felt that targeted recruitment drives were counter productive, as they had given a false impression of working life in the industry (8.3.1). Women preferred to gain knowledge of the sector via first hand accounts of other women's working experiences. They saw this as allowing them to make informed choices of whether they would like to pursue a construction career. In addition, men and women suggested that steps should be taken by the HE sector to provide students with exposure to some of the cultural aspects that construction careers present. Suggestions from the literature for achieving this included mentoring, field trips, work shadowing and professional development workshops. A simpler suggestion maybe to actively encourage women to undertake a sandwich

placement as part of their degree courses, and to question graduate entrants as to their knowledge of the realities of working life in the industry.

In terms of women's entrance to the industry, several problems had been created by the devolution of recruitment responsibilities to line management (8.3.2). Many informants felt that the informality of the recruitment process required redress. Operational managers who were given responsibility for recruitment used biased techniques in staff selection, and there was little consistency in how applicants were treated during the recruitment process. Hence, the following recommendations were suggested to improve the entrance of women to the industry:

- **Present a realistic description of working life in construction in graduate marketing literature;**
- **Test graduate applicants to ensure that they have a good knowledge of the work in relation to the hours & geographical instability associated with the industry.**
- **Train operational staff in interviewing techniques;**
- **Develop company wide recruitment guidelines.**

9.2.2 Structural policy measures to improve the workplace

Flexible work practices

The analysis showed a clear need to facilitate women's integration into the workplace, and to increase the flexibility of employment practices within the industry (8.3.3). As such, there was a need to develop flexible working practices, and to move away from the concept of unbroken career cycles. The literature points towards a range of mechanisms helping women to cope in demanding work environments, including personal leave programmes, child care facilities, flexitime, part-time work, job share and tele-commuting (Owen, 1993). The Social Chapter (1989), which the UK has recently signed up to, states that action should be taken to ensure the implementation of the principle of equality between men and women. It also calls for measures to be developed to enable men and women to reconcile their occupational and family obligations. This is highly relevant to the industry given the current working practices which have emerged as preventing the combination of work and

family lives. This may force construction employers to improve such provision in the future.

Although certain professions were seen as offering better opportunities for career breaks, it was generally seen as difficult to take time out of careers. Many women believed that after leaving to have children, they would find it difficult to return, because of a lack of company support. Even organisational policies on maternity leave allowance were not well communicated, with women being wary of asking about their entitlement in case of negative assumptions being made about their work commitment. However, most of the women interviewees felt that there was scope for employers to offer more flexibility in working arrangements, particularly for those working in office based roles where a stable environment and consistency of working hours allowed routine arrangements to be made. Part-time work and job share schemes were seen particularly well suited to quantity surveying, as many informants worked on two projects simultaneously. This led to the possibility of their role being divided amongst two employees, or being redefined as part-time.

Although only two women had children, child care had serious financial implications, particularly for women in relatively junior positions. Many women identified a need for crèche facilities and sympathetic work placements, which may attract women in the future. However, previous studies have shown that the cost of providing such facilities has been used as a reason for not employing women (Wilkinson, 1992c). Moreover, the transient nature of construction work was assumed by many male informants to render such schemes unsuitable for the industry. Despite these concerns, however, successful initiatives have been used in the US, where women *and* men have been able to bring their children to work (Gilbert, 1990). Pilot schemes have even been initiated whereby crèches have been used on large construction sites (Stocker, 1996). These studies have shown that the benefits outweigh the costs of providing such facilities. Hence, the following recommendations were suggested:

- **Develop a career breaks scheme for employees with children;**
- **Set-up focus groups to consider the feasibility of part-time work, job share and child care;**
- **Publicise policies on maternity leave and allowances.**

EO policy and commitment

Before organisations can consider developing work force diversity, they first need a foundation of EO (Opportunity 2000, 1995; Ross and Schneider, 1992). However, most informants were unaware of the content of their employer's EO policy, and as was discussed in 4.3.3, construction companies exhibit minimalist approaches to EO. The CIB (1996) suggested the use of EO audits to establish the level of equality present within construction organisations. These would assess the quality of the policies and the level of implementation within organisations. EO surveys should be used to establish whether women are reaching positions which are commensurate with their ability (Steele, 1989). Many women suggested such initiatives for their own companies.

The women interviewed generally felt that individual project managers should be given the responsibility of monitoring and enforcing their EO policy. It was also suggested that organisations should impose minimum standards of workplace behaviour. Although difficult to enforce, the level of control of line managers at a project level may allow adherence to such policy to be monitored. Several women also suggested that construction companies could join Opportunity 2000. This was seen as an effective way in which employers could demonstrate their commitment to EO and work force diversification. Hence, the following recommendations were suggested to address EO needs:

- **Provide EO training for all senior and middle managers;**
- **Promote wider awareness of the company EO policy;**
- **Review HR strategies for combating potentially discriminatory policies;**
- **Formalise promotional procedures;**
- **Join Opportunity 2000 (nationally accredited scheme to promote the equal participation of women in the work force).**

9.2.3 Training, career support and performance appraisal

The majority of issues emerging from the study were suggested by the informants as having the potential to be addressed through structural mechanisms aimed at supporting the employees' careers, and manipulating organisational culture through HRM initiatives.

Performance appraisal and performance management

There was a general consensus that new PASs were required that: take into account the developmental needs of individual employees; are specific to particular career paths; provide feedback on relative performance; and are audited to ensure fairness in appraisal scores, project allocation and training provision. Suggestions included appraising core competencies that were required for specific career paths and/or hierarchical levels. Most informants believed that an individual development plan was required for each employee.

Devanna *et al* (1994) suggested that the PAS offers the potential to create change in employee attitudes and priorities. This is because they can induce behavioural change through the manipulation of performance goals (Brown, 1995; 2.2.1). If the appraisal system measures traits (i.e. intelligence, communication skills and capacity to cope with change), then the company will be seen to value employees for the personal strengths that they bring to the organisation. Thus, by adapting the PAS to take account of the individual strengths of employees, this may induce a cultural shift so that individual strengths are valued within the organisation. PASs using clear criteria have been shown to help women and minorities to achieve equitable career development in other sectors (Owen, 1993; Hirsh and Jackson, 1993; Arvey *et al*, 1996). Thus, the following recommendations were suggested to improve performance management:

- **Overhaul the performance management and appraisal system to move towards a system promoting the effective application of individual skills and attributes.**
- **Increase verbal feedback on employee performance;**
- **More regular appraisal reviews.**

Training support

Expanding stage informants perceived that organisations expected too much of new entrants, and that they under-valued formal training. It was suggested that spending a short time to integrate new employees into the workplace would lead to them being more productive and facilitate their understanding of team dynamics and their place within them. Job rotation was seen as potentially allowing new graduates to make an informed choice regarding where they worked in the company. It has been shown to have helped retention in other male dominated sectors (Owen, 1993; Anon, 1992).

Most employees had found that formal training support declined with experience. They believed that there should be a continued input from training departments to review their progress, identify shortfalls in their training, and establish suitable internal career opportunities. This would require a more prominent role for HRM departments generally. They also suggested that by having clear development paths, with defined continuing education mechanisms to enhance academic and professional competence, it would provide a training environment more likely to meet their needs. One area of training suggested by several women was time management. Hacker and Kleiner (1993) suggested that women faced with an organisational culture that obstructed their career progression, should focus on time management skills to maximise their work productivity. This may also facilitate the combination of work and family responsibilities.

There was also a belief that both promotional and lateral opportunities should be made available to existing employees before recruiting externally. This was reflected in the confusion over existing succession management policies, where organisational policy required clarification. In terms of implementing improved training provision, several employees suggested adopting national training standards such as Investors In People. This was seen by women as an effective mechanism to monitor their commitment to training. These suggestions are addressed by a number of recommendations listed below (see over):

- **Develop bespoke long term career development and training plans for all employees;**
- **Try to match projects to the developmental needs of employees;**
- **Clarify the position on succession management;**
- **Develop a more prominent role in career management for HR dept;**
- **Increase careers support for employees who have completed their training period;**
- **Develop training agreements/contracts for all staff;**
- **Formalise training provision including on-site training to ensure consistency across the organisation;**
- **Include a period of job rotation in the graduate training scheme;**
- **Join Investors In People (nationally accredited scheme to promote staff development and training);**
- **Free up time to do post-graduate qualifications and work towards professional qualifications;**
- **Initiate training in time management.**

Intra-organisational mobility

Barriers to internal mobility stemmed from senior departmental and divisional managers who refused to release staff. To mitigate these effects, third party control of HRD was suggested. Many informants believed that improvements to inter-divisional mobility were seen as essential if employees were to achieve geographical stability. They advocated flexible internal labour markets, where all employees would have the opportunity to apply for new positions as they arose. However, it was also acknowledged that frequent intra-organisational mobility may be detrimental to the stability of existing projects through a lack of staff consistency. Hence, an optimisation of organisational and personal requirements is required. By moving managers of all levels around the organisation, many women saw this as having the potential to break down ingrained divisional sub-cultures.

Many informants also discussed barriers to them taking up opportunities to work overseas. The majority believed that they would become isolated, and would find it difficult to re-secure a position in the UK on their return. They requested support mechanisms to ensure that UK divisional positions would be available for staff after a pre-specified period. Accordingly, the following recommendations were suggested:

- **Facilitate lateral movement between different divisions;**
- **Endeavour to match projects to individuals geographical preferences;**
- **Encourage staff promotions during long-term projects;**
- **Develop support mechanisms for those working abroad;**
- **Guarantee a suitable position to return to in the UK after working overseas.**

9.2.4 Organisational communication

Employees saw improving formal communication as essential to the long-term retention of staff. Monthly reviews were recommended by several informants, where senior management would explain strategic decisions and employees would be informed of contracts awarded and opportunities arising in other parts of the organisation. At a project level, regular communications meetings between the project management and project teams were suggested in order to relay any relevant information. Several informants also suggested that communication could be facilitated through electronic methods. Email was seen as an effective way to communicate new opportunities within the company. However, improvements to communication were so fundamental that most informants believed that an organisation-wide review was required. Hence, it was recommended to:

- **Review organisational communication at every level within the organisations. A working party should be set up to consider how it could be improved.**

Networking and mentoring

Most of the informants, and particularly those at junior levels, believed that they would benefit from informal careers support from mentors. Mentoring has been credited with offering benefits for those at every career stage, and has been shown to offer the potential to develop and retain junior staff in construction companies (Kram and Bragar, 1992; McNamara *et al*, 1997). They improve the career progression of women by providing a more personal form of development support (Coatham and Hale, 1994; Arnold and Davidson, 1990), and importantly, help to develop an understanding of organisational culture (McCall *et al*, 1988). Mentoring schemes are now common practice in the US (NAS, 1994), and have been shown to be effective in the UK surveying profession (Watson *et al*, 1993; Mulhearn, 1992).

When asked directly, the majority of women stated that they would prefer a same-sex mentor. However, the lack of senior women employees would lead same-sex schemes to overload women willing to participate. Cross-gender mentoring is likely to be limited in its effectiveness since male mentors are unlikely to have empathy with the particular

problems that women face (Kram and Hall, 1996). Several women offered a potential solution, to change mentors as the employee moved through their career stages. This policy could be maintained until such a time as enough women were available to act as mentors without them becoming overloaded. All of the senior women participants indicated that they would be happy to take part in such a scheme, provided that the time spent did not detract from their other work commitments. An alternative, would be to appoint external mentors from outside of the organisations. Contacts through professional bodies would provide the opportunity for individuals to find mentors from different companies (Schirmer, 1994: 35). In addition, formal networking arrangements were suggested to allow women professionals to exchange experiences, and discuss how they had overcome barriers to their career development. These would alert women to vacancies in other companies, and help to remove feelings of isolation. To address these needs, the following recommendations were suggested:

- **Develop a mentoring scheme for trainees and junior managers;**
- **Develop networking programmes to facilitate informal communication.**

9.2.5 Management approaches and work systems

Several informants suggested that middle management should undertake training on how to motivate their staff, and the importance of retaining managers. Following a recent take-over, Co.4 had initiated training for all management in motivational and management skills. This initiative was perceived as having a positive effect on workplace relationships. There was also believed to be a need to review the types of contracts with which women professionals tend to be involved. This study has shown that women generally preferred to work under contemporary work arrangements, and if positive benefits became apparent, then they should be exploited by allowing women greater access to these projects. Examples may include contemporary management oriented procurement systems, which many women expressed a preference for working under. Accordingly, the following recommendations were suggested (see over):

- **Promote informal encouragement, praise and feedback through line management;**
- **Examine current work practices to establish their effect on women's careers.**

9.3 Benchmarking Exercise

The benchmarking exercise involved the organisation of two 'presentation days', in which representatives from the construction industry and other industrial sectors and professions were invited to present successful initiatives aimed at improving women's careers to an invited audience. This was organised as part of the author's collaborative work with CIB Working Group 8, as part of the Latham review of the industry. Traditionally male-dominated sectors presented initiatives that they had taken to assist women's career development and retain them to their chosen occupations. All were in some way related to the construction industry or were chosen because they had seen a large increase in female representation in recent years. These data were complemented by an EO best practice survey (see 4.3.3).

9.3.1 Equal opportunities best practice from the construction industry

An investigation into the efforts of construction companies to improve women's careers yielded very few successful initiatives. In 4.3.3, an EO survey showed that most construction employers had only reached stage one EO, where they had a basic policy, but no real implementation mechanism or monitoring procedure. Furthermore, only two construction companies had joined Opportunity 2000, and so there was little to suggest that construction companies were at the forefront of good EO practice. Of the few successful initiatives identified, Balfour Beatty (one of the two Opportunity 2000 members) had initiated a policy to allow teams working within Junction 25 to impose their own overtime schedules in order that they could manage their work and private lives more effectively. They had also provided good quality accommodation and site facilities for their staff which resulted in good working relations and better project performance. They had found such HR allocation, which was sympathetic to individual needs, as leading to tangible productivity benefits.

In 1995 the CIOB commissioned a report from the Institute of Employment Studies aimed at improving prospects for professional women in building (Court and Moralee, 1995). The report considered women's experiences in the industry, and provided recommendations aimed at addressing their retention to the building sector. Some of their recommendations could be supported by individual organisations, notably: the provision of local networks for women in building and mentoring for professional training advice; inter-personal skills training to help women cope with the attitudes of their male peers; EO policies which invoke sanctions against those who refuse to accept women's equal participation; and the provision of child care by employers. Although these recommendations provide a useful starting point, they fail to take into account the structural barriers which this study has found to affect women's careers. They focus upon developing support networks to equip women with the requisite skills to deal with the attitudes they confront. Accordingly, they do not consider the interplay of behavioural actions by men which impinge upon women's dynamics.

9.3.2 Equal opportunities best practice from other industries and professions

Other traditionally male-dominated sectors had developed and refined many successful initiatives to facilitate women's careers. In terms of increasing the number of women managers and professionals within construction companies, Hirsch and Jackson (1993) contended that women are over concentrated in administrative and clerical positions, and they suggested that managerial potential should be sought from these clerical grades and channelled into management positions. Such an initiative had been adopted by the BBC, where existing female staff in secretarial and clerical positions were encouraged to move into technical areas such as camera operation and sound recording. Women in clerical and administrative positions who already have experience of working for construction companies offer a useful source of new management considering skills shortages.

In terms of supporting women already working in the industry, child-care provision appears fundamental if women are to combine their work and family lives. The Glaxo organisation, for example, have found that their child-care policy had been entirely funded

through the savings accrued from the retention of staff. Networking arrangements are also widely acknowledged as supporting women in male dominated sectors. The accountancy profession had set up a professional group to co-ordinate the female members of the professional bodies affiliated to the profession. They provided a single point of contact for all women to share experiences and information, and provide advice for women and researchers. Furthermore, by acting as public speakers, senior women have raised the profile of the profession by putting over their positive experiences of working within enlightened employment practices. The law society has an Association of Women Solicitors, who run social events and meetings aimed at informing women of relevant legislation and professional matters affecting women in the profession. They actively promote networking through these events and through a quarterly magazine, organise courses and lectures to meet and exchange views, and provide 'refresher' courses for women returning to the profession after career breaks. Similar provision in the construction industry may act as a useful national support network, where women working away from home could communicate with fellow female professionals.

The fire service offers an interesting comparative occupational sector, as it has traditionally been almost as male dominated as construction. Bucke (1994) carried out research for the Home Office, and found that the commitment to EO across different brigades was highly variable, and the hostility that women faced had led to severe demoralisation. The fire service has other similarities with the construction industry, in that it operates under fairly autonomous brigades and stations in common with the divisions and projects found in construction companies. To address problems of discrimination, over half of the brigades in the study had developed their own EO policy and implementation framework, and had devolved responsibility for its implementation to managers of individual stations. This had led to a marked improvement in both retention and the career development of women in the service. A similar scheme could be implemented in construction, with such responsibility being devolved to project managers. These findings suggest that the following recommendations may also be appropriate (see over):

- Develop schemes to encourage more women employed by construction companies to move into technical or managerial functions;
- Devolve EO responsibilities to a workplace level, with associated targets for achievement for individual line managers;
- Specialist training in the development of inter-personal skills and self-assertiveness training for women;
- Initiate cost benefit analyses of providing structural support facilities in the workplace, particularly in terms of the benefits of improved retention and lower recruitment costs.

9.4 Summary of the Recommendations

Table 9.1 summarises the key phenomena inductively developed as GTs in Chapter 8, and how they are addressed by the recommendations discussed above.

Chapter Location of GT	GT Phenomena contributing to gender differentiated career progression	Recommendation to address phenomena
8.3.1	Young women become disillusioned with their career choice more rapidly than men, and seek to leave the industry early on in their development.	Develop recruitment procedures aimed at ensuring that graduate entrants have a realistic knowledge of the industry. Initiate job rotation and early intensive training to promote compatibility of career route with personal needs and abilities.
8.3.2	Women find the process of entering organisations more difficult than men, both in terms of their initial entry to employment, and in their subsequent attempts to move between different organisations.	Train staff in interviewing techniques and formalise the recruitment process. Initiate training schemes for women currently working in clerical and secretarial positions to move into professional roles. Release staff from work commitments to allow time for further study. Join Opportunity 2000.
8.3.3	Gender configurations within the organisations were attributable to women actively avoiding senior management positions in order to remain in operational positions within project teams, and to organisations allocating women to office based support positions.	Equal opportunities training and promoting awareness of EO policy. Formalise promotional policy. Review HR policy for discriminatory processes. Join IIP scheme. Review PAS to promote individual skills and attributes. Initiate training agreements. Initiate training in self-assertiveness. Promote effective management styles to encourage women's participation.
8.3.4	Women found developing their organisational careers within operating frameworks which favoured male career patterns and needs problematic. The informality in structural systems maintained women's career under-achievement.	Develop flexible working practices. Formalise HRM and promotion procedures. Support women's careers from central HRM departments. Initiate time management courses. Review staff allocation procedures. Develop networking and mentoring programmes.
8.3.5	Construction organisations militate against women's equal participation and achievement through the maintenance of a workplace environment which excludes and undermines women through the synergy of exclusionary 'smart macho' and discriminatory 'locker room' cultures.	Overhaul performance appraisal system to promote behavioural change within the organisations. Review organisational communication. Develop networking and mentoring programmes. Examine current work practices to establish the effect on women's careers. Develop formal networking schemes. Develop comprehensive EO policies with implementation and enforcement mechanisms.

8.3.6	Women perceived that they had to make a choice between a career or a family oriented lifestyle. Men were more likely to successfully combine their work and family lives.	Development of flexible working practices. Make efforts to match individual geographical preferences to available work. Publicise maternity leave allowances. Initiate training in time management.
8.1.7	Women's career strategies centred on inter-organisational mobility within a multi-organisation framework. Men's were more likely to be focused on proactive intra-organisational career development within their existing organisation.	Career planning and optimisation of organisational opportunities with staff development needs. Match projects to the developmental needs of employees. Facilitate lateral movement between divisions. Intensify HRM support for women.
8.1.8	Women embraced the structural organisational and industry-wide change which had affected the industry since the recession. Men opposed such changes and sought to maintain existing hierarchies and work practices.	Changes to performance appraisal system. Formalise company EO policy and general HR policy. Training agreements for all staff to give agreed levels of support. Facilitate internal mobility. Increase training input by HR department and general career support beyond a graduate level. Improve formal communication mechanisms.

Table 9.1: Summary of practical initiatives addressing the theoretical barriers to women's careers

9.5 Appraisal of the Recommendations

Due to limitations in time and resources, a postal questionnaire survey was used to collect feedback on the potential effectiveness of the recommendations. A research instrument was developed and sent to the original informants, the results of which were analysed using SPSS.

9.5.1 Development of the research instrument

The aim of the questionnaire was to establish the relative effectiveness of each of the recommendations according to men and women. The initiatives had been developed from the informants' own recommendations, and so were likely to be accepted as being effective in addressing the issues emerging from the study. Accordingly, an ordinal or ranking scale was used, where objects from different categories stand in some kind of relationship to each other (Siegal & Castellan, 1988). The method of attitudinal assessment selected was a Likert scale, which is most appropriate when a rough ordering of respondent attitudes is required (Oppenheim, 1992).

The survey used a five point Likert scale with the higher number representing a more favourable opinion towards the recommendations put forward (see Appendix F-1).

According to the HRM literature, initiatives aimed at the management of culture require integrated packages of initiatives (see Brown, 1995; Williams *et al.*, 1993). Accordingly, the recommendations were presented as an integrated framework, with closely related or complimentary initiatives being grouped together. Informants were asked to assess the likely effectiveness of each package as a whole, or of each individual element within them. A high response rate was required to avoid bias occurring by only those favouring the proposals responding. A response below 20-30% would have been of little value (see Moser & Kalton, 1977: 268). Accordingly, the length of questions was minimised, but an optional sheet with a fuller description of the rationale behind the recommendations provided for referral by respondents requiring clarification.

9.5.2 Findings

A total response rate of 74% ($n=37$) was achieved from the 50 original Co.1 respondents. Of those returned, 57% ($n=21$) were from women and 43% ($n=16$) were from men. This indicated a higher level of interest in the recommendations from women. Furthermore, the majority of responses were from the younger informants. However, this group were the most significant in terms of developing retention strategies. The boundary between large and small statistics is a sample of 32 (Fellows and Liu, 1997). Thus, the number of responses was adequate to subject the data to basic statistical analytical techniques. Accordingly, the responses were numerically coded and inputted into the Statistical Package for the Social Sciences (SPSS). Throughout the analysis, comparisons were made between men's and women's responses.

Modal values

An initial overview of the findings was taken by calculating the average scores attributed to each variable by the respondents. The validity of using mean scores in this context was dubious, as it would have given fractions of the attitudinal scale, and so the modal values were calculated (See Appendix F-2(a)). Unsurprisingly, considering that the majority of the recommendations were generated in response to informant suggestions, Table F-2(a) shows that the majority of the recommendations were highly rated by the respondents. None of the recommendations received a modal value less than 3, with most scoring 4 or

the maximum 5. This indicates that the recommendations were seen as being potentially effective in promoting better career progression and retention within the organisation.

Several recommendations were ranked more favourably than others. These were: 1 (the development of career development programmes); 3 (taking into account employees' geographical preferences); 7 (improved feedback and enhanced performance appraisal mechanisms); 11 (equal opportunities legislation and initiatives) and 12 (flexible working initiatives). Furthermore, several constituent parts of some of the packages of recommendations were ranked more highly than others: 11 (where EO initiatives were favoured over formalising promotional procedures); and 16 (where IIP was favoured over Opportunity 2000 membership). Unsurprisingly, women rated the latter aspects of these recommendations significantly more favourably than men, as these recommendations were aimed at equalising opportunities, and facilitating the combination of work and family lives. Men were more positive about recommendation 10 (establishing the knowledge of the industry of those wishing to enter the industry). This suggests that they wished to exclude those without a realistic impression of the industry.

Total attitudinal values

A fundamental weakness of using modal values is that the analysis excludes respondents with different attitudes to those of the majority of the sample. With such a small sample size, this significantly affects the reliability of the analysis. Hence, a method was required which could take into account the attitudes and opinions of the entire sample group in assessing the *relative* attitudes towards each recommendation. According to Oppenheim (1992: 197), the best way to analyse attitudinal scores in a Likert survey is to calculate the total score for each issue, and then the relationship between the response for any particular variable and the total score for the group under investigation. The total score from each recommendation for men and women was calculated by multiplying the number of respondents eliciting a particular response by the numerical scores given. Men's and women's opinions were then rank-ordered to give their relative opinions of the effectiveness of each variable. For example, if from 20 respondents, 9 gave 5 for recommendation A, 3 gave 4, 2 gave 3, none gave 2 and 6 gave 1, the total score for that recommendation would be 69 (i.e. $(9 \times 5) + (3 \times 4) + (2 \times 3) + (0 \times 2) + (6 \times 1) = 69$). Thus, the

maximum possible score would be the entire sample size $(20) \times 5 = 80$, and the minimum would be the entire sample size $(20) \times 1 = 20$. In this case, the highest possible score was 185 (37×5) , and the lowest 37 (37×1) . The highest score for women was 105 (lowest = 21), and for men was 80 (lowest = 16).

Table F-2(b) in Appendix F-2 shows the total scores for each variable (sub-recommendation), rank ordered as an overall score for the entire sample. Total scores over 160 indicated a particularly significant retention potential for men and women. Thus, the most highly regarded recommendations were 3A (matching projects to geographical preferences), 1A/1B (developing bespoke long-term career development and training plans for all employees and attempting to match projects to individual developmental needs); and 12A (developing a career break scheme for employees with children). Recommendation 12 (developing flexible working arrangements) was also ranked surprisingly highly by men, who also felt that the industry would benefit from the opportunity of career breaks.

Overall, the recommendations judged to be least beneficial were 10A (presenting a realistic description of working life in construction in graduate marketing literature); 9A (developing a more prominent role in career management for HR dept); and 6A (overhauling the performance management and appraisal system to move towards a system promoting the effective application of individual skills and attributes). The relatively low rank order position of 6A was surprising considering the comments on the weaknesses of the existing system. In contrast to the modal value for 10A, a low score was given by men and women. However, this was to be expected, as this initiative was meant to benefit future entrants to the organisation by ensuring that they had a good understanding of the realities of working in the industry. Of greater significance was the relative lack of support for developing a more prominent role for HR departments. This may indicate that organisational change was not seen as being generated through the HRM department.

Correlation of men's and women's scores

By comparing rank-orders, any variance in opinion as to the likely effectiveness of the initiatives proposed can be established. The variance between men's and women's attitudes can be shown graphically by placing them adjacent to each other and cross

matching the variables with lines. The steeper the incline of each variable link-line, the greater the differentiation in the rank order placing between men and women (see Figure F-2(c) in Appendix F). Figure F-2(c) ranks the recommendations according to the total score, and the relative rank order position of men's responses is subtracted from the women's responses to give the total variance value between the two sample groups. The greater the number of ranked places between men's and women's opinions, the greater the divergence of opinion on that particular recommendation.

Figure F-2(c) shows a rank order dichotomy between men and women in terms of their assessment of the likely effectiveness of the recommendations. Most of the variables indicate over ten places difference in their ranked positions. The most notable differences occurred for the initiatives which were designed to promote a cultural change within the organisations, which received a lower ranking by men than women. Similarly, those initiatives aimed at creating parity of opportunity through formalising procedures were ranked more highly by women. For example, 10B which suggested that applicants entering the company should be thoroughly tested to establish if they had a realistic perception of the industry, was ranked highly by male informants. This infers that they wished entrants to be scrutinised before being allowed to enter construction companies. However, 11D (formalising promotional procedures) was ranked more favourably by women. Whilst these findings appear paradoxical, this may suggest that men wish to maintain informal recruitment for those with a cultural insight into the sector. Considering the findings from 8.3.1, this is likely to disadvantage women entrants.

Gender differences were also apparent for 15B, which suggested creating opportunities for those returning from working overseas. Men were more concerned by such issues, which maybe because many planned to work overseas in the future. Furthermore, for Co.1 respondents, this may have been in response to the company directive requiring employees to have international experience to reach a senior management position in the future (see 7.6.2). Women ranked this as one of the least effective recommendations, which may indicate that working overseas was not a high priority for them, or that they dismissed the possibilities because of the difficulties that such a position would present.

A high rank score and degree of similarity between men and women existed for recommendations 3A (matching staff to their geographical preferences) and 1B (matching projects to the developmental needs of staff). These were two of the most widely discussed issues during the interviews, and should be regarded as a priority by the organisations taking part in this study. The high priority attributed to these recommendations re-emphasises the ad-hoc way in which employee resourcing was carried out.

Statistical confirmation of findings

Whilst the rank order chart (Fig F-2(c)) provides a useful visual comparison of the opinions of the two respondent groups, it does not statistically confirm the strength of correlation between the two rank orders, as it does not use the actual response figures calculated from the Likert survey. However, ordinal scaling allows hypotheses to be tested using ranking or ordered statistics. The coefficient of correlation between the ranks is a measure of the association between two variables determined by the rank observation of the variables. This can be tested statistically by applying Spearman's Rho and Kendal's Tau. A low coefficient under these tests would indicate little correlation between men's and women's ranking of the recommendations. In calculating rank orders, the higher number of female respondents made the Likert scores meaningless. Hence, the mean scores for each variable were taken to allow the rank order correlation calculation to be made. The mean values for each recommendation are shown in Table F-2(d) in Appendix F-2. They confirm the modal values, in that every recommendation scored above 3 (3 indicating indifference on the Likert attitude scale).

Using SPSS, the common rank order correlation coefficients were calculated (Spearman's Rho and Kendal's Tau), at the 95% significance level. These non-parametric tests make few assumptions about the data, and do not require interval or ratio data (Bryman and Cramer, 1996; Siegal and Castellan, 1988; Leach, 1979). Using Spearman's correlation coefficient, Rho is the function of the discrepancy between the rankings given by different groups, the rank discrepancy for any variable being the difference between the measurements expressed in rank order form (Newson and Matthews, 1971). For the type of data collected, this gives a more reliable result. The Kendall rank-order correlation coefficient measures the association between two variables when they are both in ordinal measurement. In addition, a t-test was carried out to establish consistency between men's

and women's rank ordered mean scores. This indicates whether there is consistency between the two lists. The significance needs to be at $\rho < 0.05$ to be a significant correlation (at the 95% significance level). The resulting rank order coefficient gives a value from -1 to +1, the more significant the correlation the nearer to the -1 or +1 values (-1 indicating a negative correlation).

The results are shown in Table 9.2. All three tests gave low values at the 95% significance level, indicating no significant correlation between the two rank orders. Furthermore, the t-test indicated little correlation between the two sets of mean scores. Thus, it can be safely concluded, that there is little correlation between the men's and women's opinions on the rank order of effectiveness of the recommendations. This implies that gender specific initiatives may be appropriate to improving women's careers and retention.

Test	Value	Interpretation
Kendal's Tau	0.149726134	No significant correlation
Spearman's Rho	0.06	No significant correlation
t-test	1.14327×10^{-17}	No consistency between men and women's attitudes to recommendations.

Table 9.2: Summary of statistical tests carried out at the 95% significance level

9.5.3 Final recommendations

The findings from the questionnaire contradict some of the assumptions surrounding the effectiveness of initiatives aimed at improving women's participation in construction at professional and managerial levels, as in terms of good employment practices, men and women had different opinions on the relative effectiveness of initiatives to improve their careers. This has potential implications for HRM policy, because any initiative taken to promote retention of women would be better focused on women's needs. The findings of the survey confirm those from the qualitative analysis, in that men favoured the recommendations which maintained the existing workplace environment. The most popular recommendations for men were those which enabled them to improve their chances of promotion and rapid career development. These included working abroad, gaining further academic qualifications and having further training. Conversely, women were concerned with developing an equitable and flexible work environment. Whilst the career enhancing aspects were important, it was noticeable that the highly ranked

recommendations were those which offered the opportunity to combine their work and family lives. This indicated that women's needs for flexible working and equal opportunities remained more acute than men's. Table 9.3 lists the recommendations most likely to produce a tangible effect on women's careers and retention, whilst also being mutually agreeable to both men and women.

Number on Questionnaire	Recommendation
1 a, b	Develop bespoke long term career development and training plans for graduate employees. Match projects to the developmental needs of the individual.
2	Facilitate lateral staff transfers between different operating divisions.
3	Endeavour to match geographical preferences of individuals with the work available.
11 a, b	Promote wider awareness of the EO policy; institute training in EO for senior management; review company strategy and policies for possible discriminatory practices; and formalise recruitment and promotion procedures.
12 a, b, c, d	Develop flexible working practices to facilitate the combination of work and family lives (career break schemes; part-time work and job share; time management training; publicising all such policies).

Table 9.3 : Final recommendations

9.6 Implementation Strategy

A potential barrier to the implementation of the recommendations is the nature of HRM decisions that have to be made in the industry. Projects tend to be short-term, and staffing decisions have to be taken quickly. All construction firms must plan their management strategies carefully, as each new project will involve assembling a new site team made up from the transfer of existing staff and new staff recruited to the organisation. Hence, an approach is required, which takes into account individual needs in the context of organisational opportunities, and combines personal development strategies with organisational policy aimed at optimising human resources. By adopting such an approach, the specific needs of women can be incorporated into HRM policy which should be of benefit to all employees' careers.

9.6.1 An integrated approach to IIRD

The findings have suggested that career development programmes are required, which respond to individual and organisational needs and which interface with HRM activities. Any approach must also take into account the physical and social isolation of women.

These needs could be met through the development of bespoke career development plans, which would take on board individual needs, and match them with organisational opportunities. Supporting this implementation plan should be a comprehensive strategy of training courses, structural support facilities, mentoring, networking, and cultural change initiatives. Even ensuring geographical stability for employees could be achieved, as there were informants working in regional companies who would have preferred the opportunity to work around the country and vice-versa (8.3.7). Thus, an integrated approach to HRD is required, which optimises organisational and individual needs. This concept forms the basis of the implementation model.

9.6.2 The implementation model

The first three recommendations can be linked together through an integrated PAS and career planning system, which would act as a vehicle for their implementation. Questions should be incorporated into the PAS to establish the career priorities of employees. These would be updated after each review so that it presents an historical record of their career history and priorities for future reference. It should include priorities in terms of geographical location and work type. The employee would enter a contract with their employer, where a training agreement would be formed stating the employee's development priorities in their own terms. As a feedback mechanism, the terms of the agreement (the priorities of the individual) would be returned in a form which demonstrated that their needs were being reconciled against available opportunities within the organisation. Employees would retain a copy of all information held on file which had an influence on their project allocation. Where matches that satisfy all criteria could not be found, this should be explained to the employee, and reassurances given that opportunities will be provided at the time of their next placement. Individuals would inform their employer should any of their personal priorities change in between appraisal reviews.

The appraisal process would require independent advice from the training department and an appointed mentor. An independent arbiter should sit in on appraisal sessions to ensure the fairness of the process. This individual would promote consistency in appraisals and assist in relating future development objectives to the individual's career development

plan. Independent careers advice could be provided by mentors, external to the appraisal process, who would provide informal support in setting development goals and advising on potential opportunities within the company. The HRM department would co-ordinate the scheme, and control the inevitable increased lateral mobility of staff between divisions. A summary of the scheme's operation is shown in Figure 9.1.

Ideally, such a system would be incorporated within a computer based HRM planning optimisation model. This would balance a set of weighted criteria (the value of each of which would be specified by the organisation and the individual employee). An employee information database should be set up to include information on past project performance, performance appraisal scores, geographical and work type preferences, current project responsibilities, performance review date and the likely end date of the current project. The system would automatically recommend individual employees based on project needs, employee requests and their current project status (see 10.4.2).

In addition to this framework, a well formulated and widely disseminated EO policy, demonstrating high level commitment and formal grievance procedures, should also be implemented within all of the organisations. This would form a cornerstone of the proposed implementation model. As part of this, a working group should be set up within the companies comprising men and women, to discuss how modern flexible working practices could be implemented in the organisation to enable the effective combination of work and family roles. In particular, this group should consider: flexible working hours; working from home (tele-working); part-time work and job share schemes (particularly for those working on a number of smaller projects); career breaks (and schemes for re-integrating women into the workplace); policy on maternity and paternity leave; and child care facilities. Finally, to ensure continued support for the system, membership of the IIP and Opportunity 2000 initiatives should be sought. This would demonstrate a commitment by the organisation, and ensure compliance to nationally accredited standards.

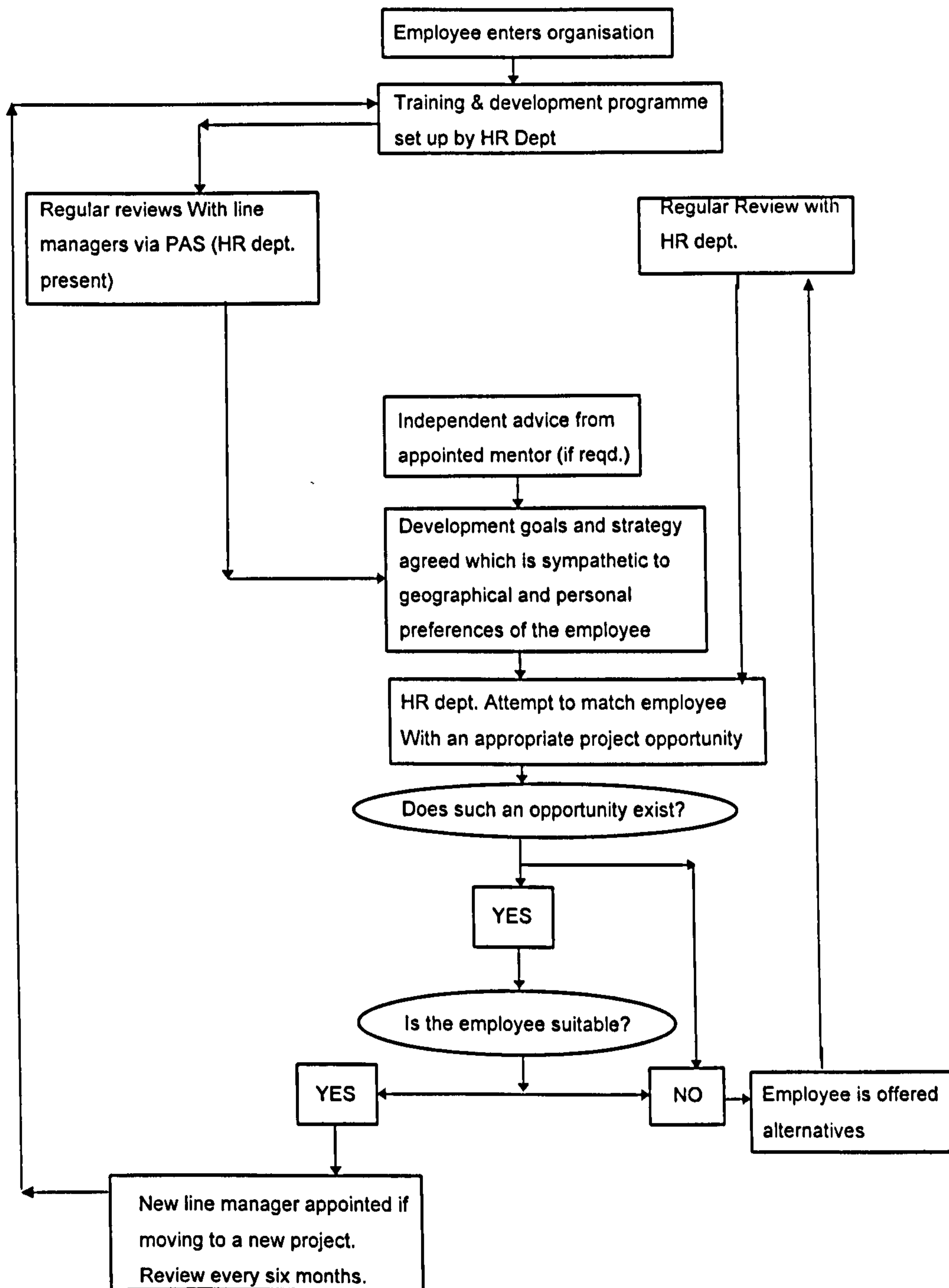


Fig 9.1: Diagrammatic representation of the proposed implementation framework

9.6.3 Potential barriers to the implementation of the framework

Barriers to the success of the proposed implementation framework were established through informal discussions with representatives of the companies taking part in the study. Representatives from HRM departments were asked whether they felt each

initiative was potentially effective, and as to whether they were capable of being implemented. Generally, the employers were supportive of the recommendations. They perceived few structural barriers to their implementation, as long as the workload requirements of the organisation were taken into account through the placing of staff with appropriate skills and abilities. They agreed that the control and co-ordination of any career development plan must be managed from a company-wide perspective, and not on a divisional basis. This would restrict development opportunities and promote conflicts of interests when allocating staff placements.

Potential barriers stemmed from the cultural change that the initiatives encouraged. HR managers were concerned that senior management may not be enthusiastic about changing existing systems which they perceived to have been effective over many years. They would be unlikely to be supportive of initiatives that supported a minority group within the organisations, and would resent the increased intra-organisational mobility which would be inherent under such a scheme. Another barrier was the lack of defined and integrated career paths and job titles in the organisations. This was because competency standards within the PAS would be required which were linked to salary and promotional objectives. It was suggested that the CISC (1994) standards may offer a potential solution to this problem.

Another concern was that by providing employees with enhanced training and development opportunities, they would become more attractive to other employers. However, although a degree of turnover would be endemic within such a scheme, the retention benefits and reduction in wastage to the industry as a whole should outweigh any increase in staff turnover. These advantages, as well as the general benefits that can be derived through diversity, must be explained to senior management, as an acceptance by this group will ultimately lead to a general acceptance within the organisations.

9.7 Summary

The general level of support for the recommendations from the informants was encouraging in terms of their likely acceptance. However, the dichotomy of opinion between men and women in terms of the rank ordering of the recommendations was significant, as men appeared to value policies which maintained the current contextual framework under which careers can be developed. Conversely, women's priorities were to create a real change in terms of workplace culture, and in providing structural conditions that would facilitate their equal participation in the industry. Thus, attitudes towards women's employment are not likely to change significantly until cultural change initiatives have taken effect. The recommendations will challenge some of the established practices and beliefs ingrained within construction companies, and may face resistance on this basis. However, a soft HRM approach which focuses on individual needs, provides the potential to improve women's careers without excluding or alienating male employees.

The fifth proposition was that "*Opportunities for women in construction companies can be improved through HR policies which provide a more equitable working environment for women.*" In this chapter, recommendations have been developed which have the potential to address barriers to women's careers which aim to promote a equitable workplace environment, which will eventually lead to attitudinal change. They address the core issues affecting women's retention, and the determinants of women's under-achievement, partially by being developed in response to informant recommendations. As such, they represent solutions based on first-hand experiences, and not in response to organisational agendas. This, along with the success of the initiatives in other sectors, suggests that this proposition could be supported. However, without comprehensive field testing over a significant period of time, it cannot be certain whether they will induce the cultural change necessary to improve women's careers and retention in the industry.

CHAPTER 10: CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER RESEARCH

The aim of this research was to establish methods of improving the retention of women construction professionals working for large construction companies. This was to be achieved by establishing the determinants of the disparity between men's and women's organisational careers, and then developing initiatives to mitigate these factors. In pursuance of this aim, a GT was formulated to explain the causal factors leading to the disparity in the career progression dynamics of men and women. This chapter now assesses the extent to which the original objectives and propositions of the research have been met, discusses the limitations of the study, and offers guidance as to the direction that future research should take in order to develop the area further.

10.1 Conclusions of the Research

The research has shown that men and women experience disparate career progression. Women progress at slower rates to men, and confront a greater number of obstacles to their development. This contributes to a higher turnover of women managers and professionals within contracting organisations. This disparity between men and women stems from the gender differentiated effect of structural and cultural factors which shape career development, and the interactive strategies of men and women in coping with these constraints and exploiting career opportunities. These actions and interactional processes are enacted within construction organisations, which form arenas for discriminatory behaviour and the eventual exclusion of women to take place. Resentment of women stems from a patriarchal culture which exists within construction companies, in which women are seen as added competition for limited career opportunities. The ingrained structures and cultures of these organisations reinforce the male dominated nature of the industry and restrict the effectiveness of women's strategies in dealing with their career constraints.

The GT developed in Chapter 8 to explain the processes leading to women's under-achievement, comprises four key components as follows:

1. *A competitive sub-culture* has developed within organisations where the recession, top-heavy management structures, continued external recruitment and flattening hierarchies have restricted opportunities for vertical progression;
2. *Structural constraints and cultural values* reinforce a culture where vertical development is emphasised despite the background of restricted opportunities, and lateral development is restricted by operations managers who retain control of the HRM function. Women are viewed by men as competitors to the limited promotional opportunities available;
3. *Discriminatory mechanisms and behaviour support cultural values* by undermining women's careers through a mixture of discriminatory behaviour and the maintenance of a work culture geared towards male career patterns and needs;
4. *Actions taken in response to organisational constraints on careers* then further restrict women's progression, as their forced organisational mobility leads to fewer opportunities for internal succession and lower career motivation. Hence, few reach senior positions who may have acted as role models for future women entrants, whilst others choose to leave the sector. This leads to the further under-achievement *and* under-representation of women in the industry.

10.2 Achievements of the Research

An integral part of a GT study is to remain reflexive throughout data collection and analysis. Accordingly, this section assesses whether the GT and resultant recommendations address the aims, objectives and research propositions. The original aim of the research was to establish the factors that currently lead to women's career under-achievement, in order that their effect can be mitigated through HRM policies which encourage the development of an equitable work environment. In pursuance of this aim,

five objectives were developed, which were addressed through the propositions which acted as a focus for data collection and analysis. The fulfilment of each of these propositions is now addressed in turn.

10.2.1 Proposition one

The first proposition was that “*Obstacles to women’s career progression are more numerous and difficult to overcome than those of men’s.*” This proposition was supported in that women encounter a wider range of structural and cultural factors which adversely affect their careers than men. Barriers to women’s careers began when they entered to organisations. Difficulties stemmed from the informal nature of the recruitment process, and the prejudice of the managers who acted as gate keepers to an all-male industry. As women progressed, their need for geographical stability became more significant, and for those attempting to simultaneously maintain family and working lives, the process became unmanageable. Their positions were further undermined by the actions of men, who used discriminatory behaviour to exclude and marginalise women’s professional contribution.

10.2.2 Proposition two

The second proposition was that “*Men’s and women’s career progression rates and opportunities are differentially determined by the structure of the industry and its organisations.*” This proposition was also supported, as changes to organisational structures, job titles and descriptions had altered the developmental opportunities available to employees, but had a gender differentiated impact on progression rates and dynamics. Moreover, obstructive attitudes had maintained organisational power structures and operational control. This had reduced the impact of what may otherwise have been career enhancing policy for women professionals. The root of many of the emerging structurally defined problems was that responsibility for dealing with HRM had been devolved to line management. They sought to reproduce existing attitudes and behaviours to maintain existing divisional cultures and sub-cultures within the organisations.

10.2.3 Proposition three

The third proposition was that *“Men’s and women’s career progression rates and opportunities are differentially determined by the culture of the industry and its organisations.”* This was also supported in that distinct sub-cultural environments existed throughout the organisations taking part, which were maintained through the structural framework outlined above. These sub-cultures were intolerant of those who deviated from organisational norms, and so women had their professional credibility undermined, and their contribution disparaged. Women’s social exclusion reinforced their workplace marginalisation, as they could not develop the networks of contacts required for successful organisational careers within the industry.

10.2.4 Proposition four

Proposition 4 was that *“The actions of men and women in response to labour market and non-labour market determinants of careers, reproduce gender configurations within construction organisations.”* This proposition was also supported, in that women faced the fundamental choice of whether to confront such barriers, conform to male life-cycle patterns, leave their organisation, or leave the sector. None of these actions had the effect of challenging the attitudes or structures maintaining their under-achievement. Rather, women who remained in the industry were forced to adopt time-consuming strategies merely to prove their commitment and maintain their positions in the industry, whilst men could proactively take advantage of the informal nature of contracting organisations in developing their careers.

10.2.5 Proposition five

The fifth proposition was that *“Opportunities for women in construction companies can be improved through HR policies which provide a more equitable working environment for women.”* This was partially supported by the research, in that whilst there are steps that organisations can take to create a more equitable work environment, it remains unclear as to how effective they are likely to be in the long-term. This is because the research has

shown a demand for a fundamental change in the culture of the industry and its organisations, which may prove difficult to manipulate through structural initiatives. Investigation of this proposition can only be fulfilled through a longitudinal study which monitors the effectiveness of the recommendations in retaining women.

10.2.6 Summary: assessment of the fulfilment of the objectives

Through the investigation of the propositions, the research has met each of the original objectives of the research. Firstly, it has established the extent of women's career achievement in large construction companies in relation to men's. It has shown that women progressed at a slower rate than men, were more likely to work in support positions, and were less likely to reach senior positions. Secondly, it has explored the structural and cultural organisational factors defining career opportunities, and the interaction of the strategies of individuals in dealing with career opportunities and constraints. It has shown that women's careers are affected by a wider range of structural and cultural barriers than men, and that their actions are ineffective in overcoming constraints on their progression. Thirdly, it has identified the specific factors, originating from both within and outside of the labour market, which have led to women's career under-achievement. These comprise a mix of aspects of the industry's work ethos and practices which are incompatible with women's life cycle restraints, and the active subordination of women's contribution through the patriarchal nature of construction organisations and sub-cultures. The investigation of the first three propositions has revealed a gendered workplace which militates against women's equal participation.

The fourth objective was to construct a theory of women's career development in construction organisations, which may act as a basis for further research of women's careers in the future. The GT methodology allowed such a theory to be developed which reflects the complex nature of organisational and occupational career dynamics within the industry. Its provisional verification forms an integral aspect of GT methodology, where the component parts of the theory are grounded within the original data, a process facilitated by the qualitative analysis software used. This theory is capable of being tested across a wide range of construction companies, in order to test its applicability to the

industry as a whole. The final objective, to suggest HRM initiatives to address the factors emerging from the study which have led to women's under-achievement, has also been met through the development of soft HRM strategies to address the barriers identified as impeding women's careers. They have been proven effective in other sectors, and address the specific needs identified by the informants interviewed as part of the study. Their effectiveness could be measured against tangible improvements in the retention of men and women to the industry.

10.3 Contributions of the Research

In addressing the need for an empirical study into the career experiences of women working in construction organisations, this research has made several major contributions which have not been addressed by previous studies. Furthermore, it has brought into question the basis upon which women have been attracted to the industry in the past. These aspects are discussed below.

10.3.1 A contribution to the theoretical understanding of women's careers in male dominated sectors

In Chapter 1, it was explained that internal labour markets exist in larger firms, and those which operate in stable markets. Hence, in construction there appears an interesting paradox, that large firms operate in an unstable market, making the existence of internal labour markets unclear. This research has provided clear evidence that an internal labour market does exist in construction organisations, and has provided an insight into the work experiences of women within it. It has shown the effect that structure, culture and actions have on women's careers in an organisational context, and has directly compared their experiences with those of their male peers. This insight has shown gender differentiated career progression to exist, and certain aspects of the industry's culture and structure as causing it. The key output of the research, the GT of the interaction of key issues emerging from the study, can now be used as starting points from which to develop future initiatives to address the factors which have led to women's under achievement and low retention.

Thus, this research has contributed to the investigation of women's under achievement in paid work through organisation level analysis. It has allowed the investigation of the interaction of the actor with their workplace environment, insights into the subjective careers of the informants, and the incorporation of gender and culture as two dimensions of career development. Moreover, by applying ethnographic data collection and analysis methods within a GT framework, the project has also contributed to the current debate concerning the suitability of qualitative methods to construction management research. By utilising an established methodology from the social sciences, and advanced computer aided analytical techniques, it has demonstrated how social and behavioural phenomena can be investigated both extensively and intensively at an organisational level.

10.3.2 An insight into the influences on organisational career progression dynamics

This study has contributed to the understanding of the nature of careers and career development in large contracting companies. Previously, very little has been known of the influences on careers within the industry, or the physical nature of typical progression dynamics. This research has addressed this by analysing both the objective and subjective careers from the informants' frame of reference. This has provided a model of careers and career influences which can be used as a framework for further study in the future.

10.3.3 A need for a re-prioritisation of women in construction research?

This study had brought to light a fundamental question concerning the suitability of the industry for women, and the initiatives used to attract and retain them. The smart macho and locker room cultures appear so intertwined within the fabric of construction organisations, that they are unlikely to change in the short-term. The apparent mismatch between women's initial perceptions of the industry, and the realities of working life within it, leaves doubts as to whether women *should* be attracted to an industry ill-equipped for employing them. This brings into question recent calls for increased participation of women in the industry, which have not been based on empirical evidence that opportunities for women will be equitable once they entered it. Attempts to attract more women to the

sector should be moderated until the structure and culture of the industry and its organisations have been developed to facilitate their employment. Such changes should not be confined to the development of family friendly employment policies, but should focus on the manipulation of existing sub-cultural environments.

10.4 Limitations of the Study and Recommendations for Further Research

It is inevitable that any GT study will raise more questions than it answers. This section establishes the limitations of the research and makes recommendations which may yield useful results, both for academic development of the field and in the practical application of the recommendations, to enhance opportunities for women in the future.

10.4.1 Limitations of the study

Time and resource constraints

The collection of data was a learning process in that the techniques used and research instrument evolved throughout the data collection period. The huge range of complex issues emerging from the interviews meant that there were occasions when there was not time to complete the interviews due to pressures on the informants. Furthermore, due to limitations in resources, the informants interviewed early on in the research could not be returned to for further validation of the findings emerging from later interviews. These may have yielded deeper insights into the issues emerging later in the study. Any future study should address this by returning to the original informants for follow-up interviews.

Informant bias and interview techniques

The subjects discussed in the interviews led some informants to complain about current dissatisfying aspects of their career development at an organisational level. This may have resulted in their responses not providing a balanced impression of the positive aspects of their careers, or an over-emphasis on recent career events. In these cases, the informants had to be guided carefully to ensure that the discussion remained focused on aspects of their careers relevant to the research. This sometimes prevented the conversation from taking its natural course.

Limitations in sample size

The findings and recommendations of this study are based upon careers accounts of a sample of 82 subjects, 50 of which were from the focus organisation. This sample allows only tentative conclusions to be drawn, as it represents only five percent of the professional staff employed by Co.1 at the time of the study. It by no means uncovers all of the contributing factors that affect retention of staff to the organisation, nor does it necessarily reflect the views of every employee within the organisations studied. However, such limitations do not undermine the significance of the findings of the research, or the potential practical HRM implications that the findings could bring to the organisations. The author's position as an independent researcher allowed a degree of objectivity that would not be possible for an employee of the companies. This led to deep and objective insights being gained into aspects of the company's structures and cultures. However, it can also be seen that there is a need to conduct a similar study across other organisations, as the depth of cultural insight gained from Co.1, could not be reproduced within the other companies. This would ensure that the theory will have wider relevance to other construction companies.

10.4.2 Recommendations for further research

It is important that research is continued into women's experiences of working in the construction industry so that an understanding of their careers and opportunities can be gained, and the work environment manipulated to enhance their achievement and improve their retention in the future. This research has led to many potential issues which require further investigation as follows:

The collection of vertical segregation data

There is little point in working towards equal opportunities in the industry if women's progress cannot be monitored. However, there is currently no accurate data on how many professional women work in construction, or of their achievement in relation to their representation. Accordingly, there is a need to develop industry-wide standards for job titles and career development paths to provide a benchmark for data to be regularly

collected against. This would allow the progress and achievement of women to be assessed within organisations, as well as comparisons to be made between different companies. The models developed for this study provide a starting point, but a more comprehensive study is required to generate standards capable of wider recognition within the industry. An alternative may be to examine the problem qualitatively through interviews with personnel managers. The richness of data produced by this approach, would provide insights into how women have progressed in relation to their male peers, and would allow women's progression to be determined for different sectors of the industry.

Structural systems

The effect of organisational structures and procedures should be further assessed as to their impact on women's careers. The power of project managers to develop the roles and careers of their subordinates made an accurate assessment of the effect of micro organisational structures, impossible. This is an important area for further study, as rigid delineation of team roles may negate the beneficial effects of networked structures at an organisational level. Furthermore, the research has indicated that women progress better under particular types of work arrangements. Notably, procurement systems which reduced conflict and promoted co-operation between the parties were cited by women as offering better scope for them to improve their careers. The particular work arrangements under which women are more likely to succeed should be investigated further.

Career dynamics

This study is one of only two to date which have empirically investigated careers and career development within UK contracting organisations. There is a need to establish typical development patterns across a wide variety of employers and career paths to establish the effect of socio-economic factors on career development. Specifically, a similar study to this is required which should be undertaken at a time of high economic output so that the influence of the economy can be understood. This should be assessed over a wide range of career paths so that the professions most easily combined with other life-cycle responsibilities can be identified.

Strategic HRM developments

The research has suggested certain HRM improvements as needing to be initiated if women's careers and retention are to be improved. The development of a comprehensive human resource planning and optimisation system is beyond the scope of this research. However, a system is required which would match information held on staff (such as competency in technical/managerial areas, experience, qualifications, developmental needs and current project status), to new projects secured by the organisation. It may be possible to integrate such a system into the HRM planning software already used by construction organisations. As part of this system, the development of PASs for particular roles and positions which value the individual skills and abilities are required, rather than assessment of general competencies and values which maintain current work cultures. The practical application of electronic methods should also be investigated to improve organisational communication, as this emerged as a significant determinant of women's under-achievement.

Cost/benefit analyses

Research should be initiated to establish the likely benefits of the recommendations to construction companies, as part of the development of a strengthened business case for women's future employment within the industry. This research should establish the cost of implementing and maintaining the proposed HRM framework and the benefits in terms of improved retention and staff utilisation.

Cultural investigation

Further understanding of the industry's culture could be gained through longitudinal studies which would provide deep insights into women's careers. Non-participatory observation of women's workplace interactions may provide the level of insight required to gain an understanding of how women cope with their day-to-day experiences. This investigation should include other under-represented groups in addition to women. Ethnic minorities are also likely to increase their representation in the industry in the future, and so issues surrounding their employment should also be addressed.

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APPENDIX A

Interview schedule

The interview schedule below represents the final qualitative instrument developed from the emerging finds of the study. It was used as a guide to prompt questions from the informants on topics as they arose, but the order and content is in no way indicative of the way in which the interviews were structured. Each was developed according to the individual informant's responses. The instrument grew as salient issues emerged from the pre-analysis. The version below represents the final instrument which was used for the last ten interviews.

BASE DATA

Sex
Age
Experience
Profession & current position
Group company
Qualifications
Current work type and value
Work location Site/head office/ regional office
Marital/personal status
Children

Ambition:

Perception of ambition against peers' (1 - 5)

Ability:

Perception of ability against peers' (1 - 5)

CAREER PLOT

Sketch a representation of your career to date, noting the major determinants of your progression.

Talk me through your career so far, explaining the determinants of each incident defining your career pattern, and the resulting physical characteristics of your progression.

ENTRY TO THE INDUSTRY AND THE WORK ITSELF

Influences on choosing a career in construction:

School and childhood experiences that influenced a career in construction
Careers advisors influences on choosing careers

Parental influences on career choice

Personal perceptions of the industry:

Opinions on the image and status of industry and professions before and after joining

Construction education:

Built environment educational experiences

Lecturer/peer attitudes

Industrial experience - effect on career choice

Company recruitment policy:

Opinions on recruitment strategies of your employer - how does this compare to other employers

The work:

What is it motivates you about your work

Intrinsically satisfying aspects (teamwork, responsibility and challenge, autonomy and responsibility)

Extrinsic factors (remuneration, job title/status, recognition)

ORGANISATIONAL ISSUES

Communication:

Formal

Informal

Structural working environment within the industry/organisation:

Working conditions and facilities

Structural shape of the organisations (site organisation structures, main structures)

Procurement systems

Management systems

Effect of the industry structure (dynamic, changing economic cycles etc.)

Intra-organisational development

Attitudes towards work and training policy:

Career progression rates and experience gained

(Graduate) training policy

Informants definition of a successful career

Support from personnel staff and line managers

Sufficient experience to move within the organisation

Formal training vs work based learning

Professional Development:

Importance of professional qualifications

Company support

Promotion:

Criteria for gaining (formal (experience etc.) and informal (networking etc.)
Importance of functional role
Opportunities

Salary and remuneration package:

Performance related pay/competence based assessment schemes
Comparison to peers and other companies
Overall remuneration package (health care, car, holiday entitlement)

Working conditions:

Physical environment - office, equipment (clothing, computers etc.), toilets etc.

Geographical location / hours of work:

Working overseas
Regional or national division
Long hours
Attitudes towards office / site based work

Restructuring of organisation:

Perceived opportunities under new structures
Companies style of work

Getting to the top:

Benefit from experiences in other companies
Contacts with clients
Old boys network

The organisation person:

What characterises the typical organisation person

Cultural working environment:

Colleague attitudes
Day to day interactions
Differences in attitudes between superiors, peers and subordinates

Discrimination:

Overt and covert discrimination
Glass ceiling
Unequal pay

EXTERNAL FACTORS

Work/family conflict:

Effect of life-cycle restraints affect career progression
Division of household responsibilities in your home
Return to work after children
Prioritisation of work and family commitments

Out of work socialisation:

Activities away from work
Social life with work colleagues

Personal Characteristics to be successful - personal coping strategies:

What is needed for success construction
What is needed in this company as distinct from others
Positive personality characteristics
Interpersonal abilities

THE FUTURE**Future with employer:**

Can you see yourself with you company in 10 years time
Will you remain in contracting
What can the company to retain staff such as yourself
Are you using the company as a means to an end
What do you see as being important to developing your career in your company or the industry generally
What experience do you need, breadth or create yourself a niche position

Improving career development:

What can you actively do to improve your own career
What have been the three strongest positive and negative determinants of your career
How do you see your career developing in the future
How do you plan to balance the responsibilities of home and family
Would you like more say in the way in which your career is managed

Structural Improvements:

Attitude towards child-care facilities, job share schemes, part-time working, flexible hours, home working whilst on maternity leave, networking arrangements, role model/mentoring programmes

INSTRUCTIONS FOR DIARY PARTICIPANTS

List what you term “gender related events” (GREs), - events which happened as a direct or indirect result of your gender. Note how this affected your actions and/or attitude towards the event. GREs may be positive in nature as well as negative. At the end of each day state what percentage of your time was spent dealing with career issues, conflict, peers, etc. Define the classifications in your own terms, but talk principally about your interactions with people. Note any event which has a serious bearing on the direction of your career or attitude towards it.

APPENDIX B

Summary of key career strategies of the informants

Table B-1 presents the emerging principal career determinants of the sample. For each informant, the determinants for each year and the resulting direction of their career progression has been stated. The data contained within this table can also be seen in graphical and summary form for each pair in Appendix C. The data presented in Table B-1 have been summarised according to the informants' definitions of the main determinants of their careers, which were subsequently grouped under headings by the researcher. Determinants stated for year one, related to the informant's reason for entering the industry.

Key:

The dark shaded areas account for the years that the informants worked for their present employer. The position of the informants at the time of the interviews is shown at the end of each shaded area. Gradual vertical promotion through bandings can be assumed in all cases unless 'static' is indicated. At the end of each column the number of proactive and reactive major determinants for each informant have been shown.

Commonly cited determinants

Determinants outside of the control of the informant

CTP - Completion of training Period
Div - Divorced due to work pressure
HH - Head hunted by another company
Intra-u - Intra company move un-requested
Mar - Married
Mat - Maternity Leave
Proj - Project related factor
Prom-u - Promotion given un-requested (internal)
Red - Made redundant
Rg - Due to reorganisation of company
Sec - Secondment to another company
Sh - Due to sexual harassment
Sd - Due to sexual discrimination
Stat-u - Static period imposed by employer
Temp - Moved to do temporary work
TO - Company taken over (new employer)
Unemp - Significant period of unemployment
Wl - reduced workload/economic factors

Determinants under the control of the informant

cc - Career change
Hdeg - Completed higher degree
Int-a - Inter company (advert)
Int-c - Inter company (contacts)
Intra-r - Intra company (request)
MI - International transfer
NJBU - Job offer to gain prom
Preg - Pregnant/maternity
Prize - Prize won in company
Prof - Professional quals
Prom-r - Promotion requested
Sec-(dy) - Secondment (des year)
Static-r - Static period (request)
TDO - Turned down offer
ZZ - Zig-zag strategy

Direction of subsequent move

(u) upwards movement
(l) lateral/horizontal movement
(d) downwards movement
r requested
u un-requested

Reason Behind Strategy

- b to broaden experience/career development opportunities
- f family/personal reasons
- g for geographical stability
- p for increase in salary and promotion
- s for a more secure position
- o other

	F1	M1	F2	M2	F3	M3	F4	M4	F5	M5
Initial pos 1	int-ab	int-ab	int-ab/intra-u(l)	int-abp/prom-u(l)	int-ab	int-cb	int-ab/intra-rg(l)	int-ab/prom-u	int-ab	int-ap/prom-u(u)
2			intra-r(l)*	intra-rb(l)	int-cp(u)	int-cb(d)				w(l)
3		ctp(u)		3	3	red/temp		2	2	
4	ctp(u)	int-ab(d)							ctp(u)	red/temp
5		prom-u(u)			int-ab(l)	int-cp(u)*			w(d)	int-ap(u)
6		int-cp(u)				prom-r(u)			int-ab(u)	
7	int-ap(u)	int-cp(u)			red/temp	intra-rbp(d)				prom-r(u)
8					int-cpo(u)	prom-r(u)				
9					njb(u)					4
10										3
11		4	5			4	4			
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
Proactive event	1u	2u 1d	1l	1l	3u 1l	3u 2d	1l	1u	1u	2u
Reactive events:	1u	2u			2red				1d 1u	1u 1d 1red

	F7	M7	F8	M8	F9	M9	F10	M10	F11	M11
int-apb	int-apb	int-apb	int-ap/prom-u(u)	int-ab	int-ab	int-cg	int-ab/sh	int-ap/prom-u(u)	int-ag	int-ab
ctp(u)	int-ap(l)	cc-ed-b(l)	Prom-(u)	ctp(u)	int-ao(l)	zz-pb(u)	int-ap(u)	hh(u)	int-ag(u)	prom-u(u)
	prom-u(u)*	int-cp(u)		intra-uo(l)	int-cob(u)	prom-r(u)	prom-u(u)		cc-m(u)	ctp(u)
int-csf(l)		intra-r(l)		prom-u(u)		MI(l)		2	tdo-r(l)	intra-rg(l)
		2	2		int-cg(d)	prom-r(u)			cc-p(u)	
			int-ap(u)		prom-r(u)					4
			Prom-r(u)	Prom-u(u)		3				
					4		3			
				5						
int-ag(u)										
cc-r(l)										
	4									
1u 2l	1l	1u 2l	4u	2u 1l	1u 1l	3u 1d	2u 1l		3u 1l	1u 1l
1u	1u			1u				1u		1u

	F13	M13	F14	M14	F15	M15	F16	M16	F17	M17	F18
int-ap	int-ap	int-ab	int-ab/intra-u(l)	int-ab	int-ap	int-ap	int-as/tdo-g(l)	int-ab	int-cp	int-ab	
int-ap(u)	int-ap(u)	ctp(u)		red-unemp	int-ap(u)	int-cp(l)			intra-rp(u)	int-ab	
	int-ap(u)	prom-u(u)		int-ap(u)	int-ap(u)*		int-cp(u)		prom-u(u)		
int-ap(u)		intra-rg(l)	int-cp(u)	hdeg-b(d)	hdeg-p(d)	int-ap(d)	prom-r(u)	prom-u(u)	hdeg/njb-pb(u)	ctp(u)	
prom-u(u)	int-ab(u)	3	zz-pb(u)	int-ap(u)	int-ap(u)	red-unemp			intra-u(l)	int-ap(u)	
				3	preg		5	int-cpo(u)			
										int-a-s(d)	
int-ap(u)	int-cp(u)				4				3	4	
prom-u(u)										6	
										hdeg-p(l)	
										cc-s(l)	
										int-ap(u)	
Red-Inta(d)											
int-cs(d)											
Prom-r(u)											
Intra-u(l)	MI-r(l)										
static-u		7									
4u 1l 2d	4u 1l	1l	2u	2u 1d	3u 1d	1u 1l 1d	2u 1l	1u	3u 1l	3u 1l 1d	
2u		2u		1 red		1 red		2u	1u	1u 1 red	

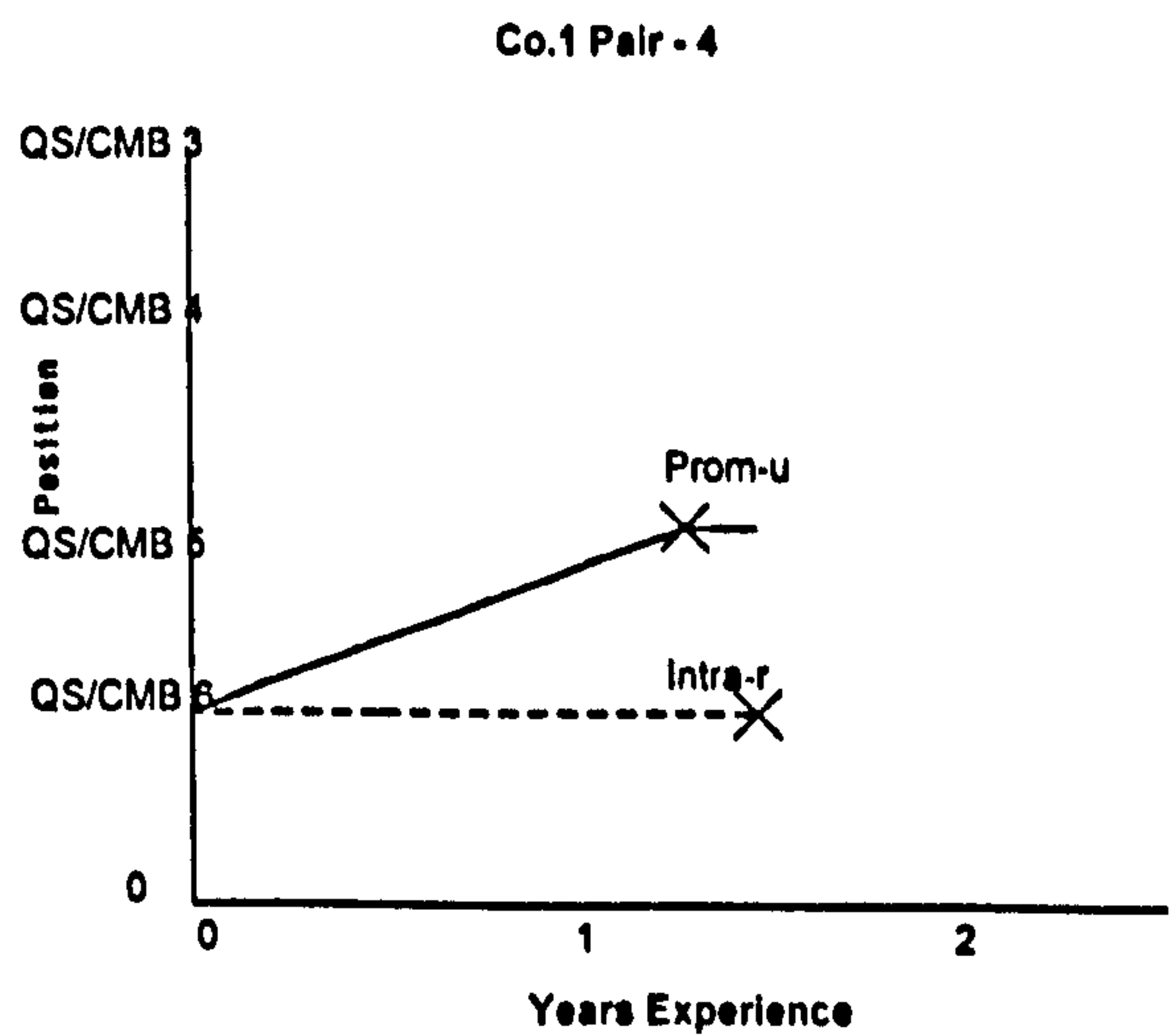
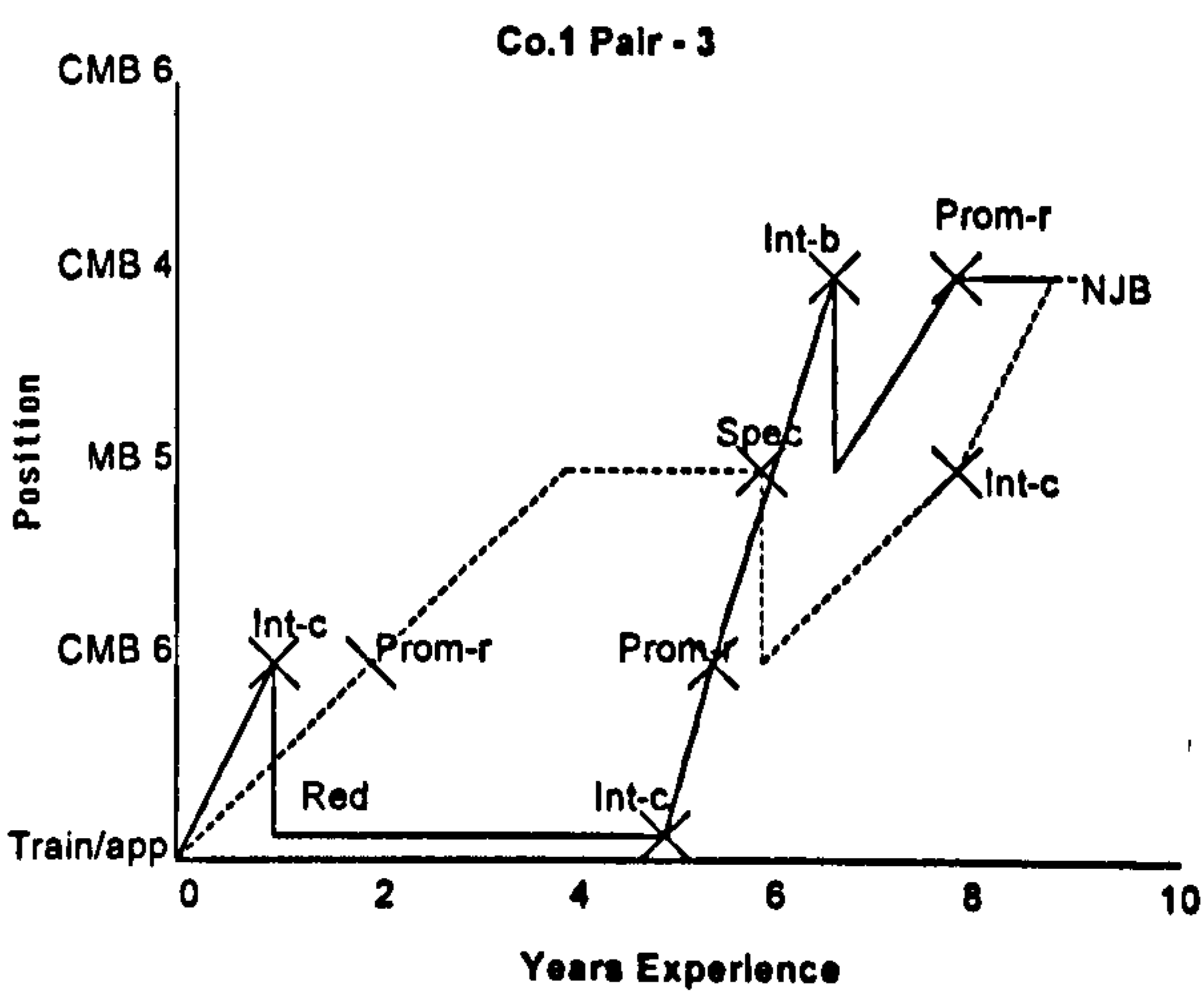
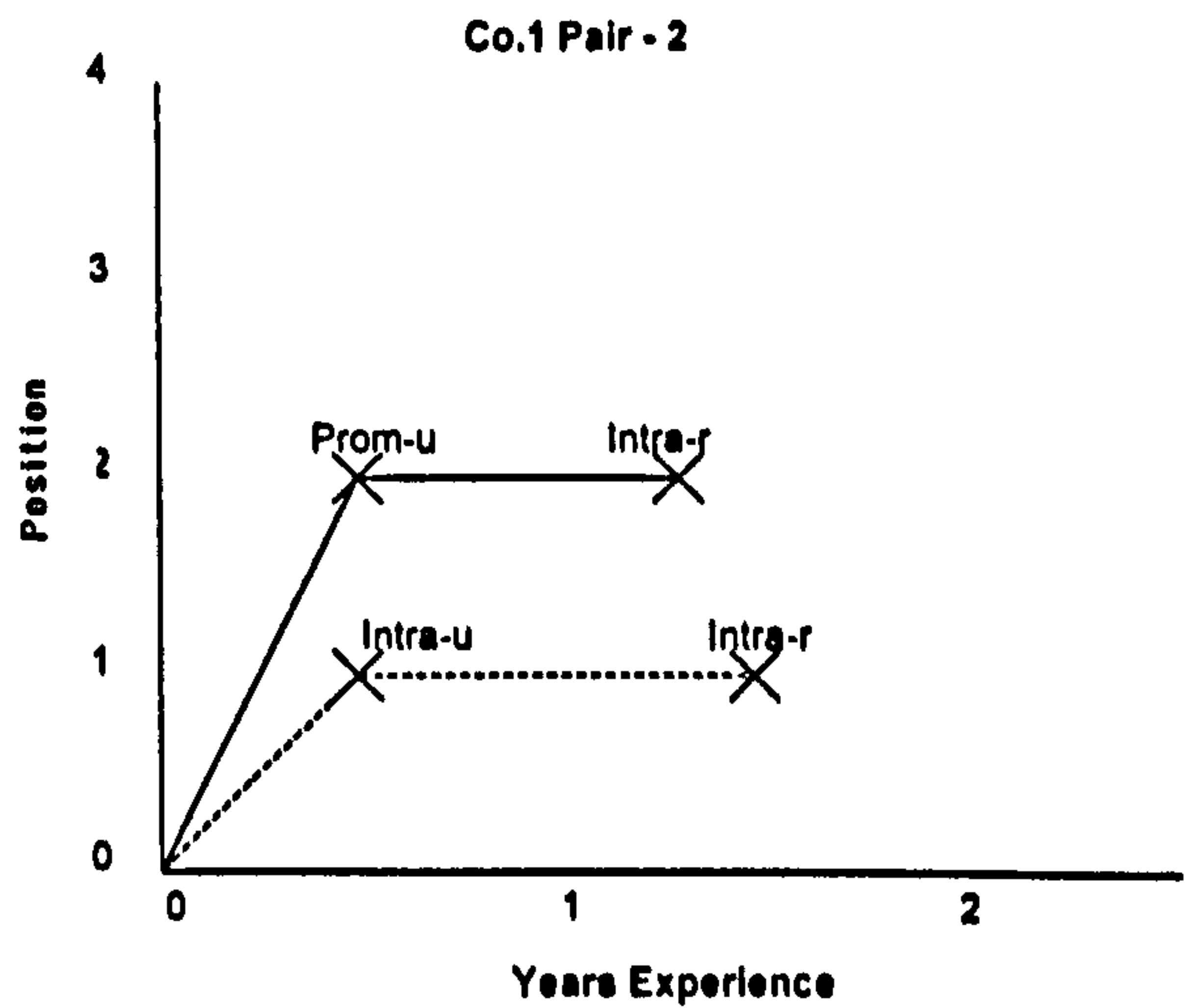
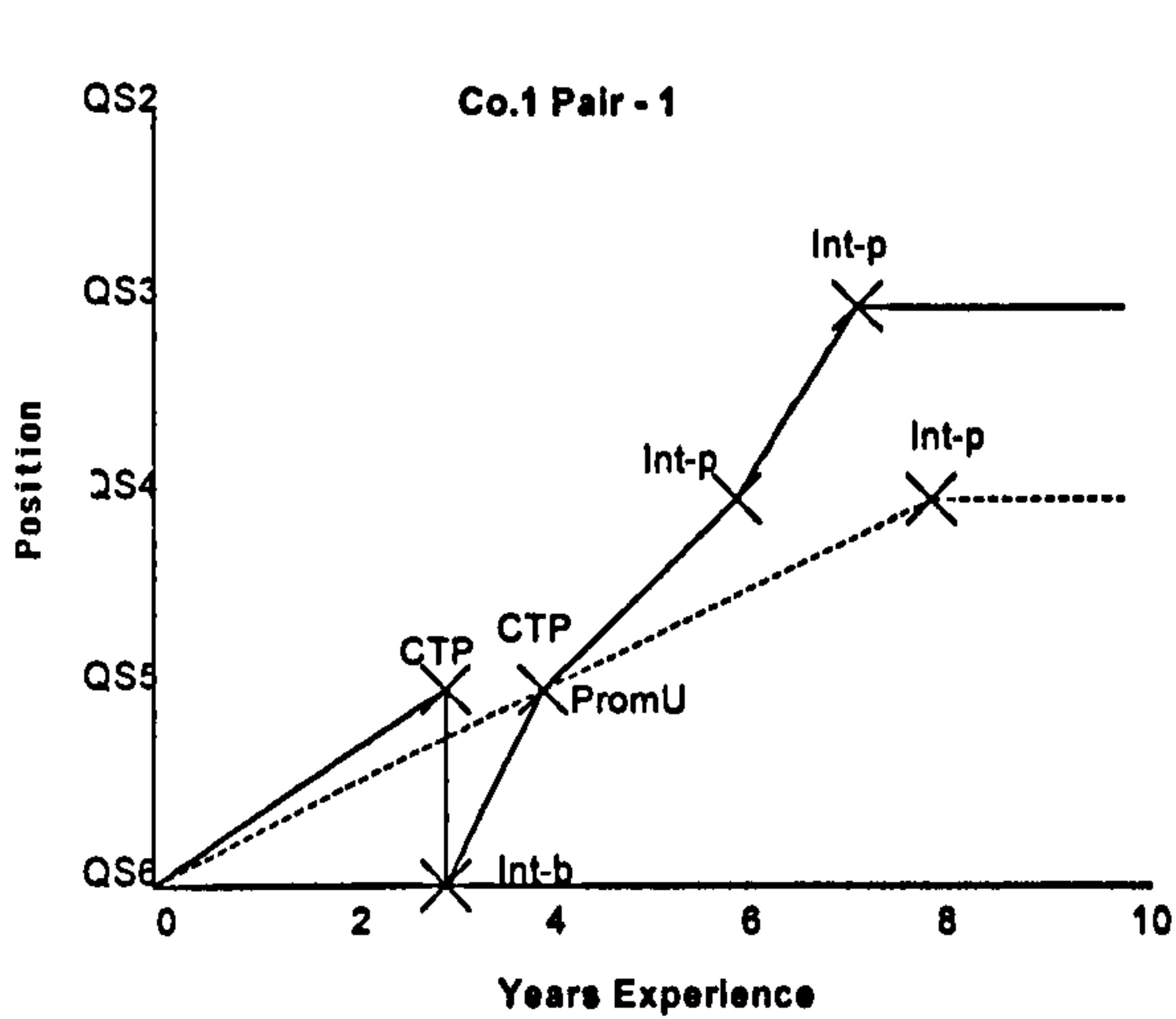
Career Determining Variable (major determinants of Informant's careers)	Assigned Code in matrix	Resultant direction and frequency of occurrence of each determinant					
		Positive effect (upwards career move)		Lateral Effect (horizontal career move)		Negative Effect (downwards career move)	
		wom	men	wom	men	wom	men
Internal labour market career influences outside of the control of the individual							
Completion of training or professional development period (e.g. end of time as a trainee - automatic promotion)	CTP	11	9				
Inter company move through contacts	Int-c	17	12	3	2	2	
Intra company move unrequested	Intra-u	1	4	8	6		1
Inter company movement through advert or spec enquiry	Int-a	49	49	2	1	4	1
Made redundant	Red					10	2
Secondment to another company	Sec				1		
Company reorganisation/take-over	Reorg			1	1		
Due to sexual harassment or discrimination	Sh/sd					5	
Promotion given unrequested (internal)	Prom-u	23	22				
Static period of no promotions unrequested	Stat-u						
Project related factor held back development (legal etc.)	Proj			2			
Company taken over (new employer)	TO			1			
Significant period of unemployment	Unemp					2	
Moved to do temporary work	Temp						
Reduced workload (economic/market factors)	WI			1	1	6	2
TOTALS		101	96	18	12	29	6
Internal labour market influence instigated by the individual							
Promotion requested (internal)	Prom-r	11	18				
Used new job offer to barter for a promotion	NJB	1	3				
Turned down better offer for extenuating reason	TDO			2	4		
Static period of development requested	Static-r						
Completed professional qualification	Prof	2	1				
Returned to original co. (zigzag)	ZZ		4				
Educational development (such as time taken out to undertake further study)	Ed	1		2	2	1	1
Completed higher degree	Hdeg	1	1	2	1	1	1
Intra company move requested	Intra-r	3	4	17	10		1
Moved to international division	MI	1	1	4	6		
Inter company move through contacts	Int-c	15	12	3	2	2	1
Career change	cc	4	3	7	5		
TOTALS		39	47	36	36	4	4
Internal labour market factors partially under the control of the individual							
Secondment for design year	Sec-(dy)			7	3		
Won prize within the company	Prize				2		
Head hunted by another company	HH		3				
TOTALS		0	3	7	5	0	0
Factors from outside of the labour market							
Divorced/family upheaval usually due to work pressure or other related reason	Div	2		2	1	3	2
Married (which had a subsequent effect on their career direction or strategy)	Mar	2	1	5		4	1
Maternity Leave	Mat			1			
Currently pregnant and preparing to leave for maternity period	Preg					2	
TOTALS		4	1	1	0	2	0
OVERALL TOTALS		126	135	63	43	32	10

Table B-2: Career determinant frequency summary.

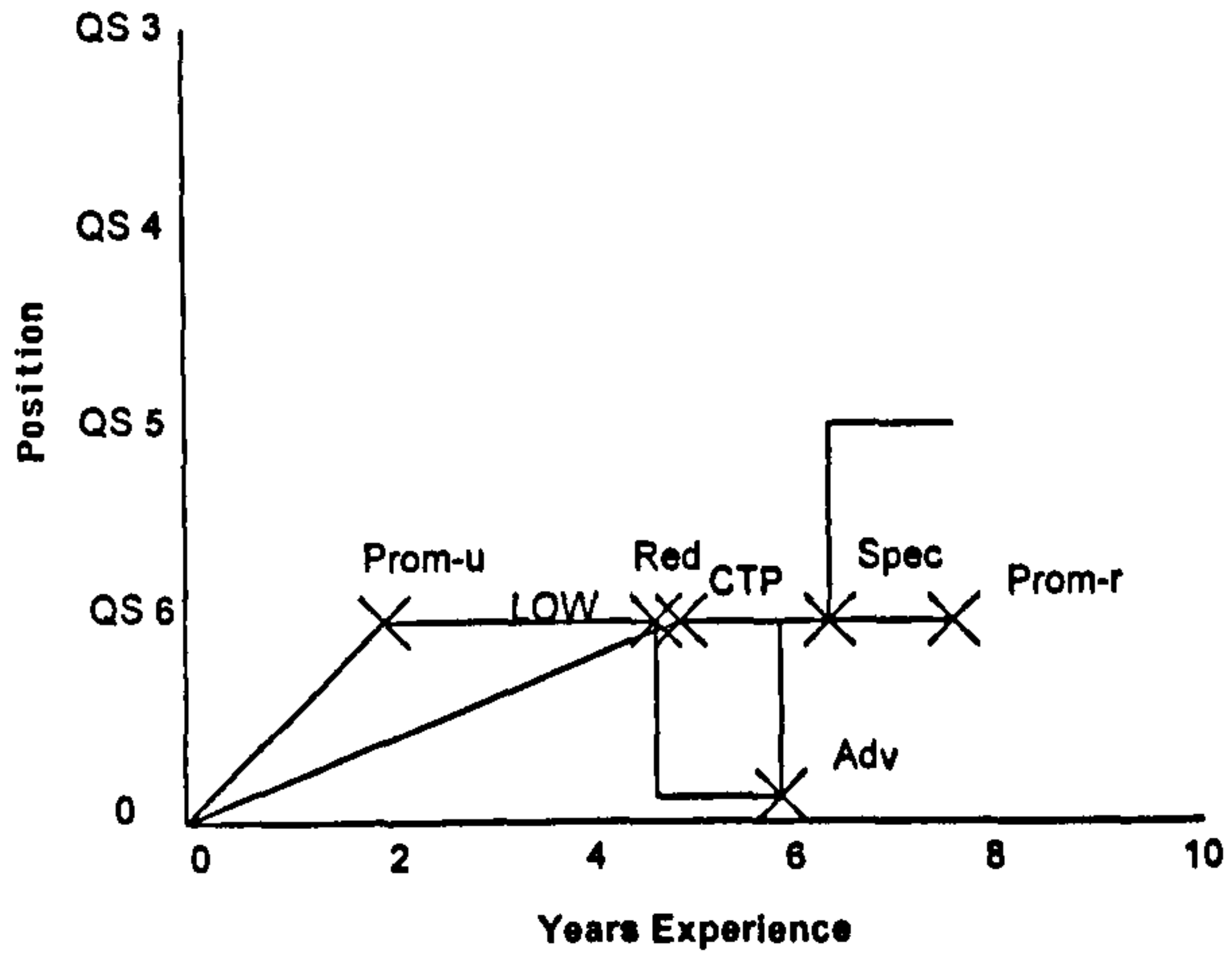
APPENDIX C

Career Progression Graphs

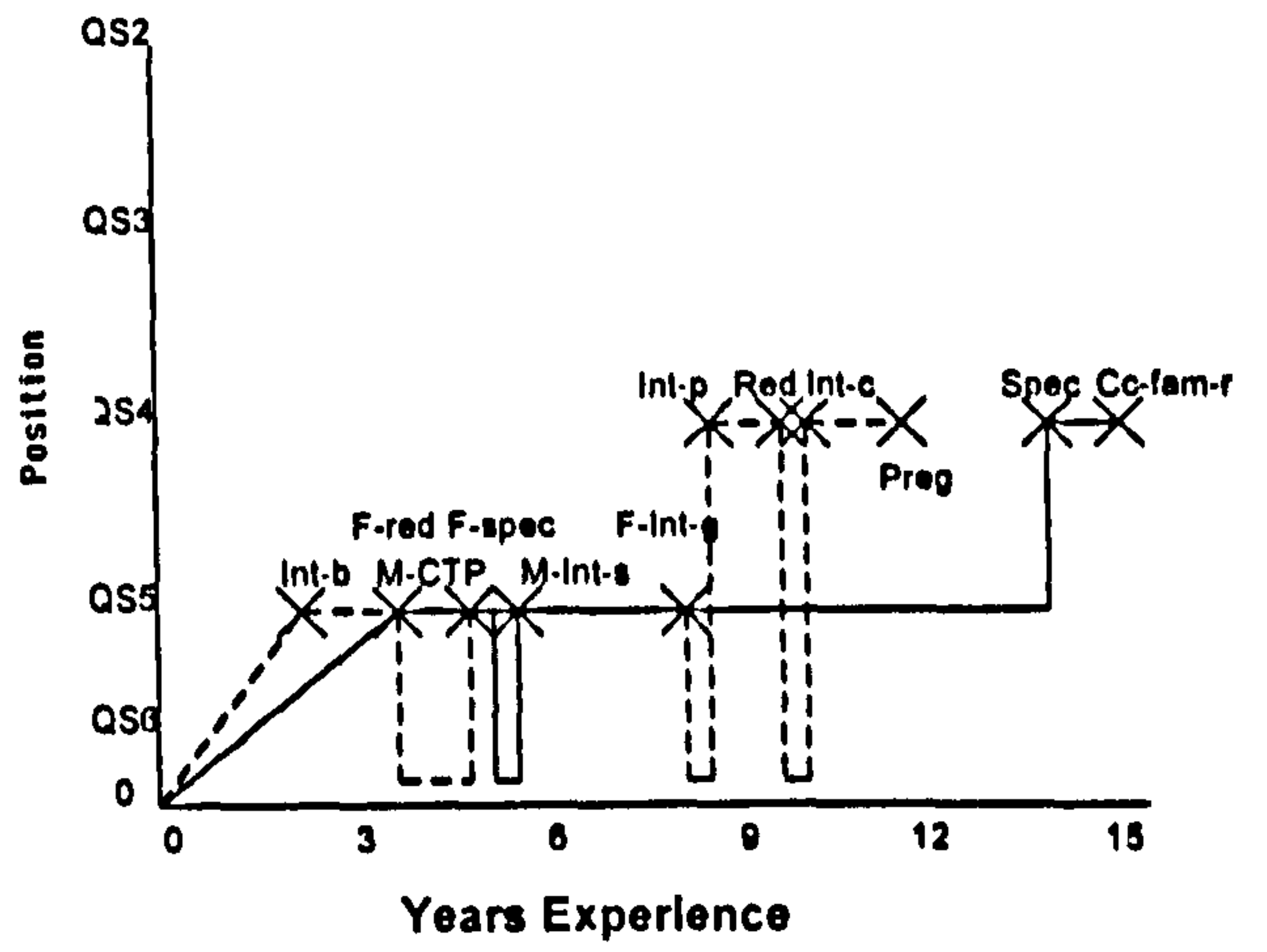
Dashed lines represent women's progression, and solid lines represent men's. The prefix 'F' denotes the female informants, whilst 'M' denotes the male informant's determinant. For key to determinants see Appendix B.



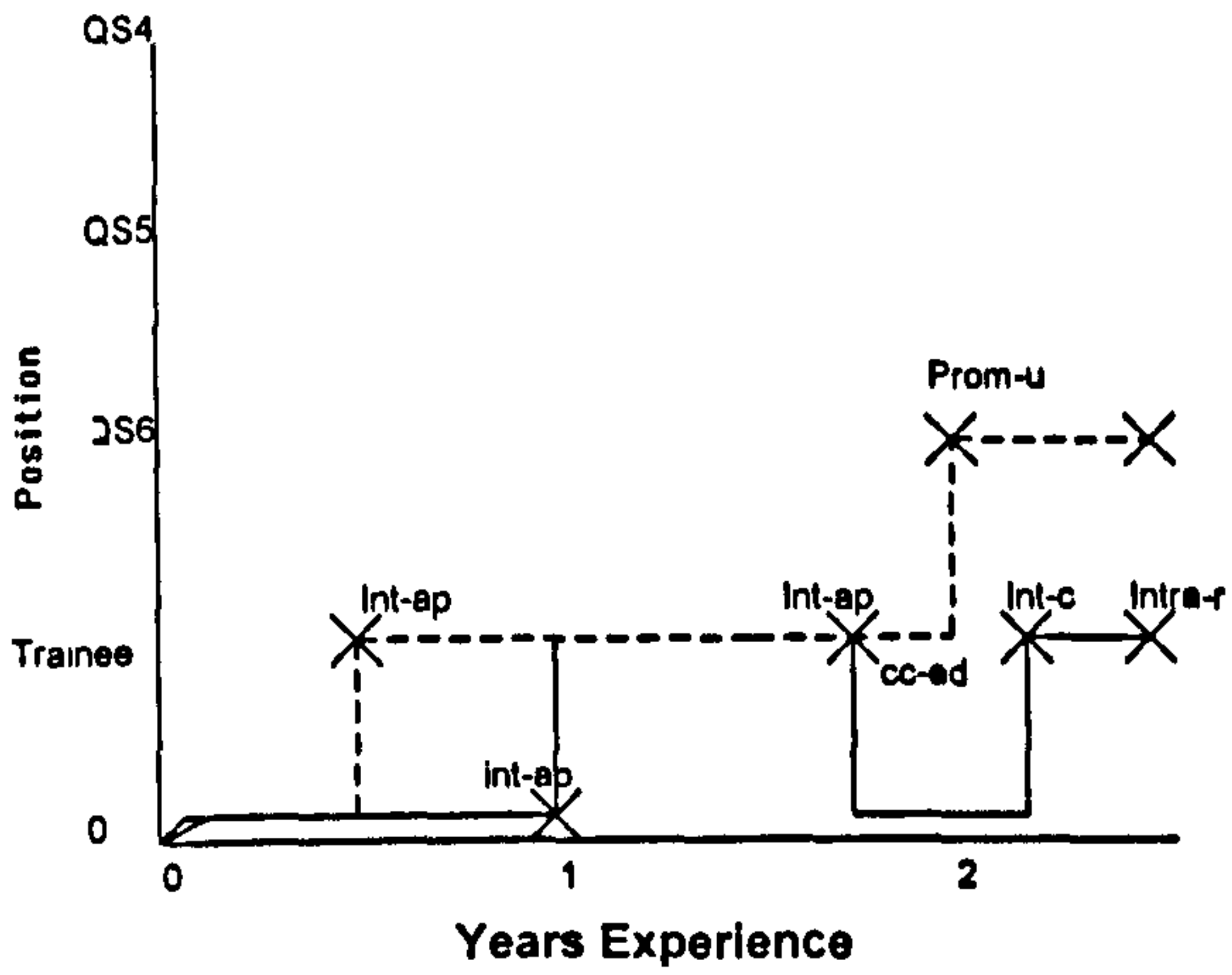
Co.1 Pair - 5



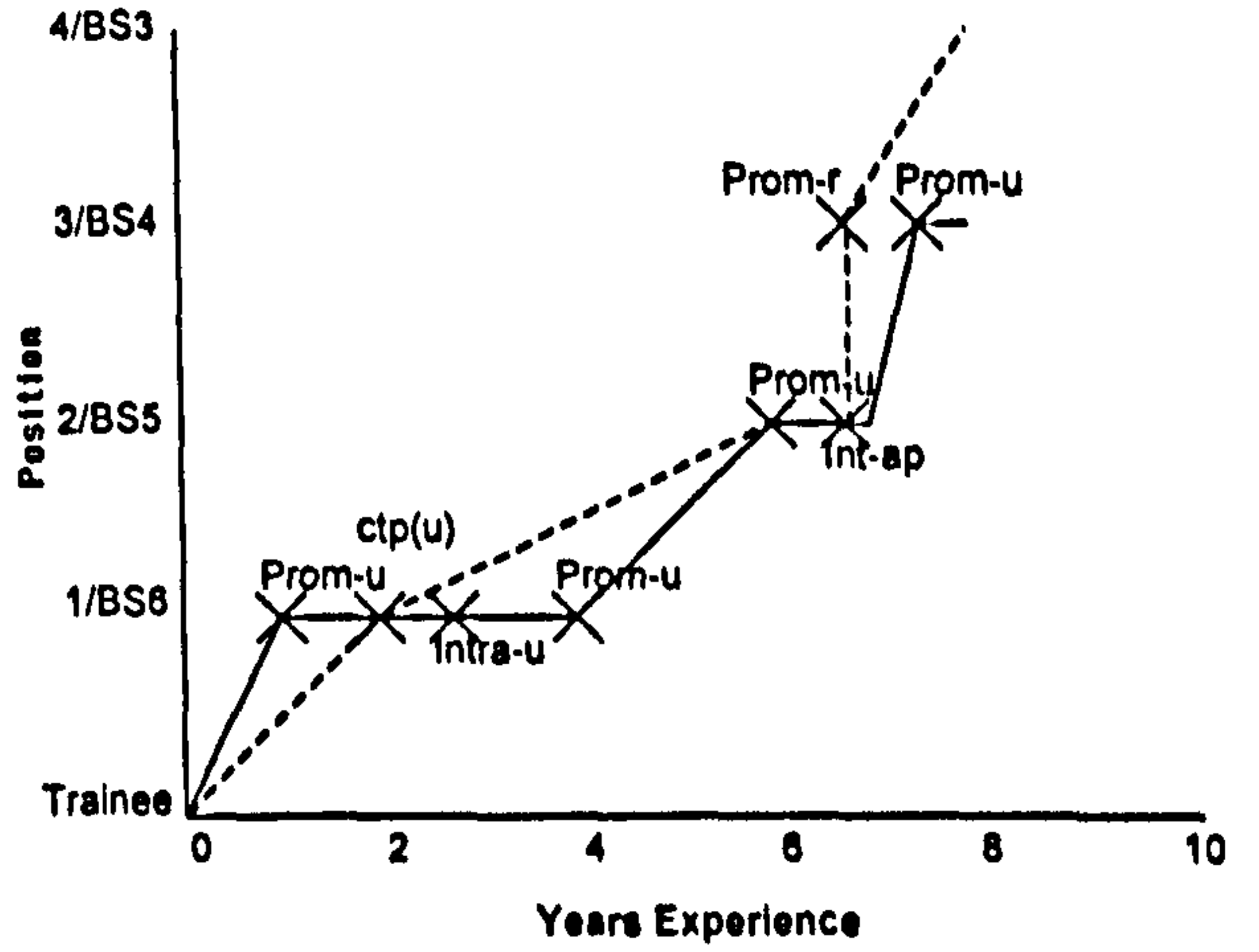
Co.1 Pair - 6



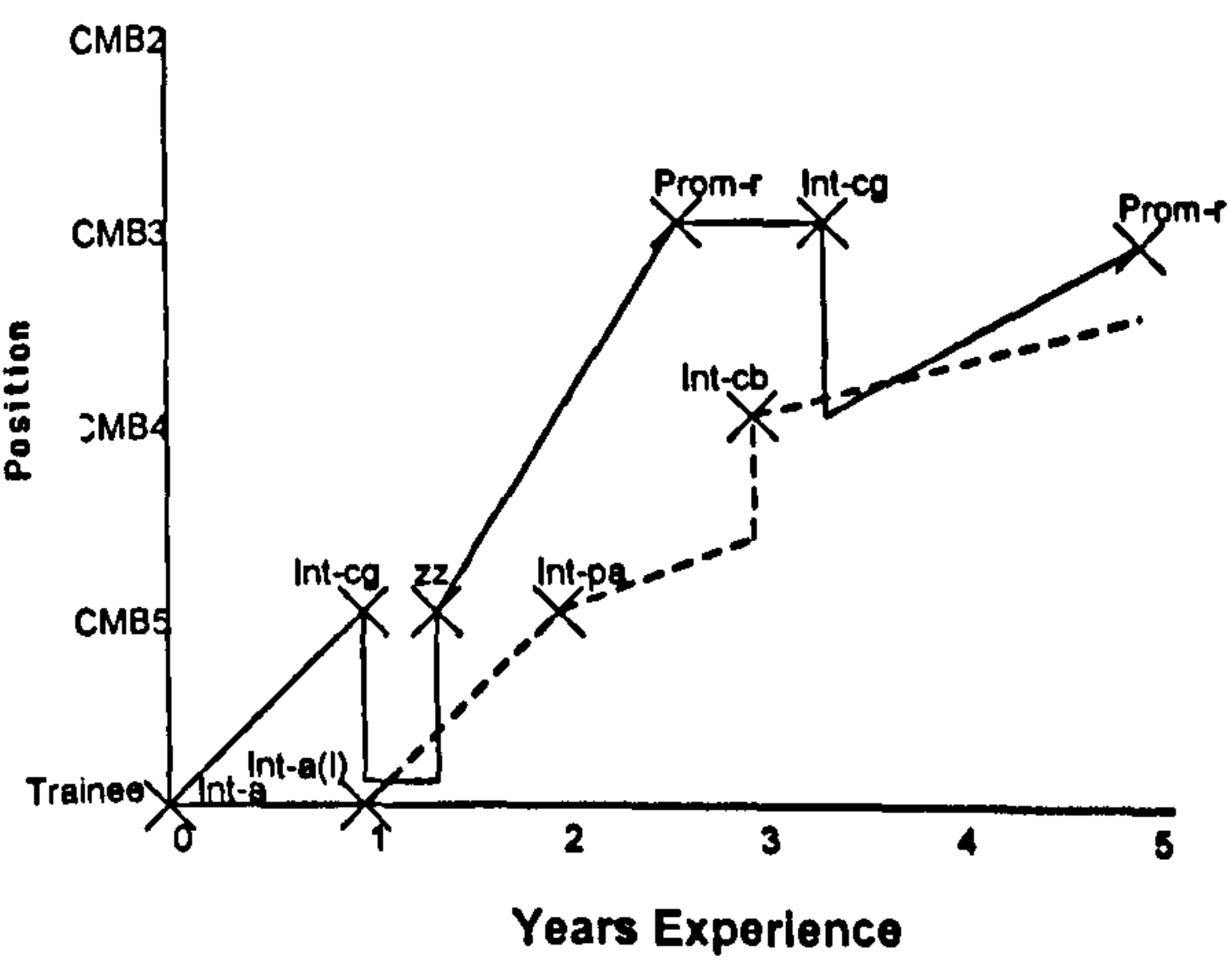
Co.1 Pair - 7



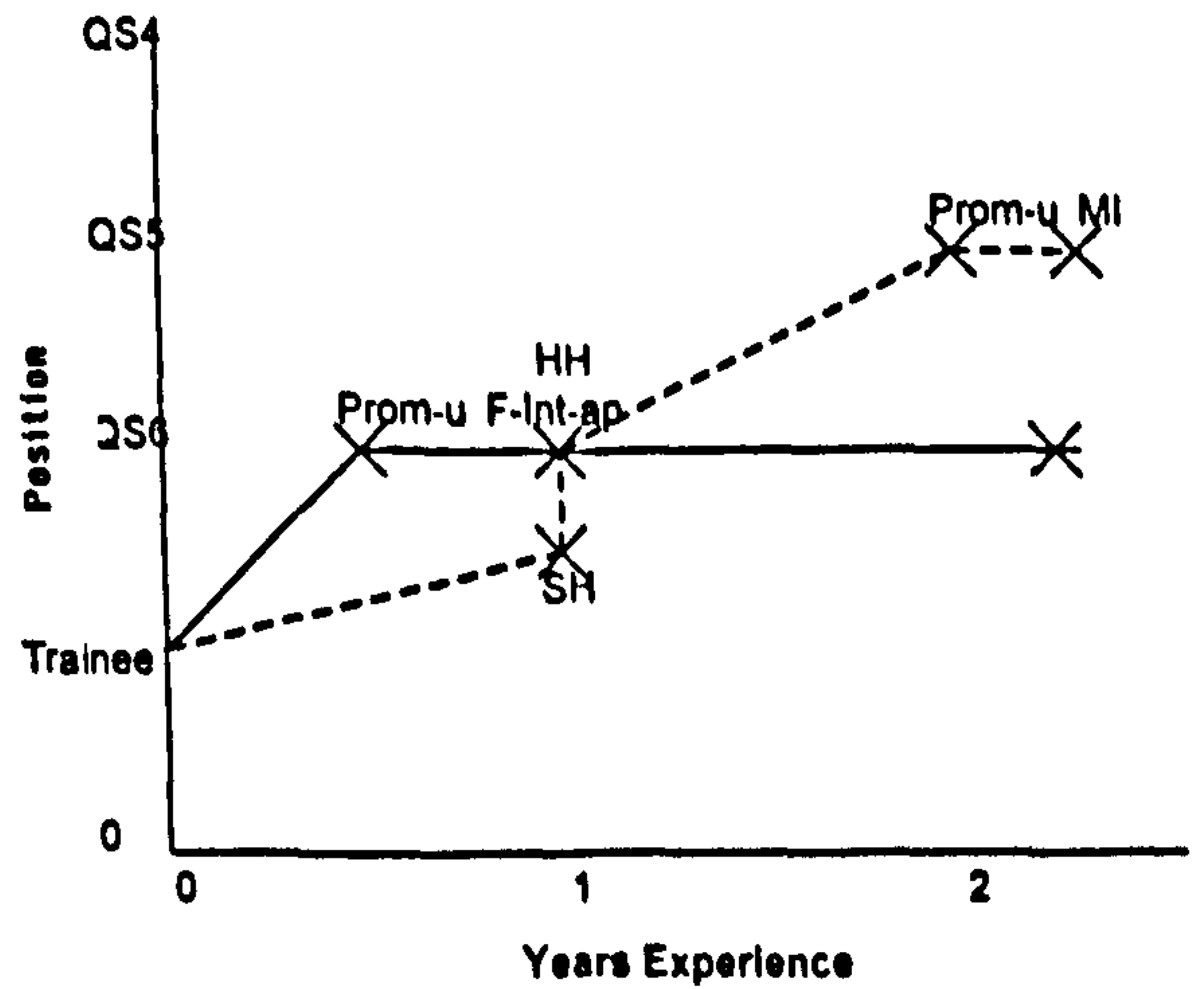
Co.1 Pair - 8

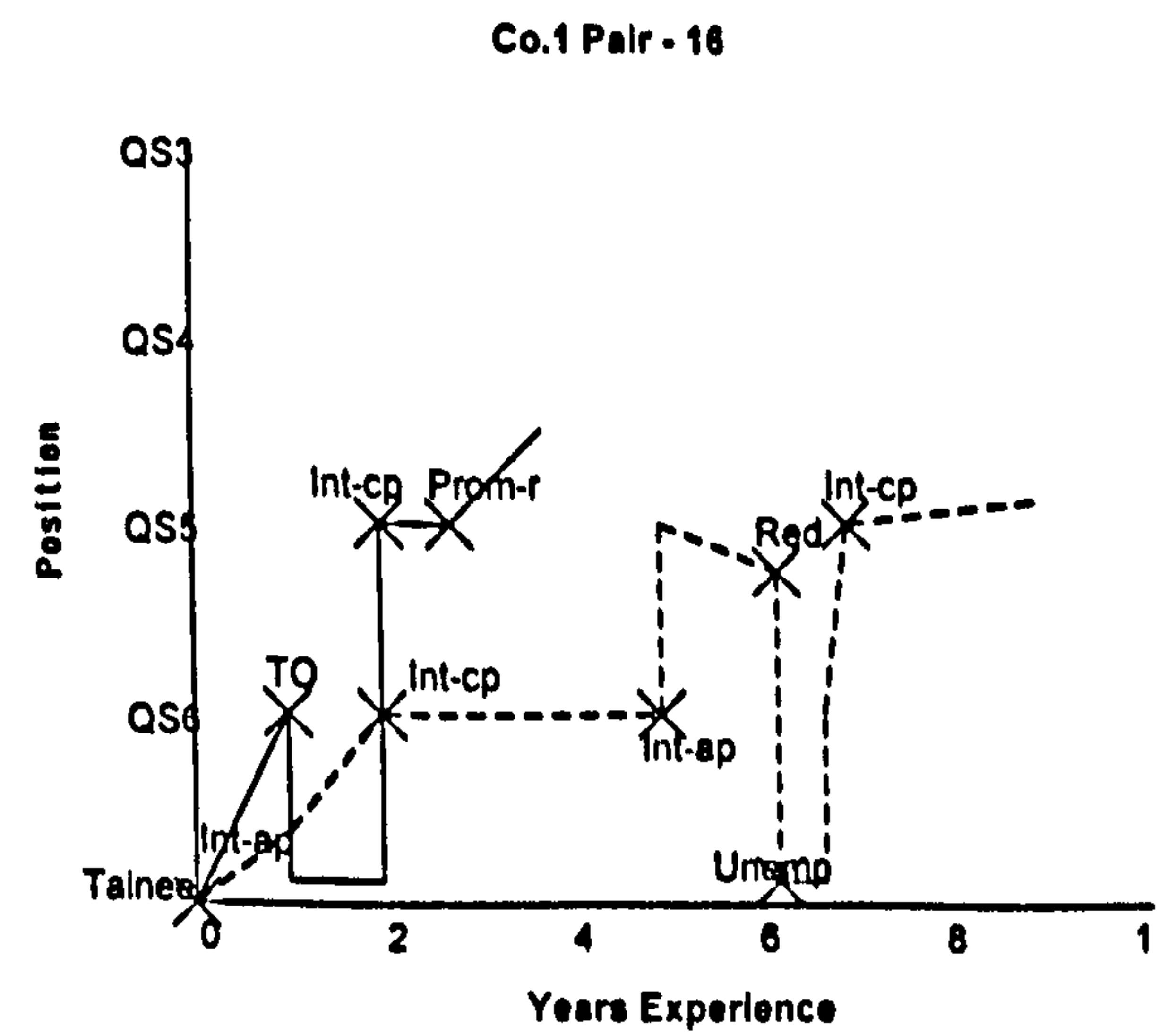
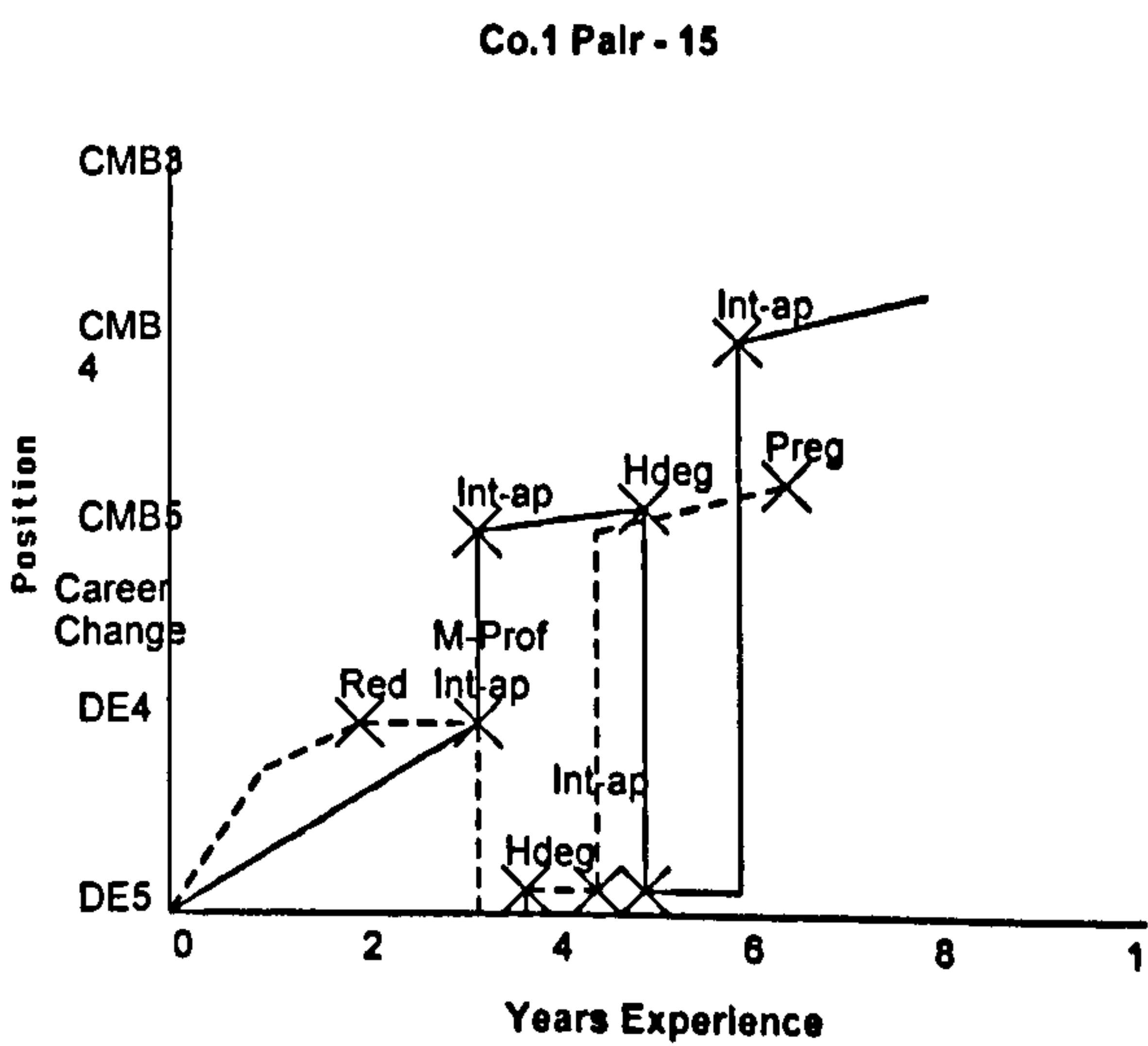
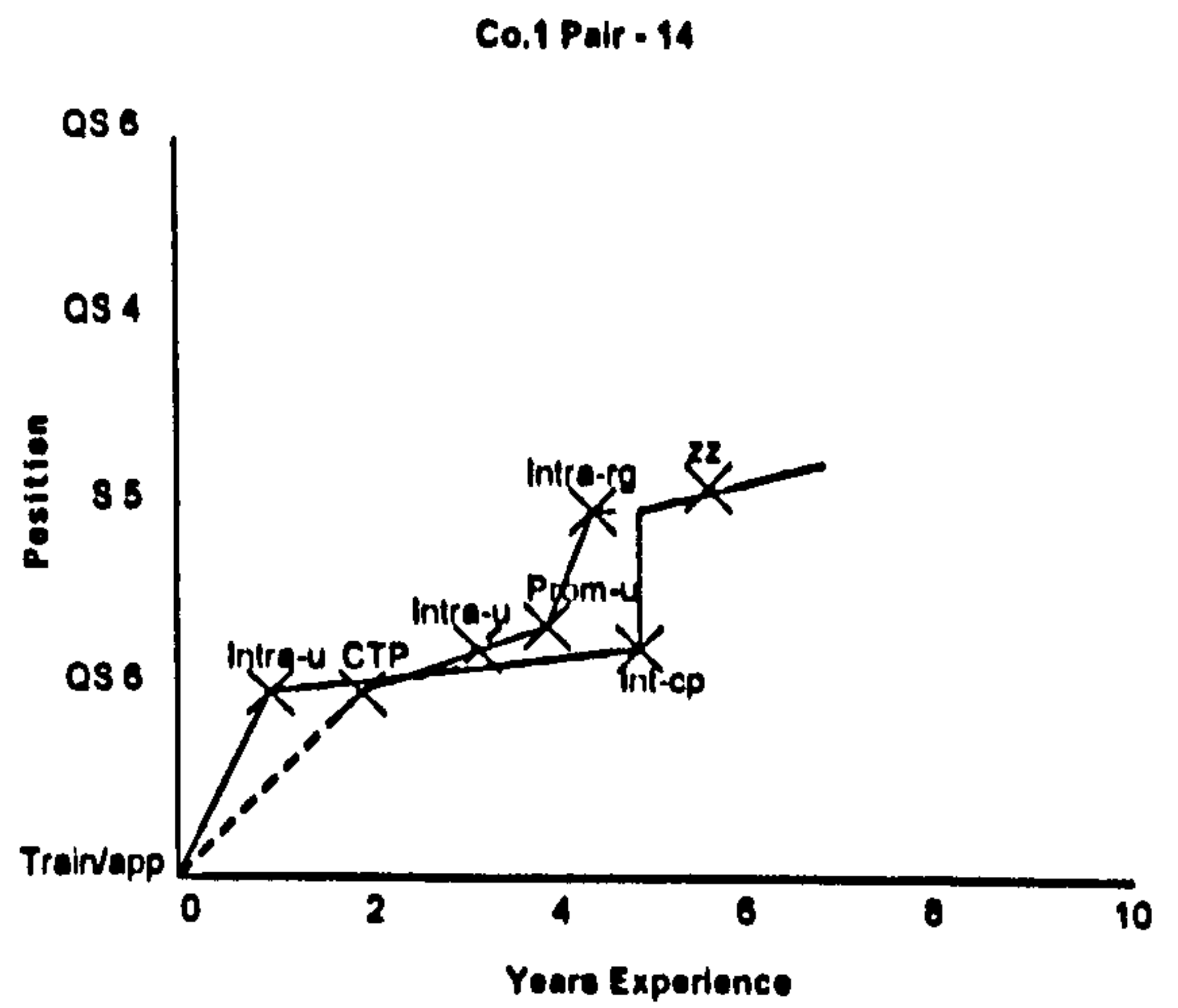
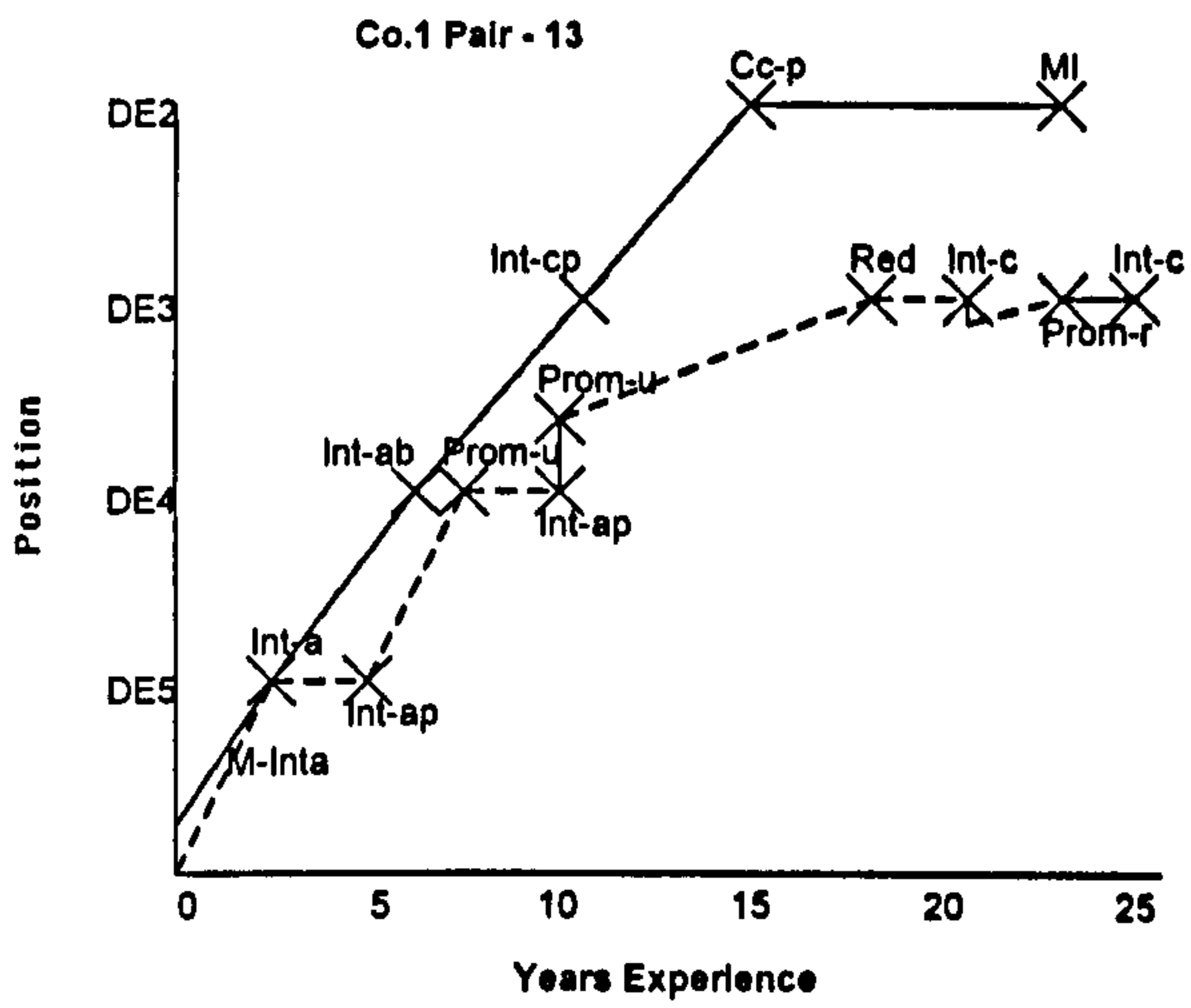
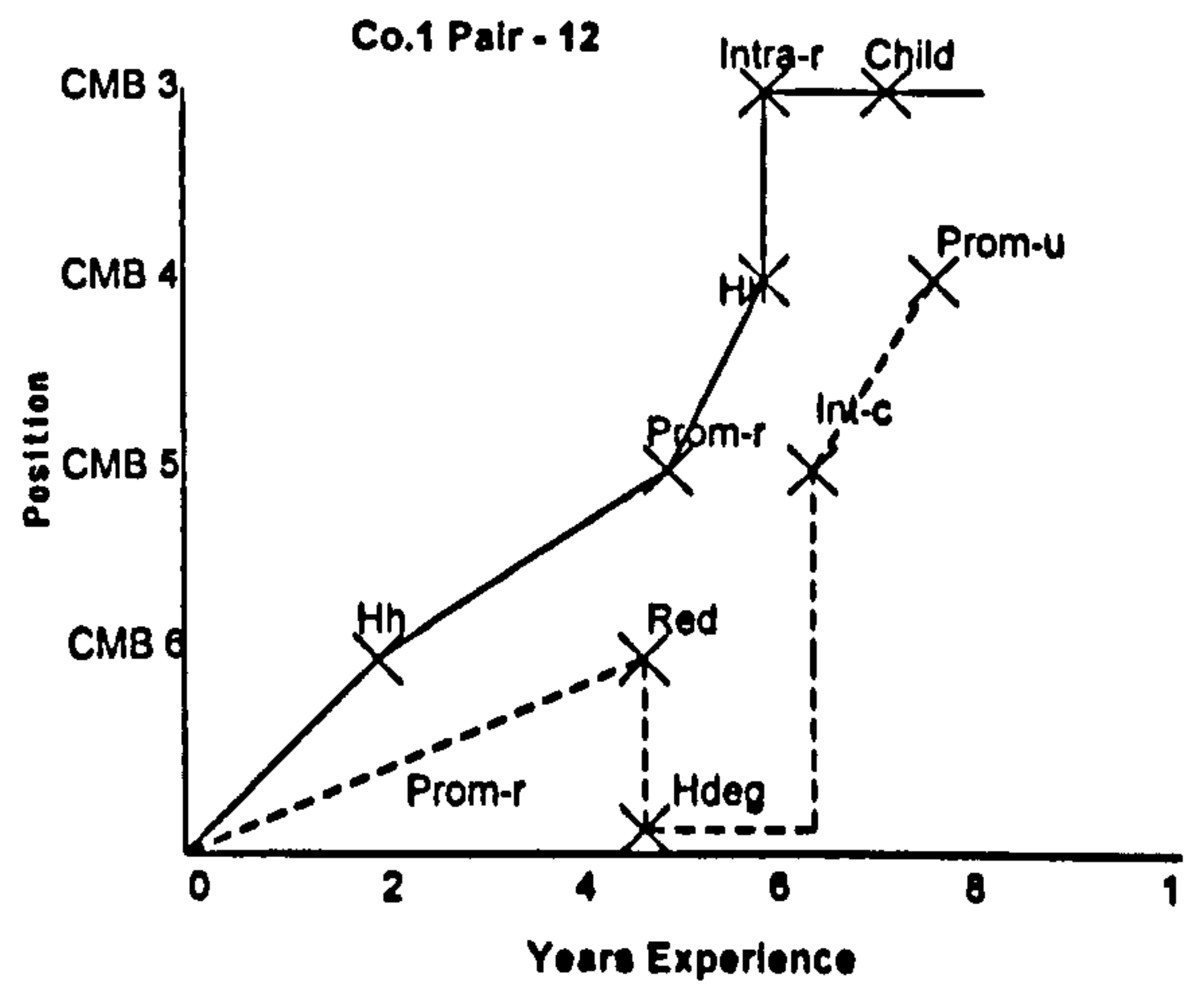
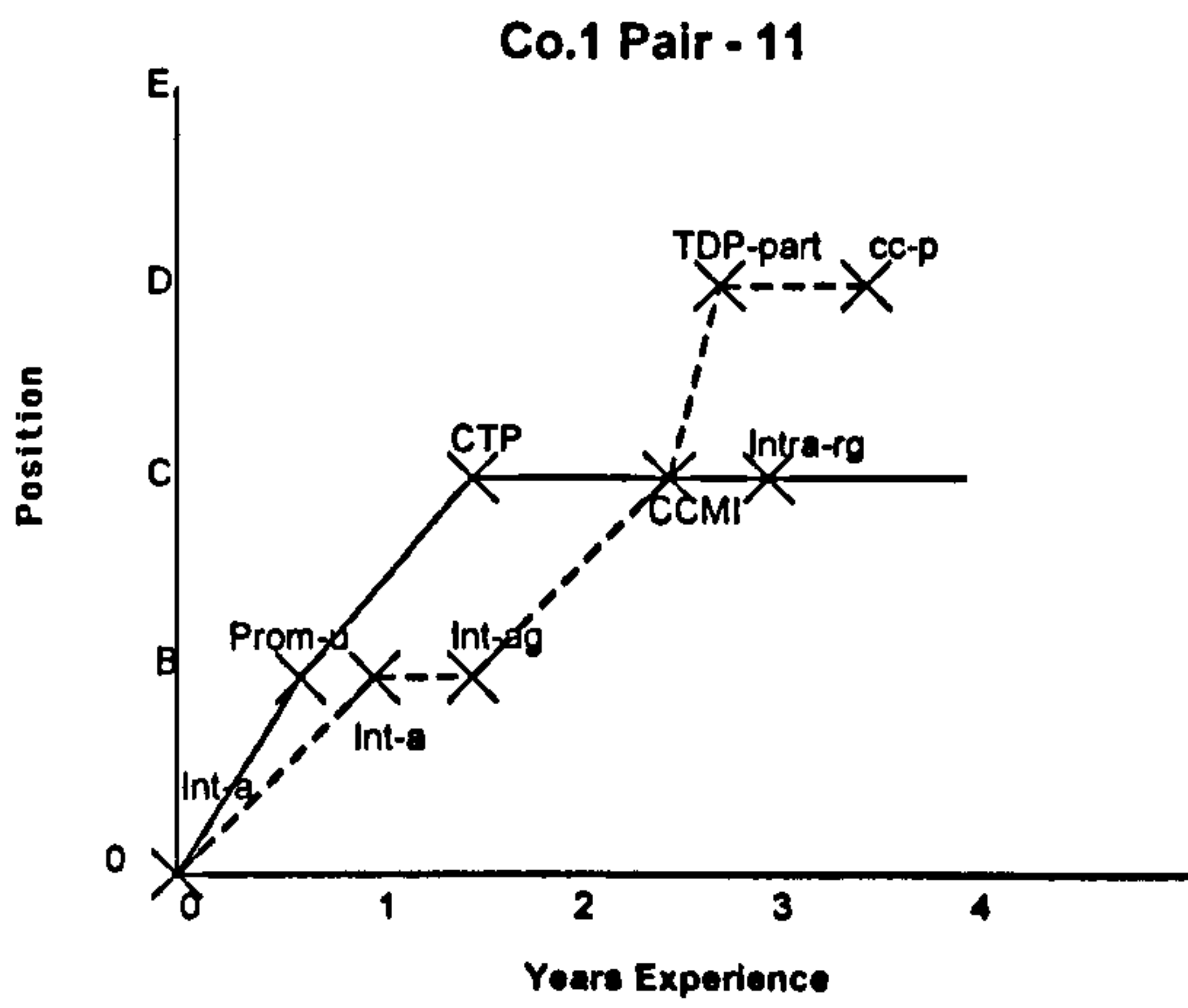


Co.1 Pair - 9

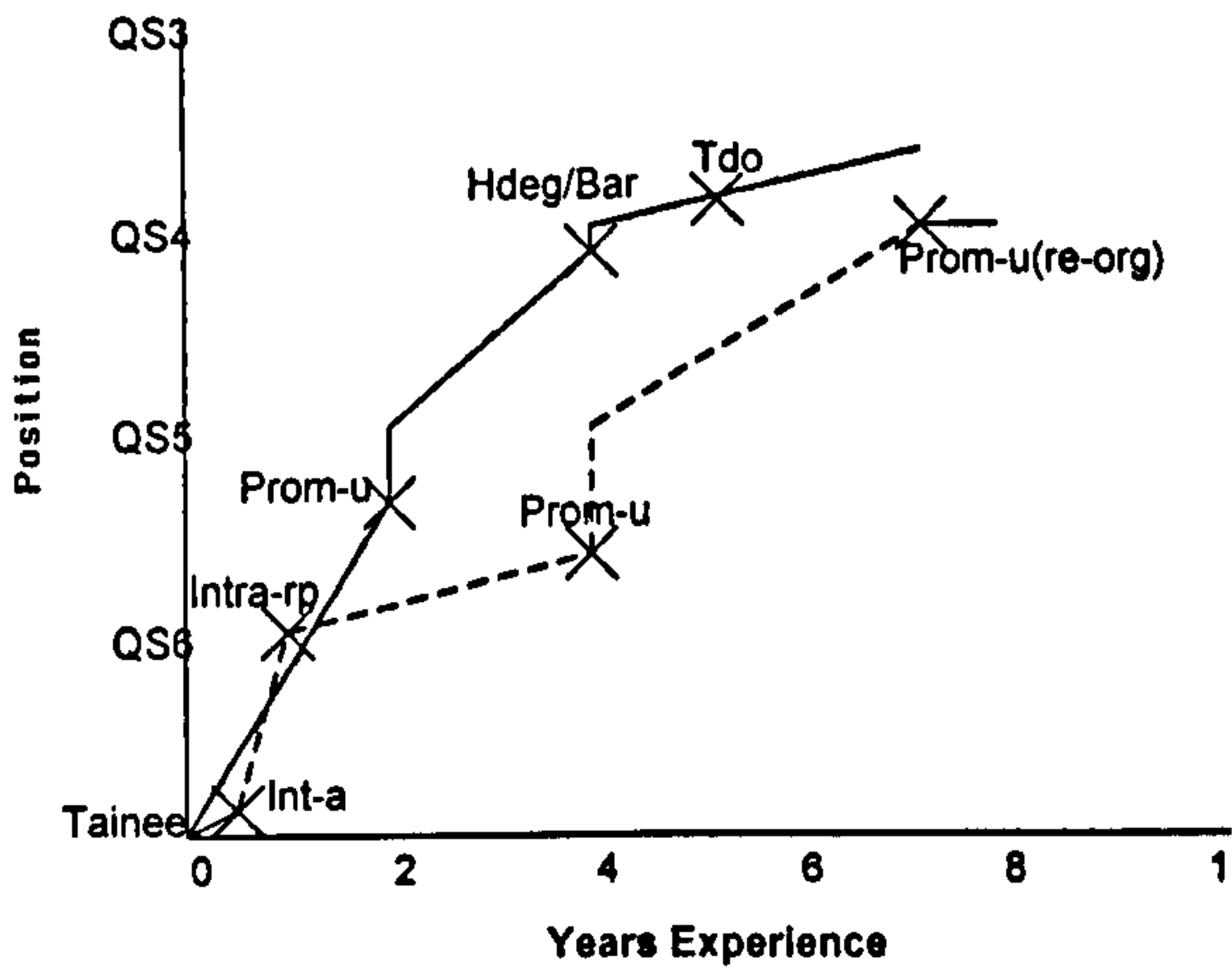


Co.1 Pair - 10

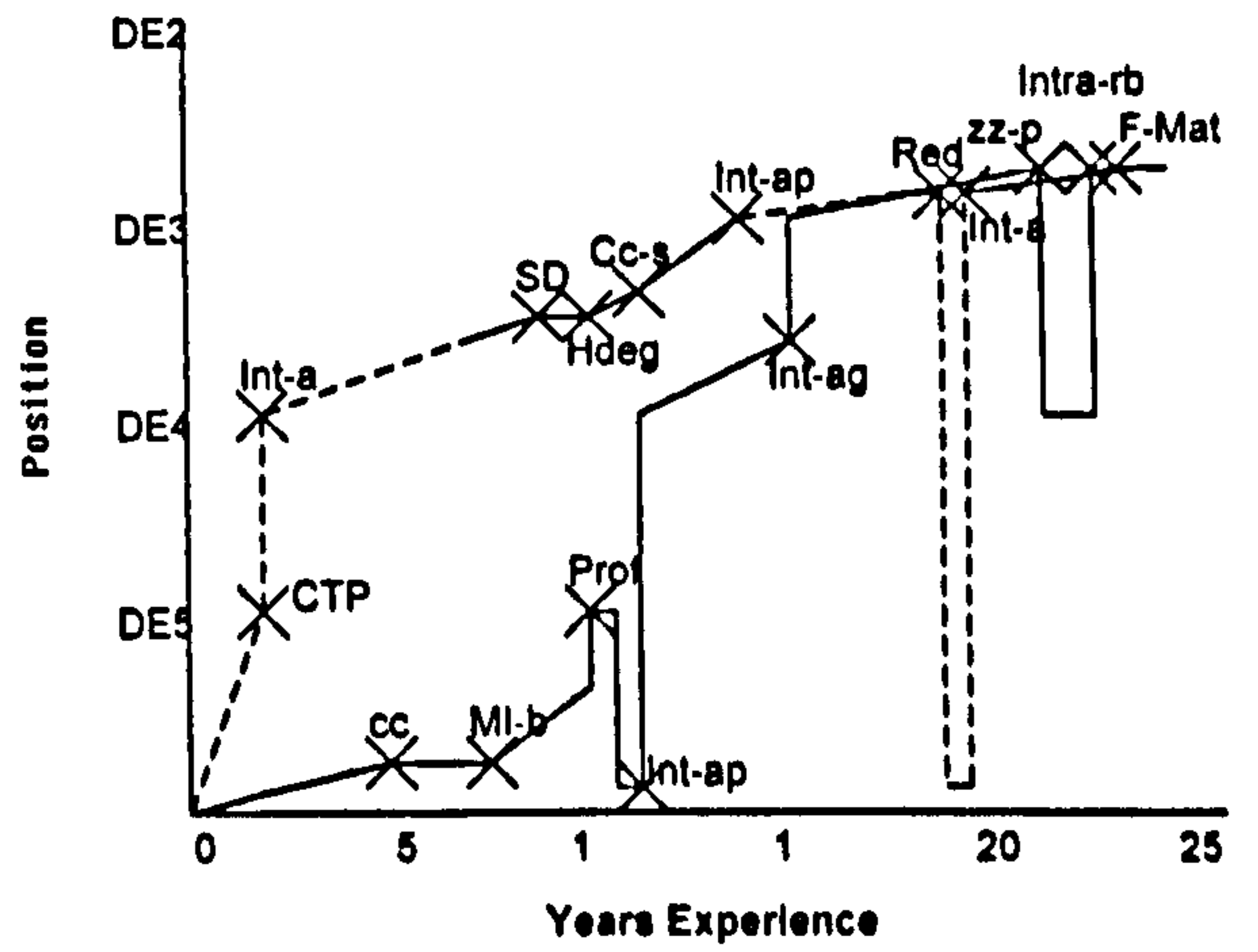




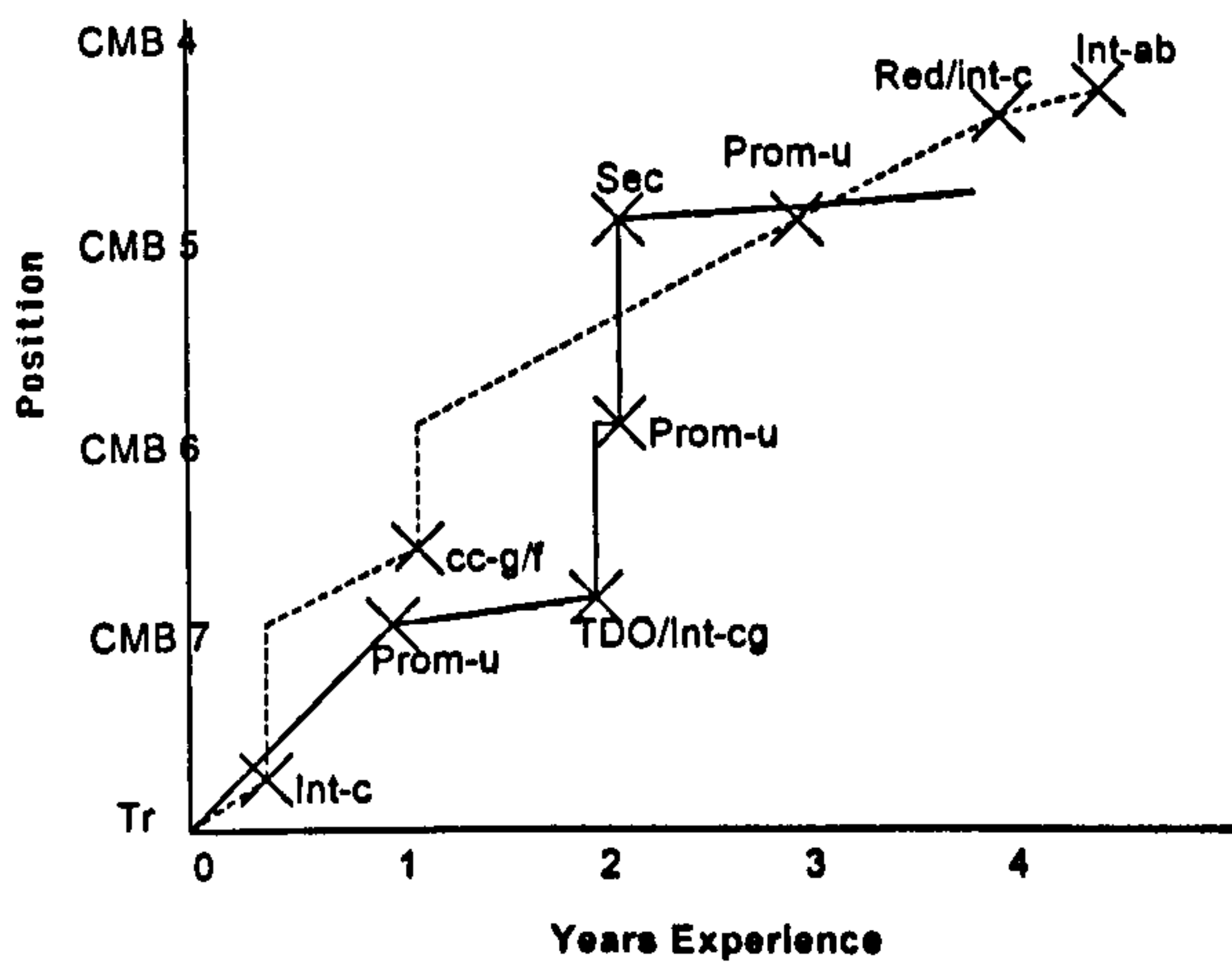
Co.1 Pair - 17



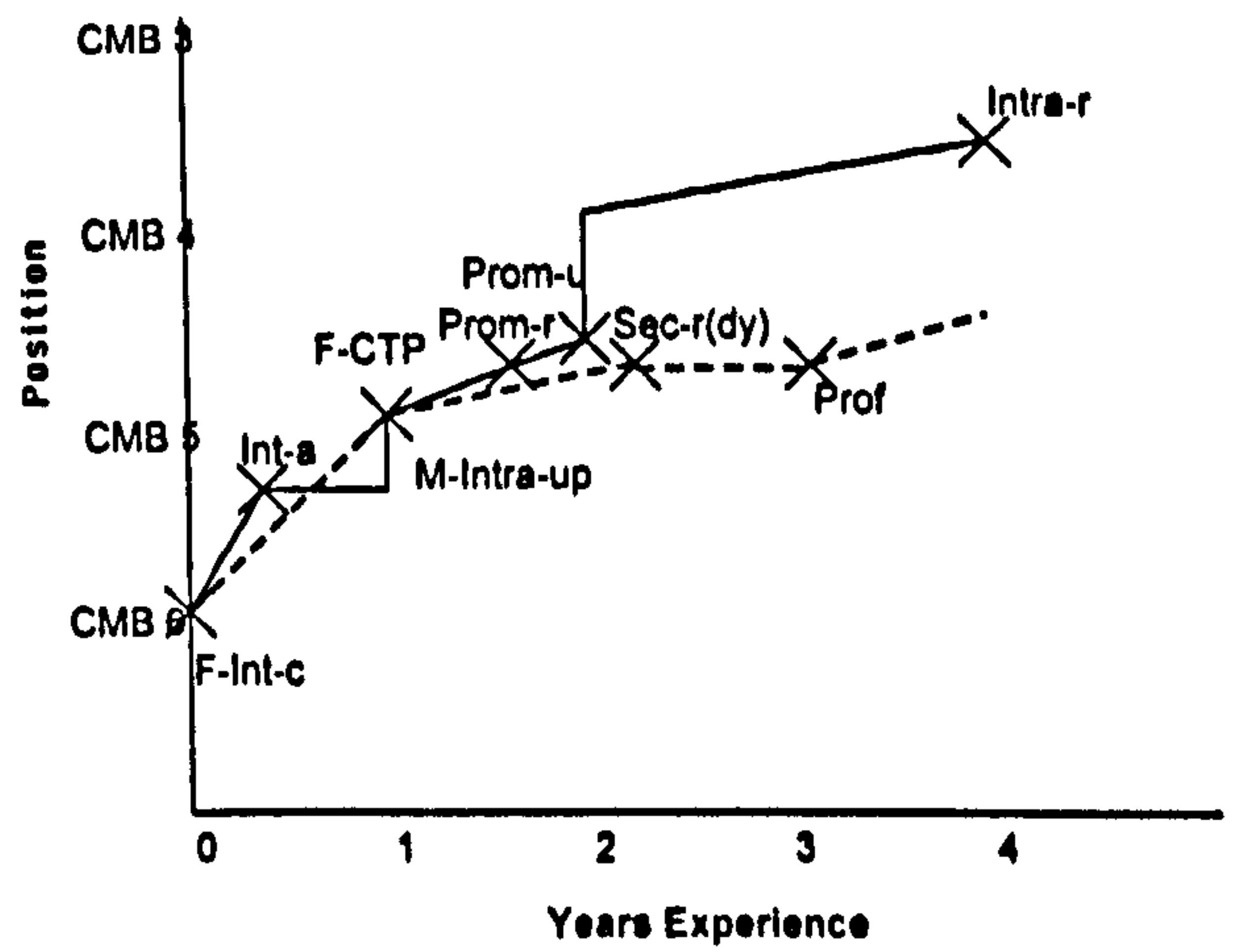
Co.1 Pair - 18



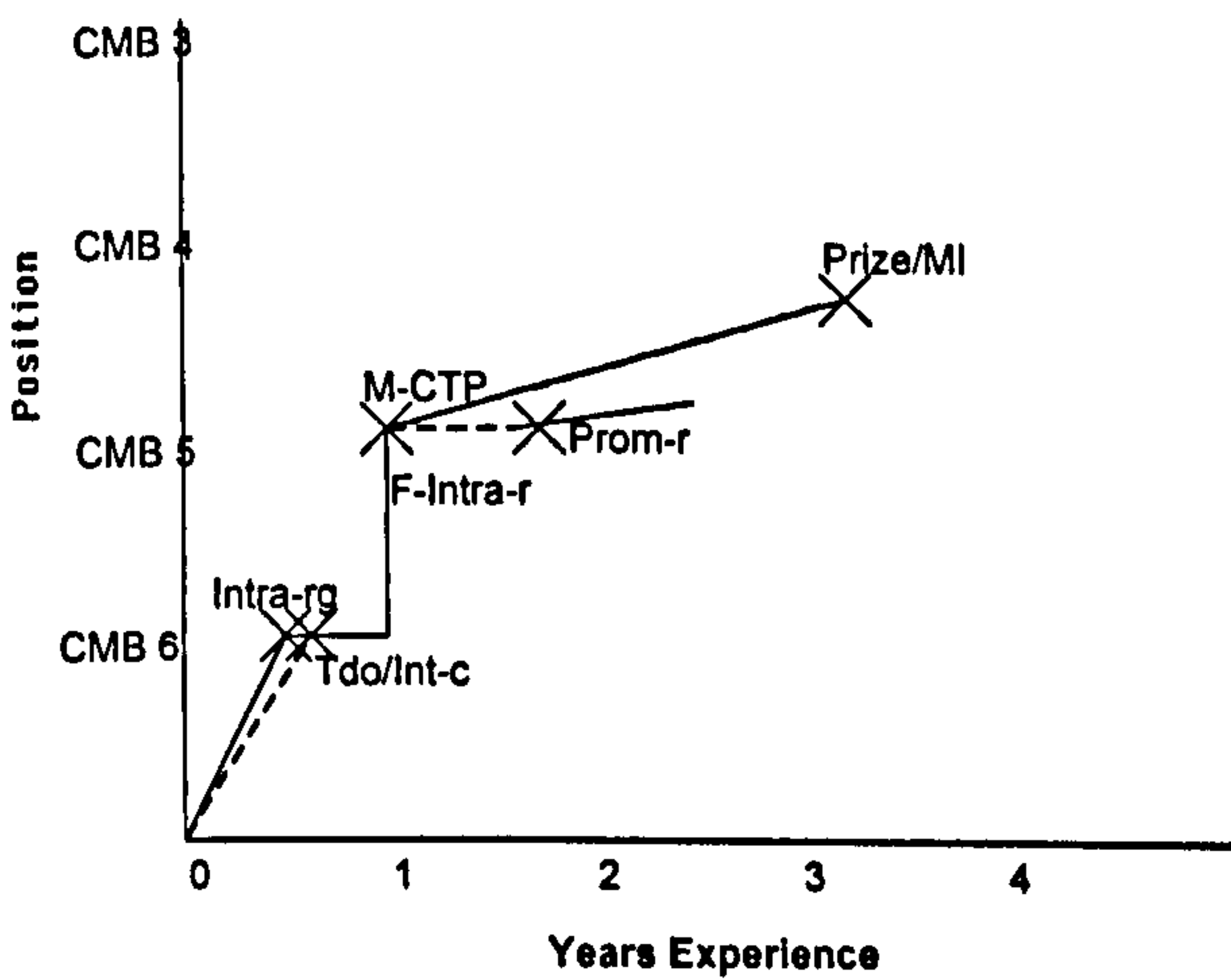
Co.1 Pair - 19



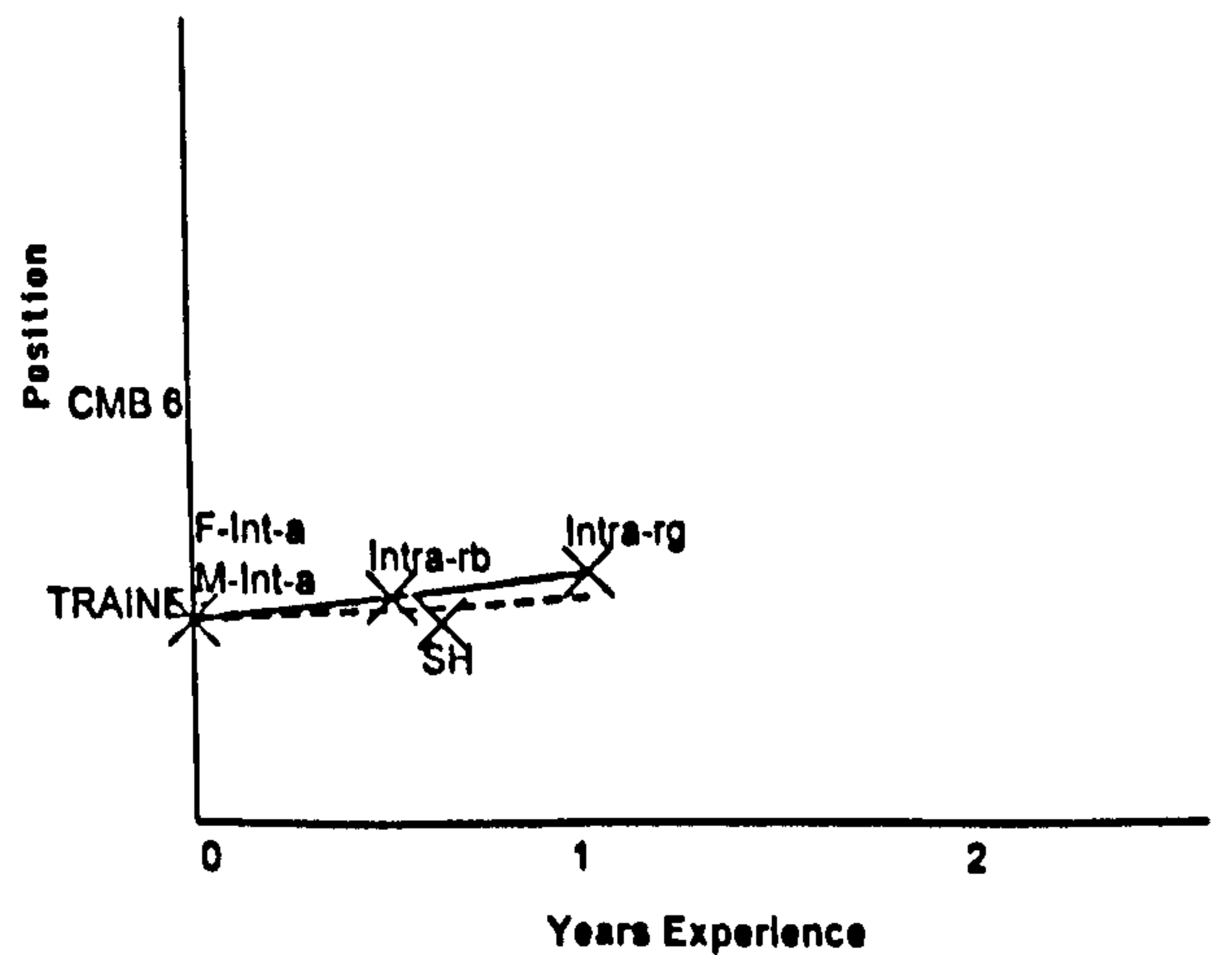
Co.1 Pair - 20



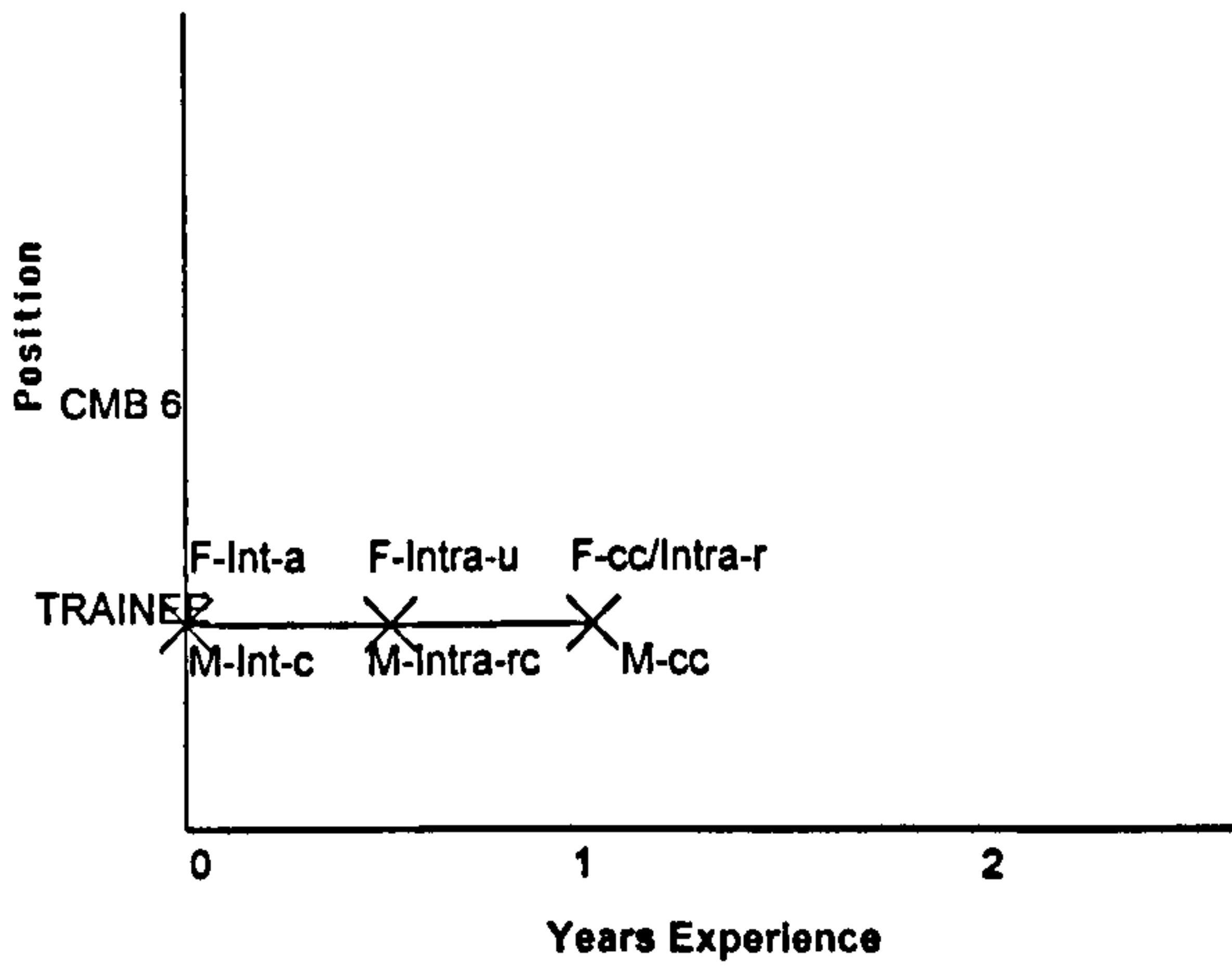
Co.1 Pair - 21



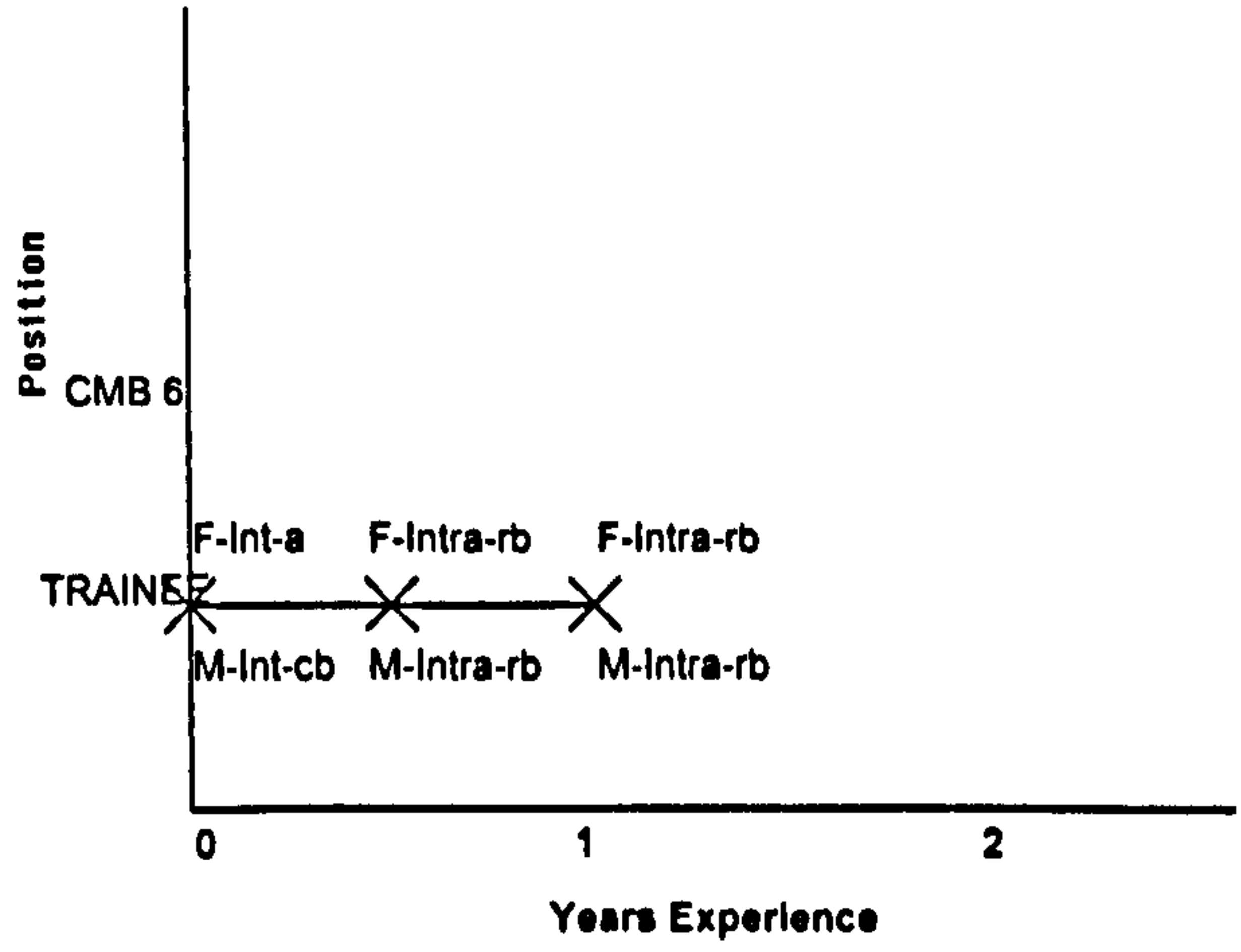
Co.1 Pair - 22



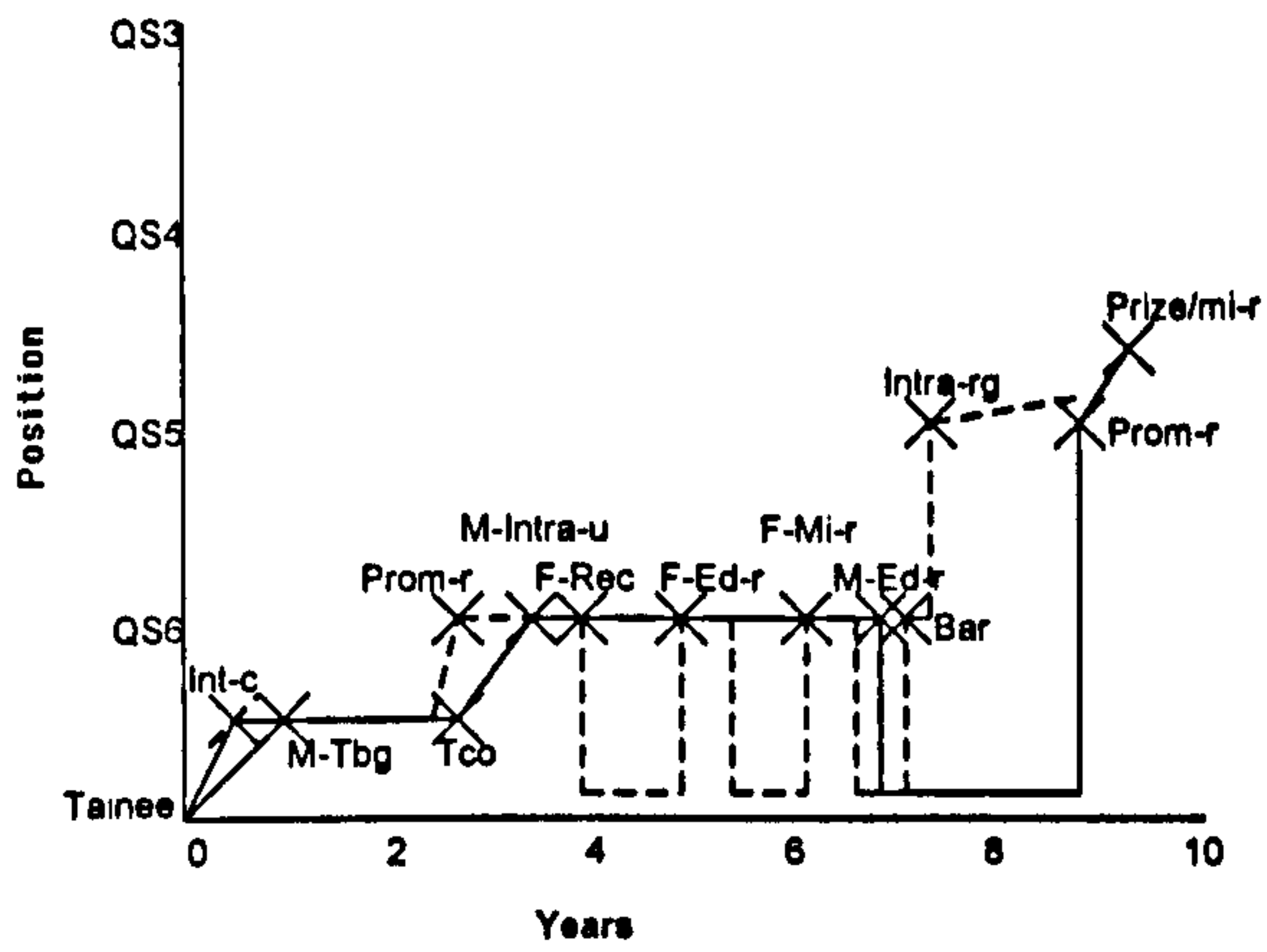
Co.1 Pair - 23



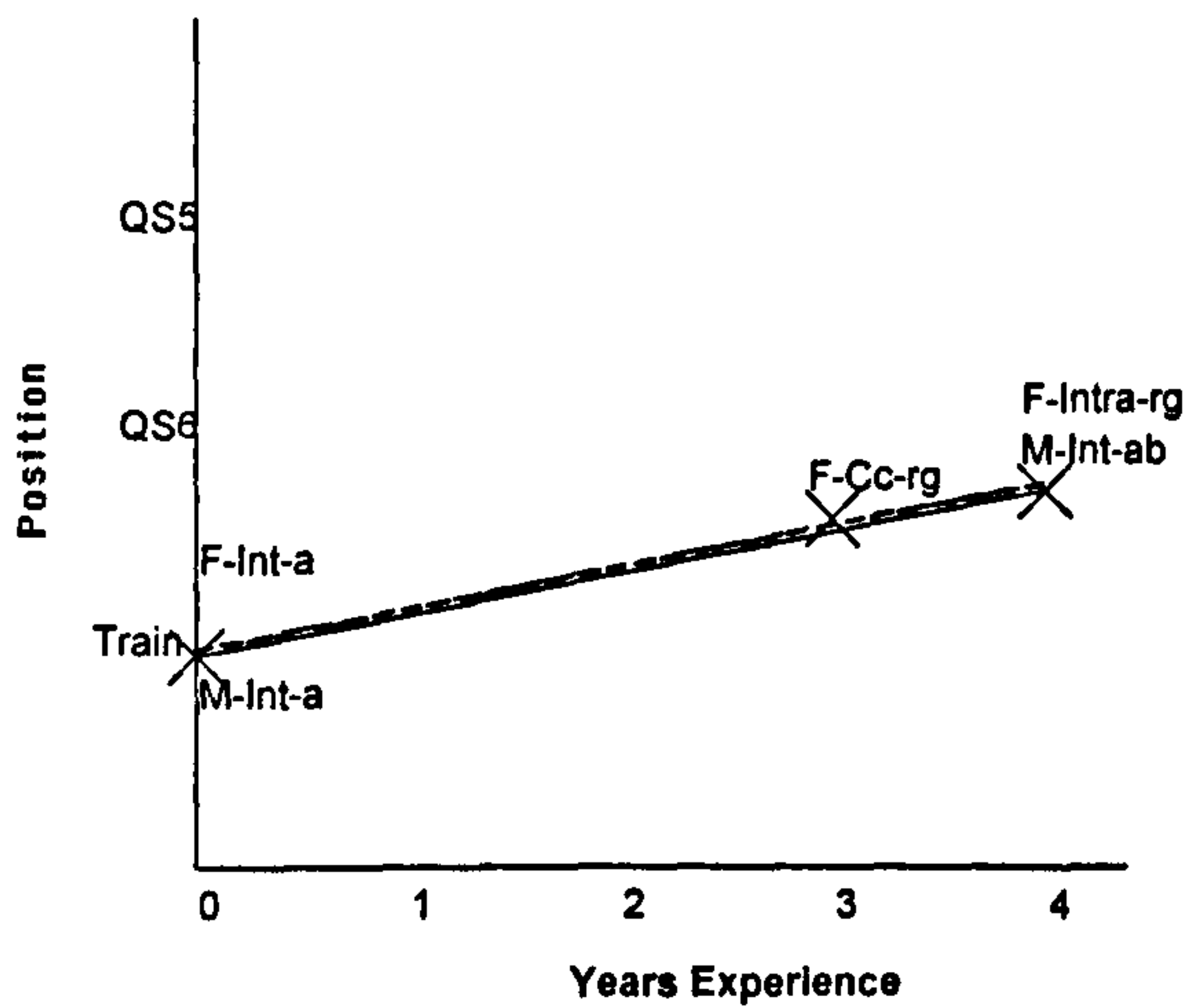
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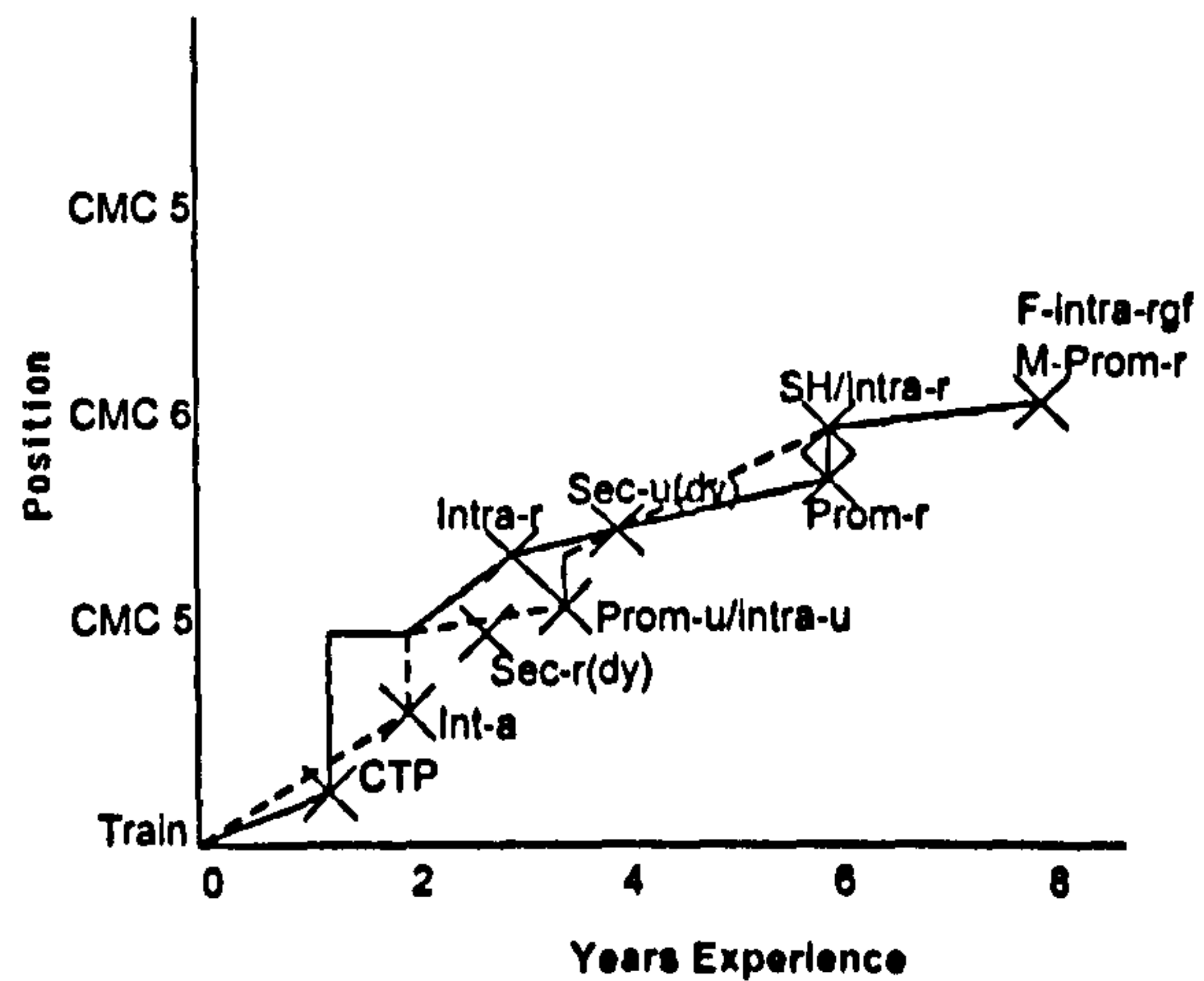
Co.1 Pair - 25



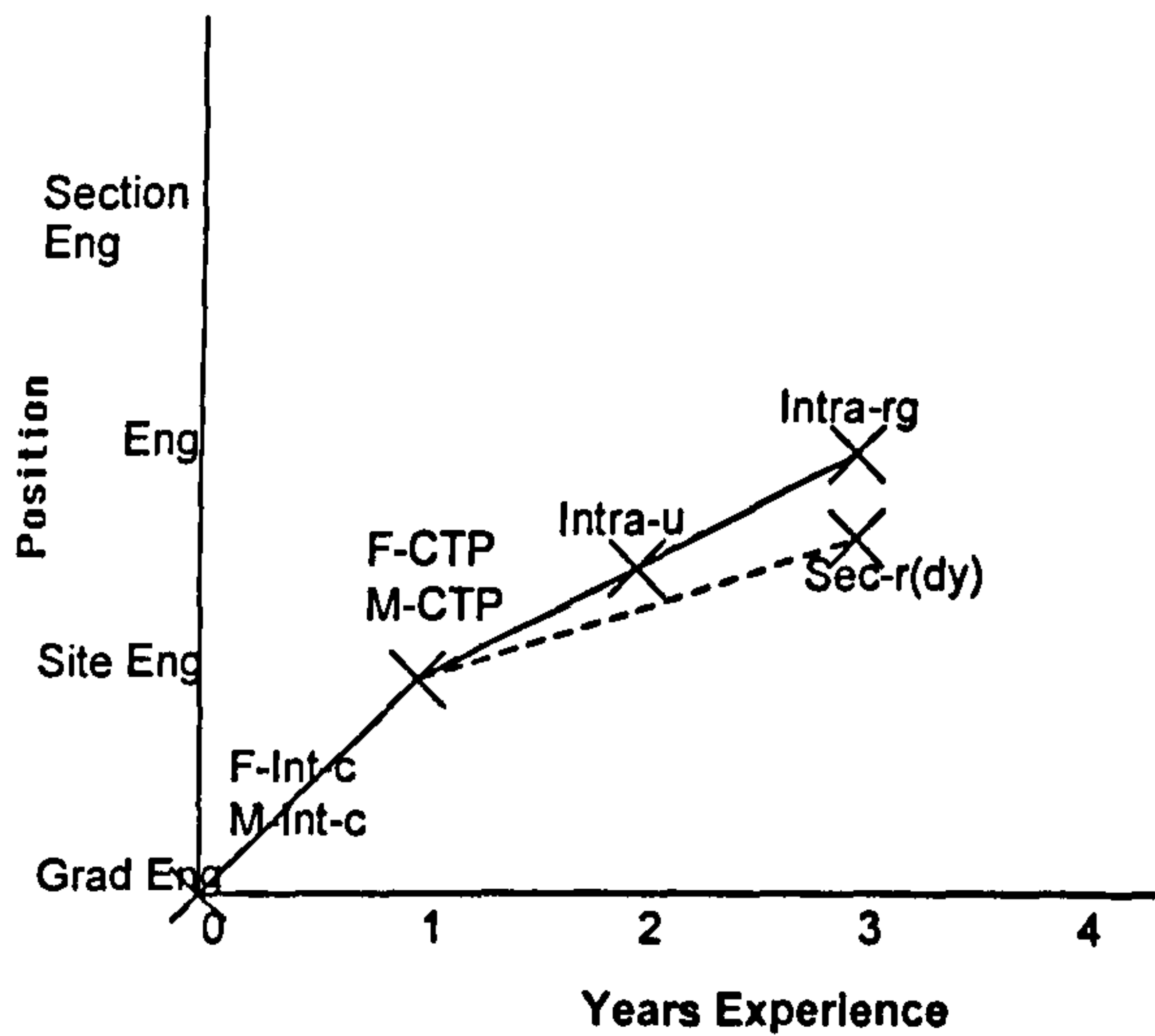
Co.2 Pair - 1



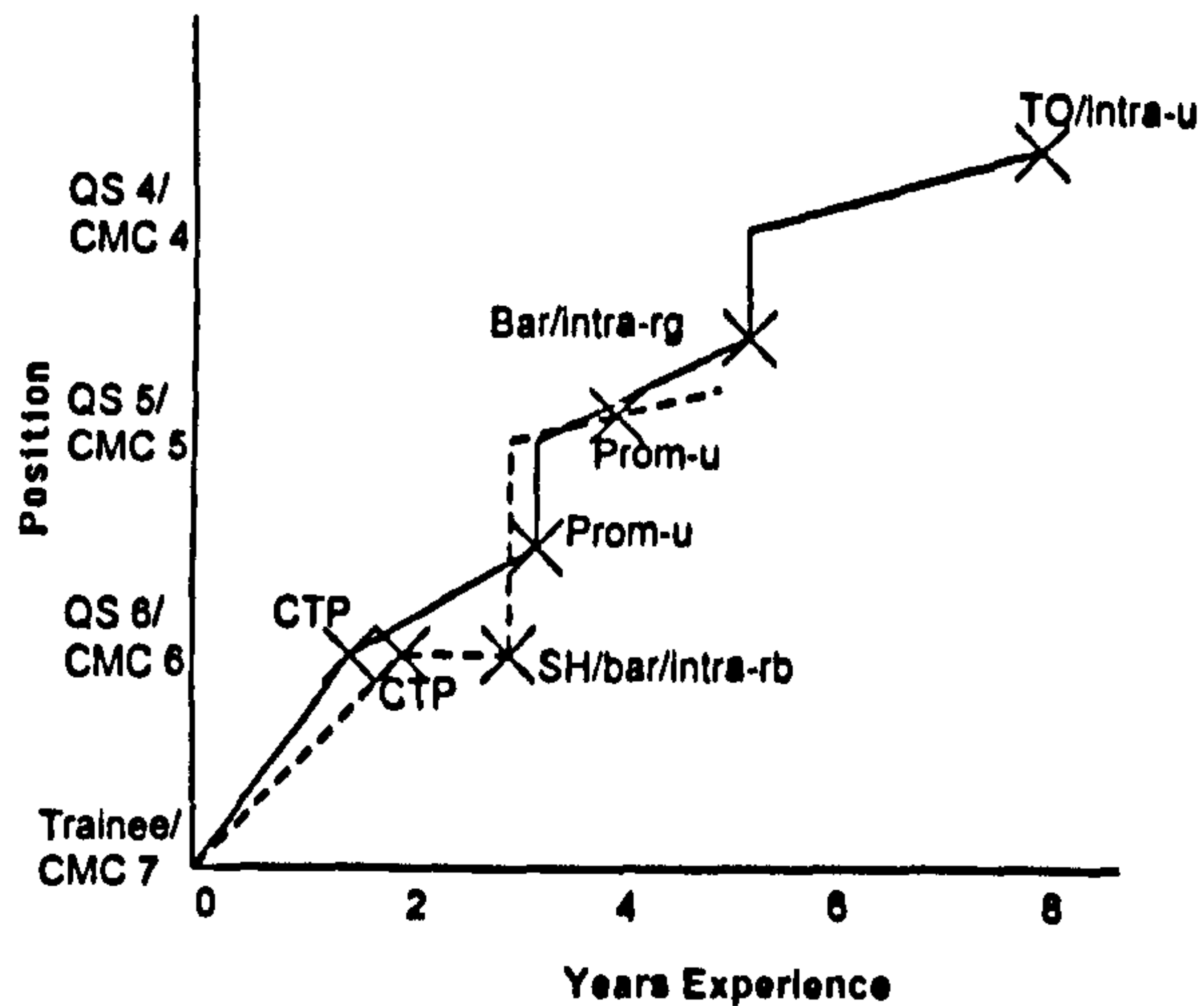
Co.2 Pair - 2



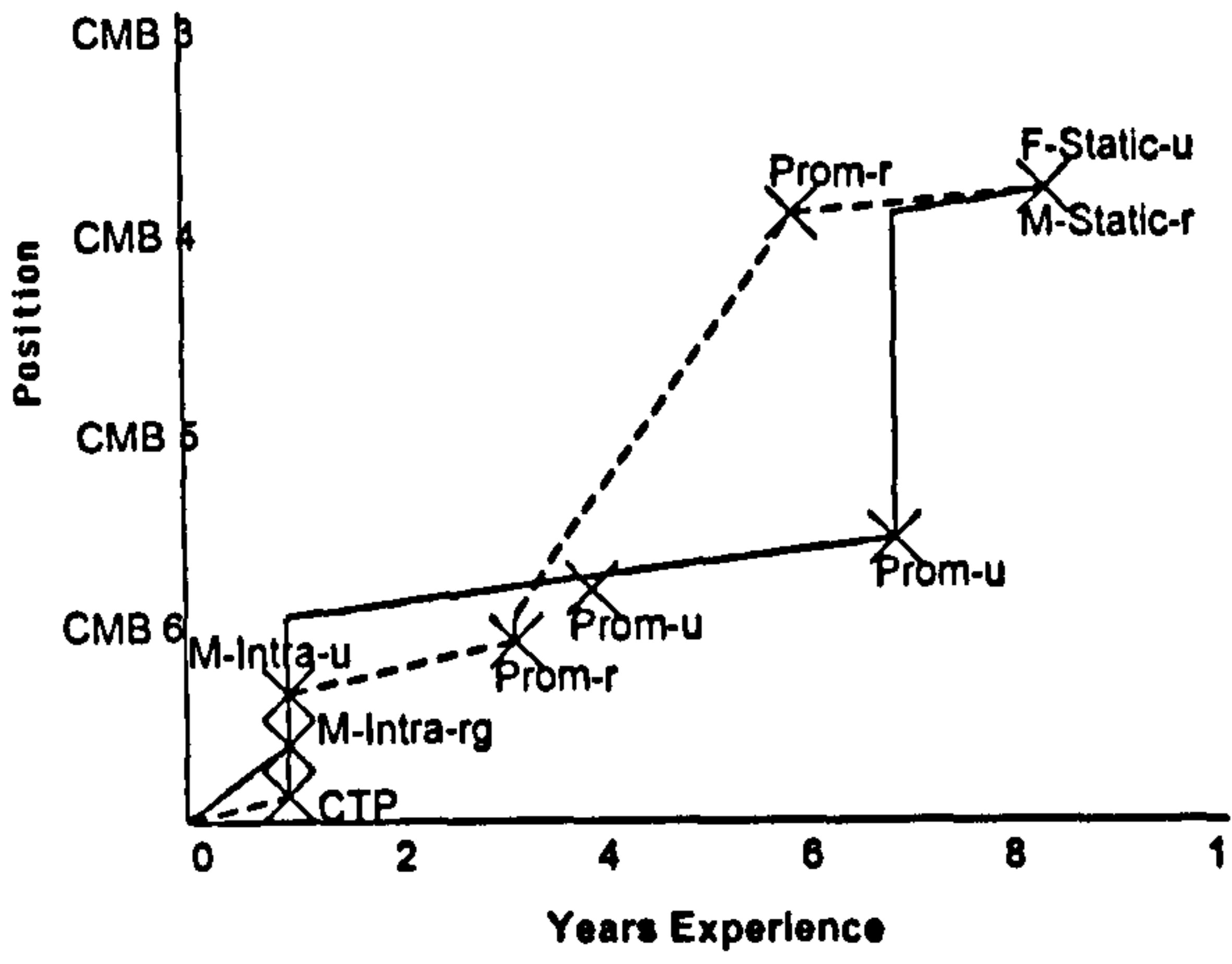
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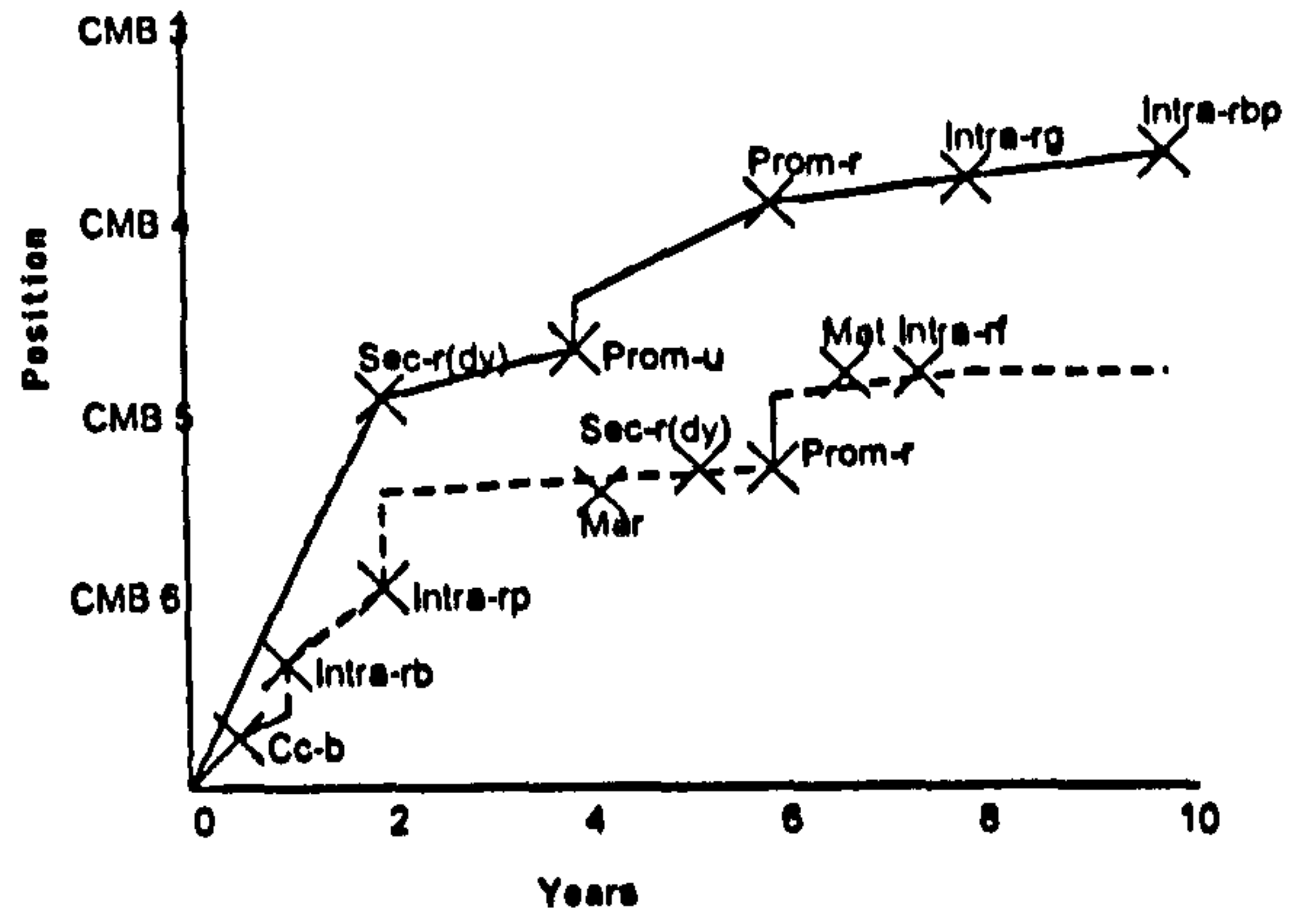
Co.2 Pair - 4



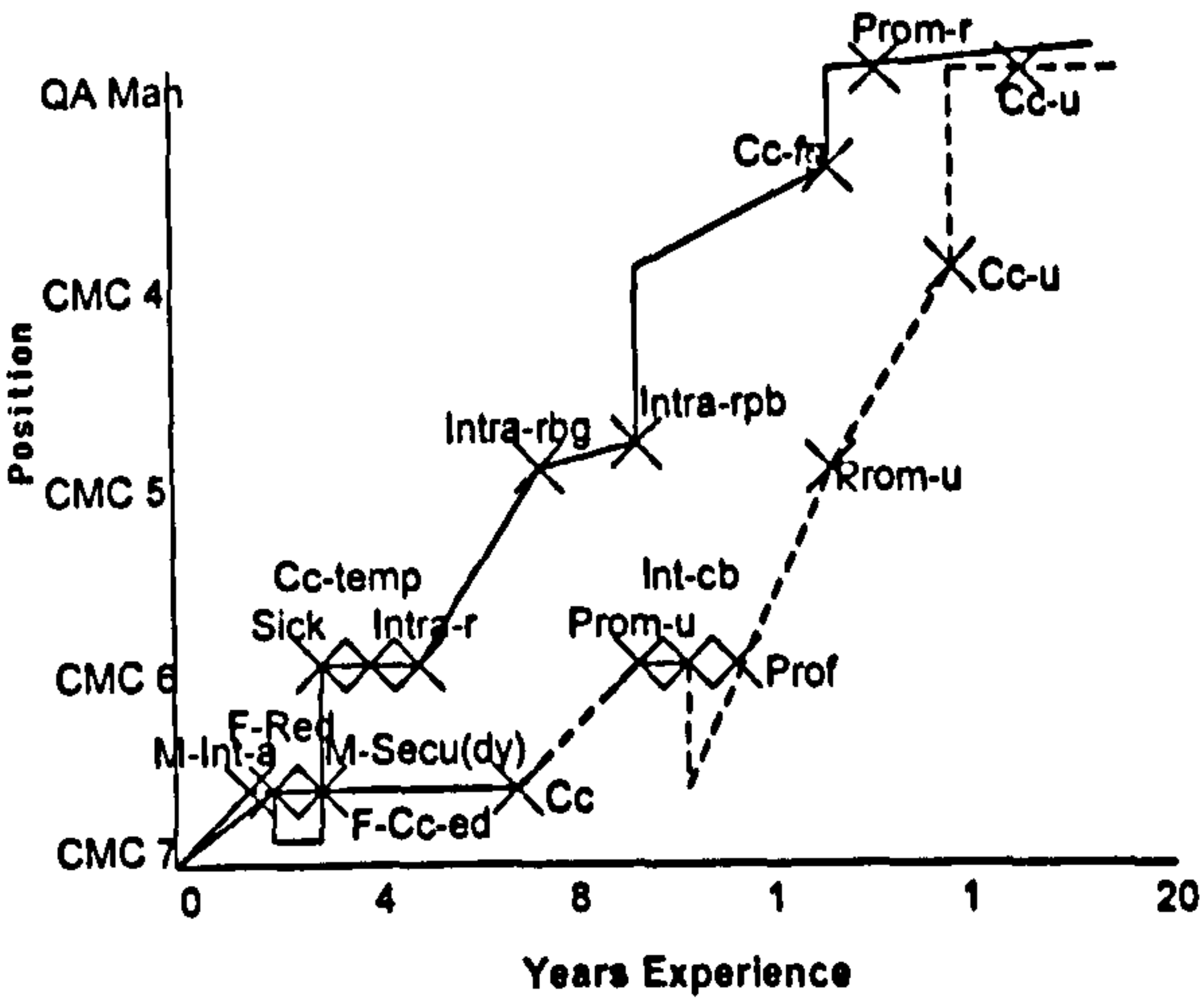
Co.3 Pair - 1



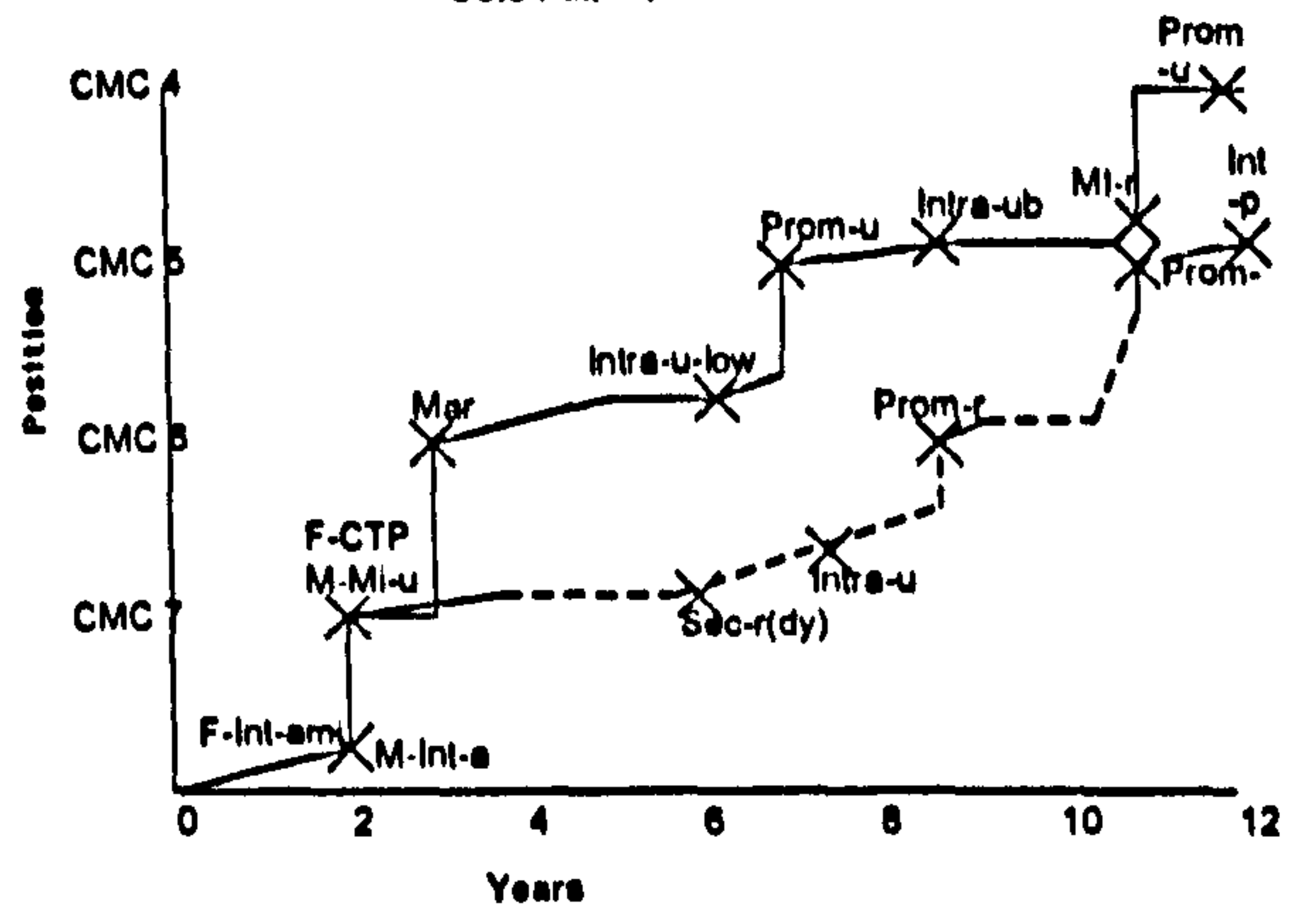
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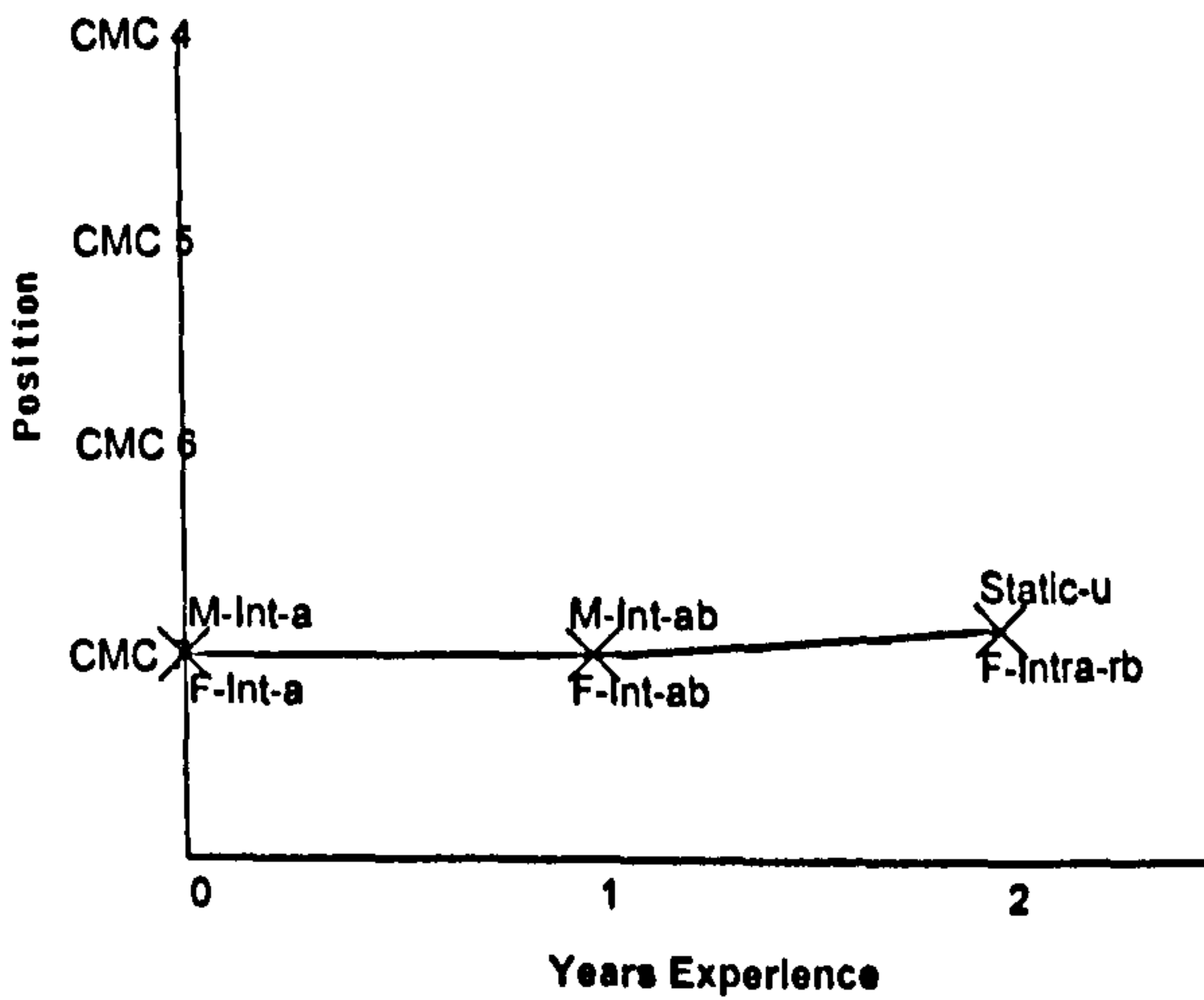
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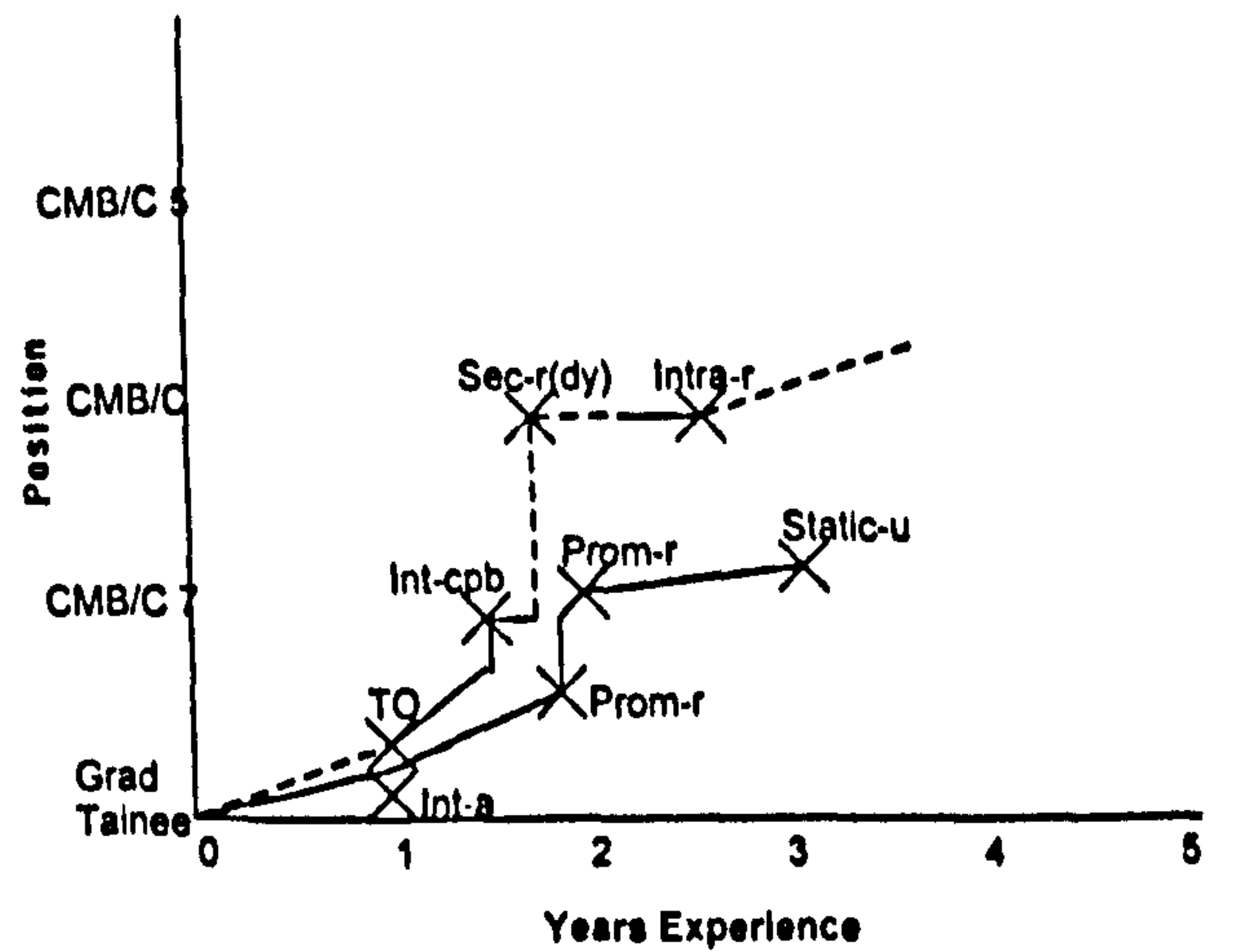
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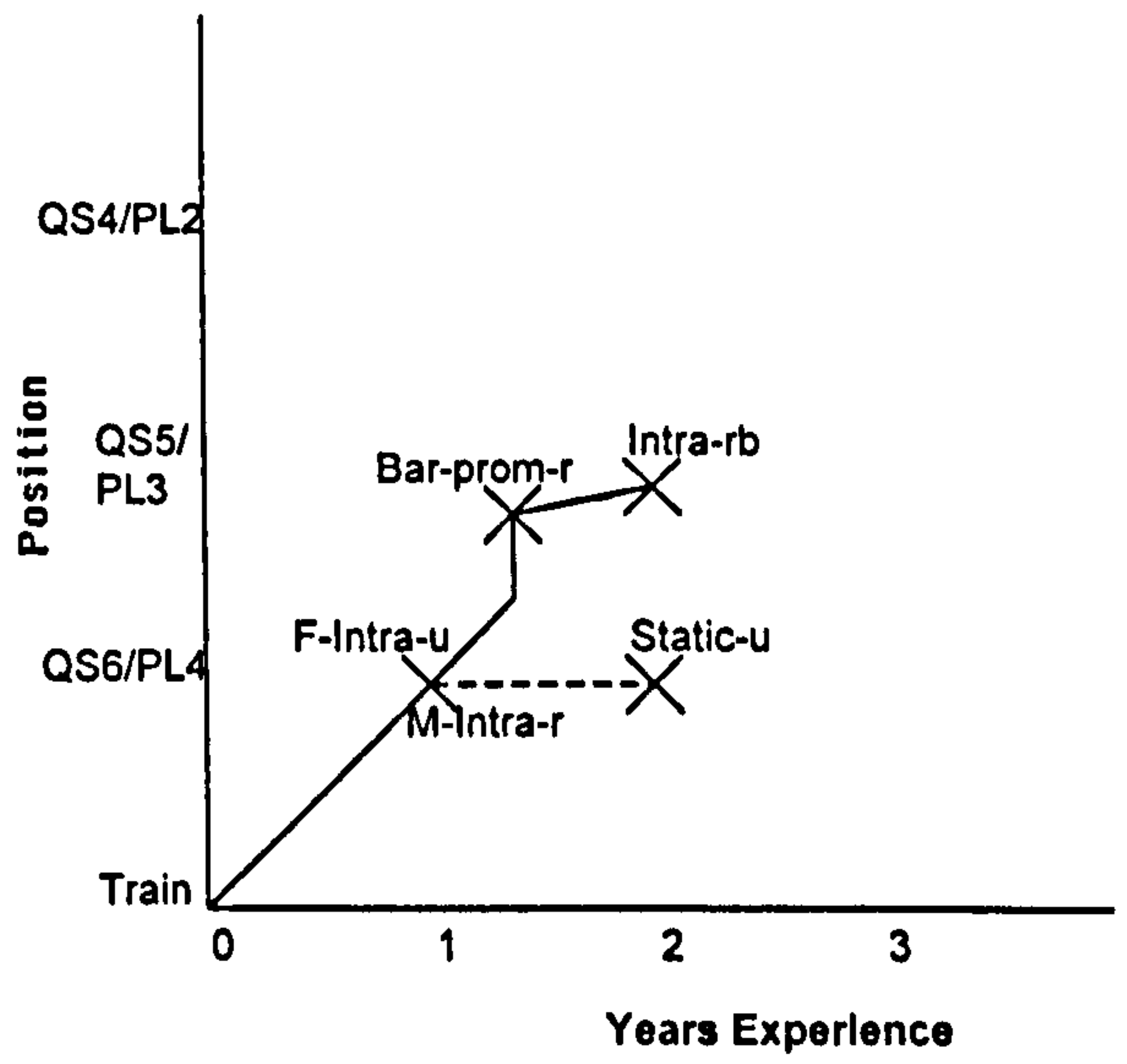
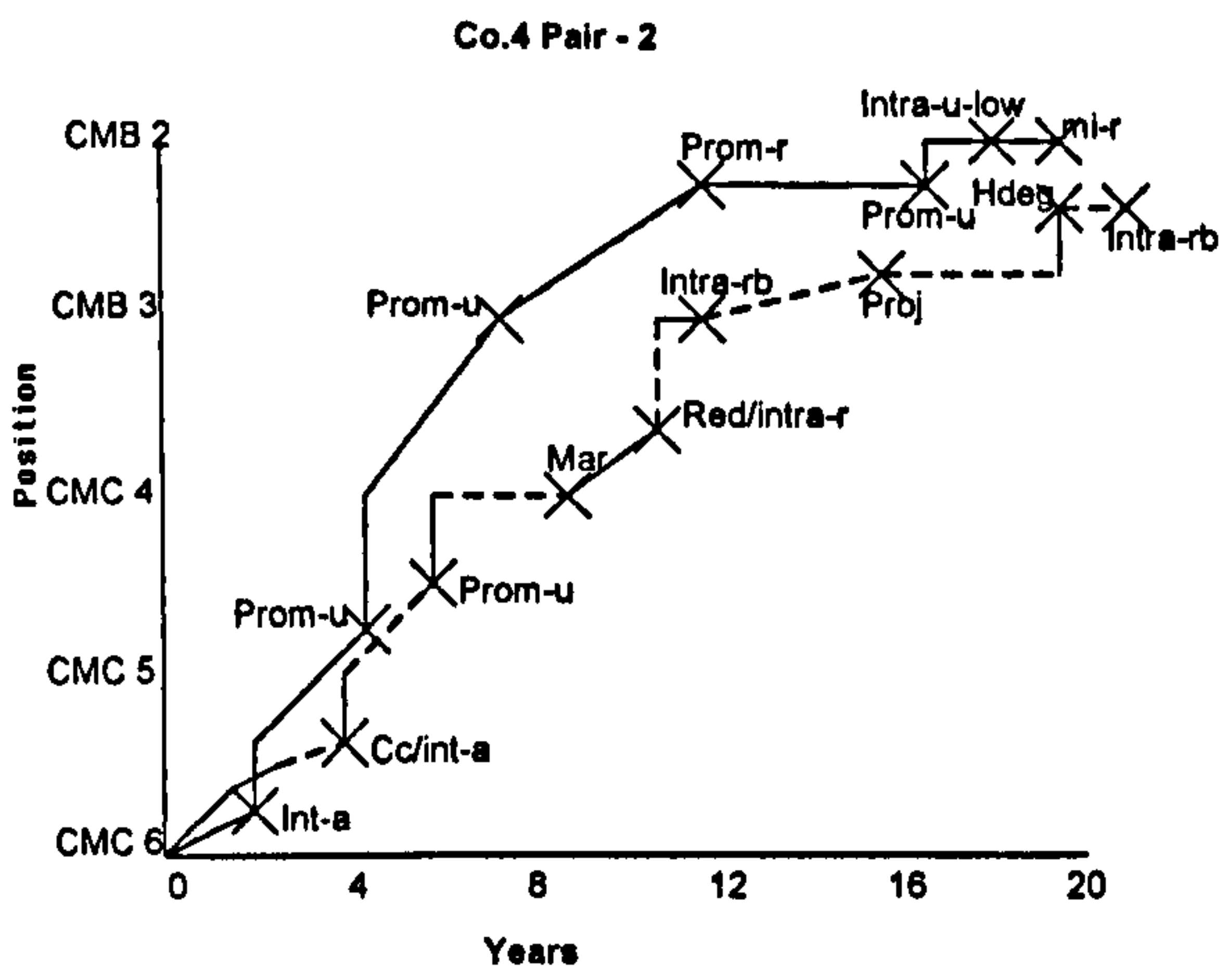
Co.3 Pair - 5



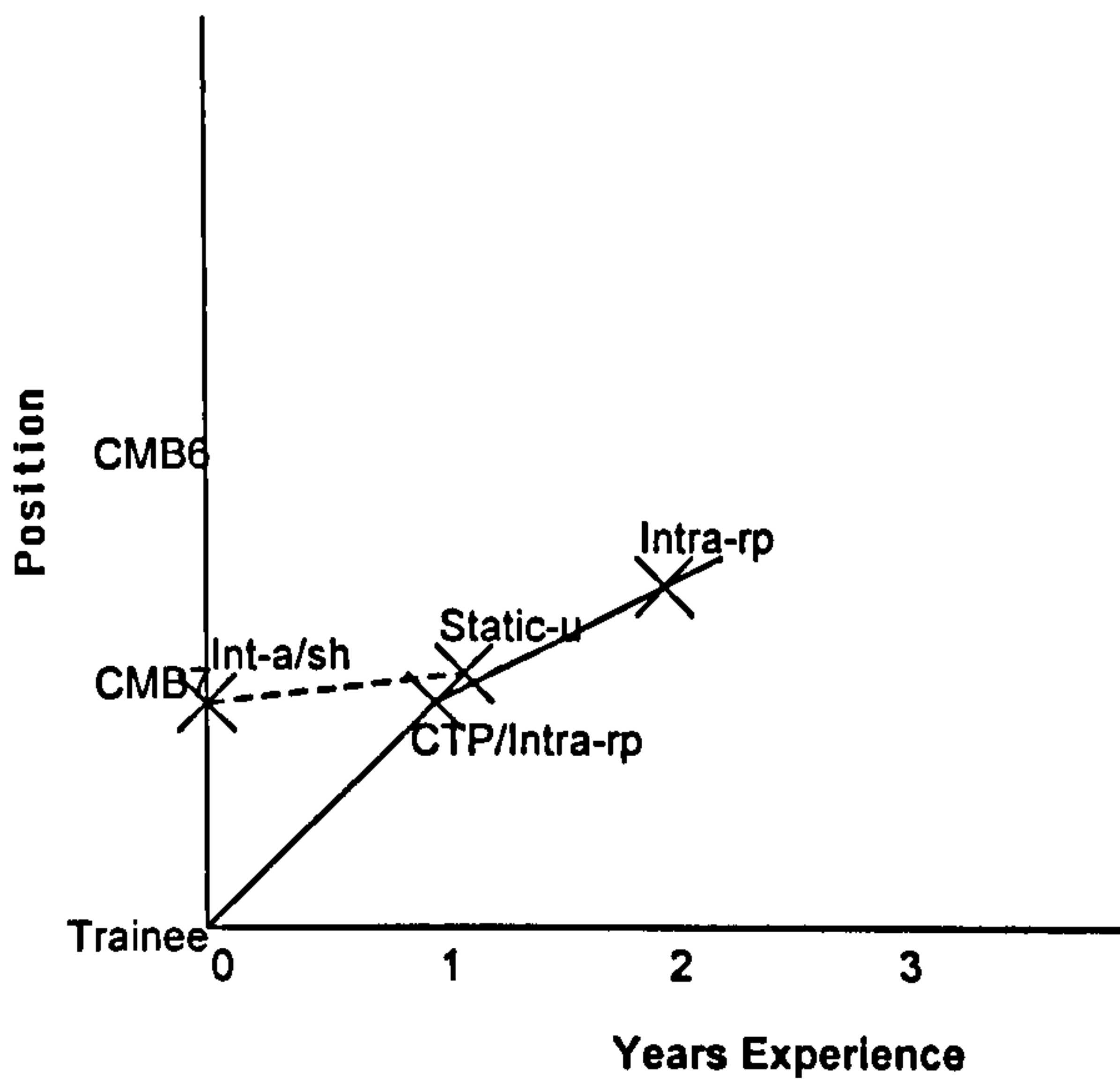
Co.4 Pair - 1



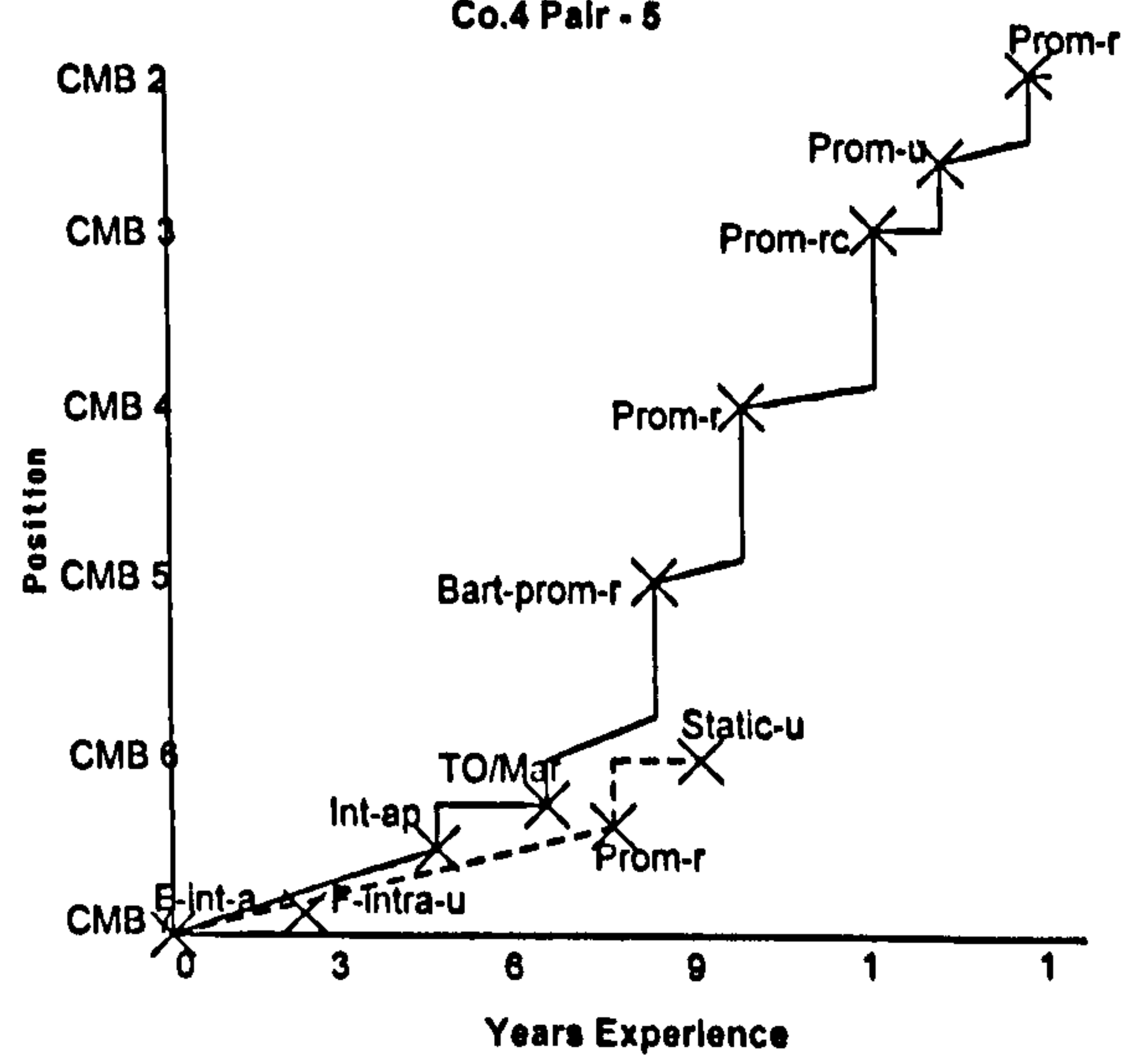
Co.4 Pair - 3



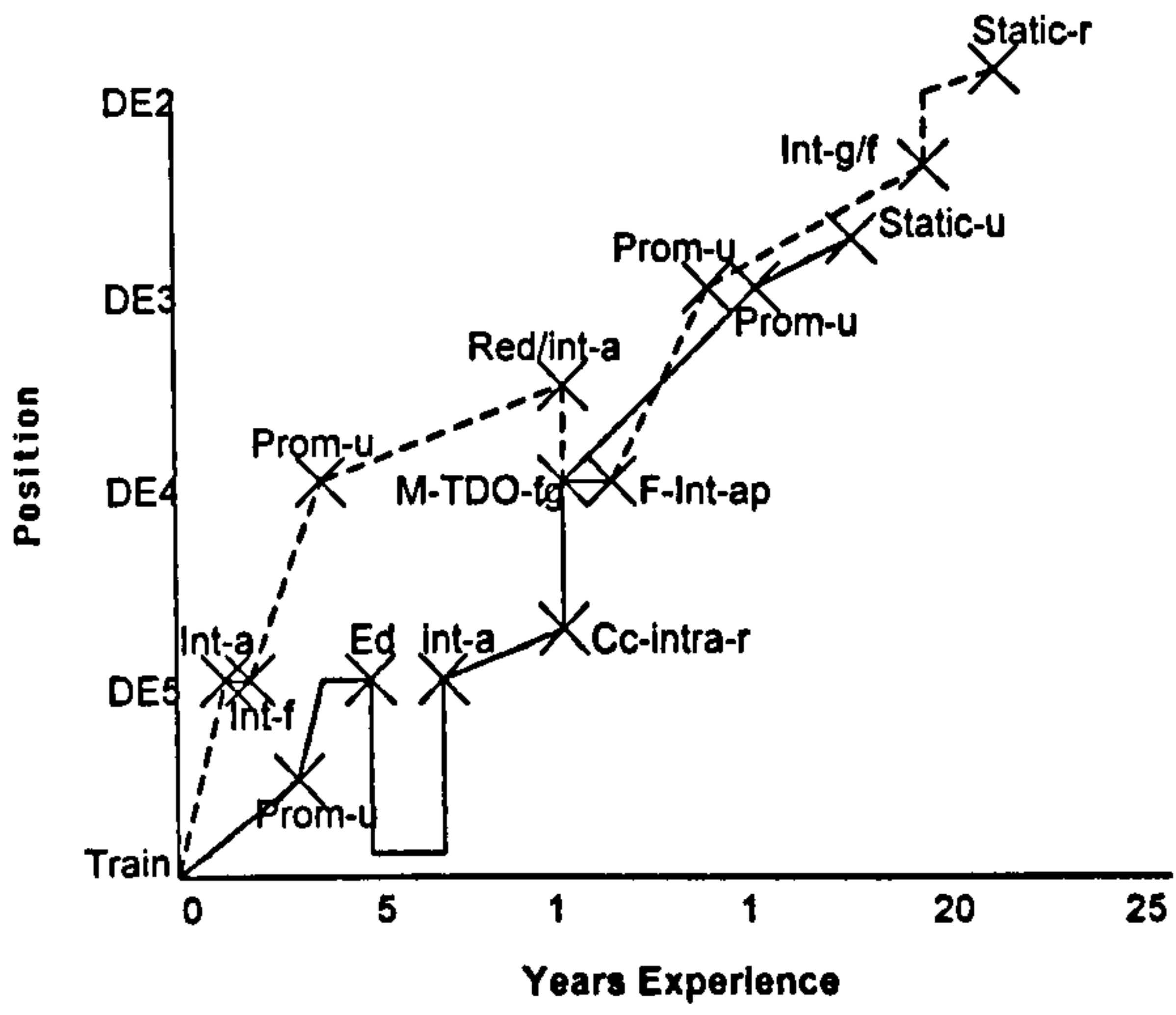
Co.4 Pair - 4



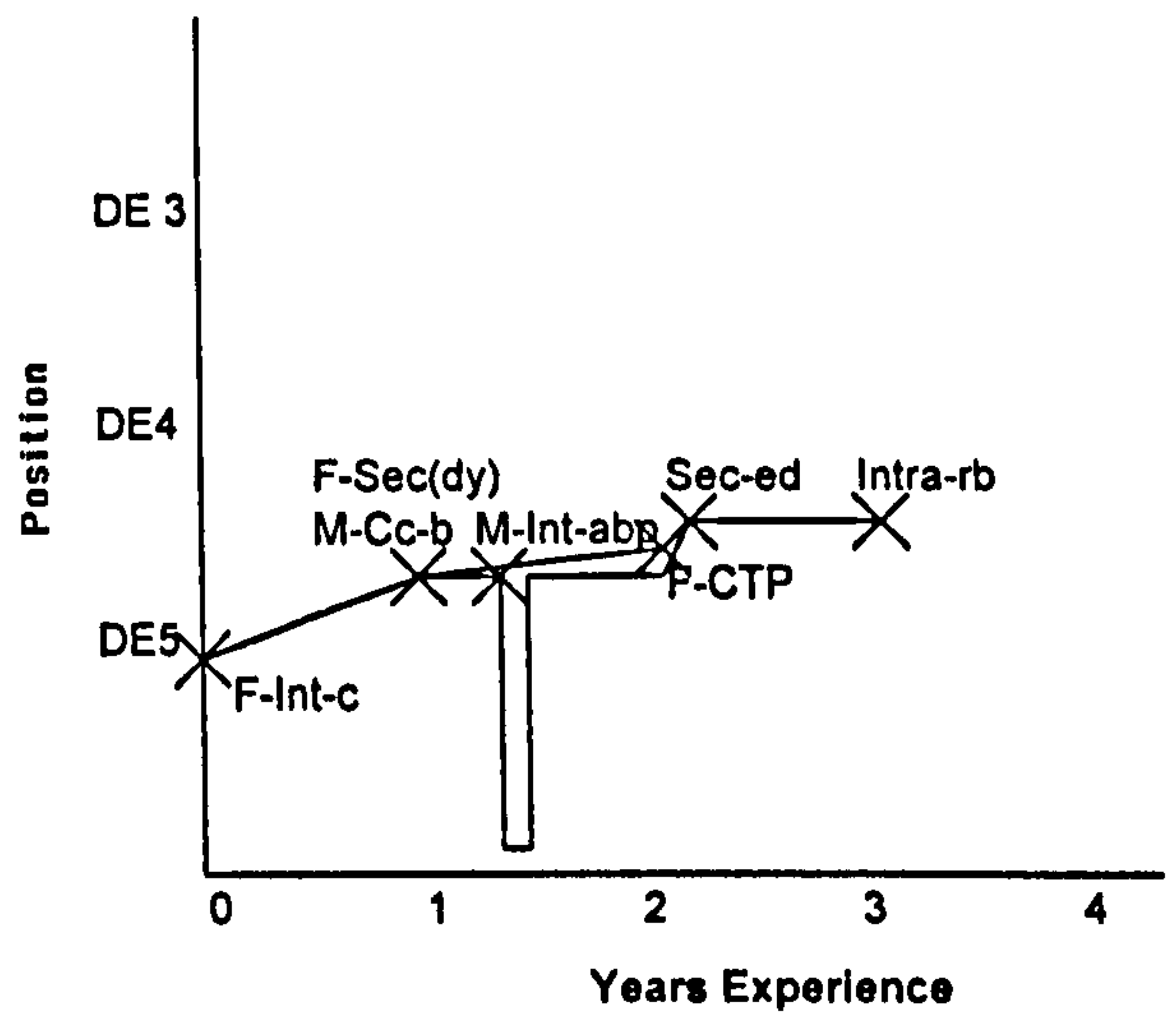
Co.4 Pair - 5



Co.5 Pair - 1



Co.5 Pair - 2



APPENDIX D

Amount of data collected from each informant

The average interview length was around 11,000 words long. Figure D-1 shows the average amount of interview data collected from informants from each career group.

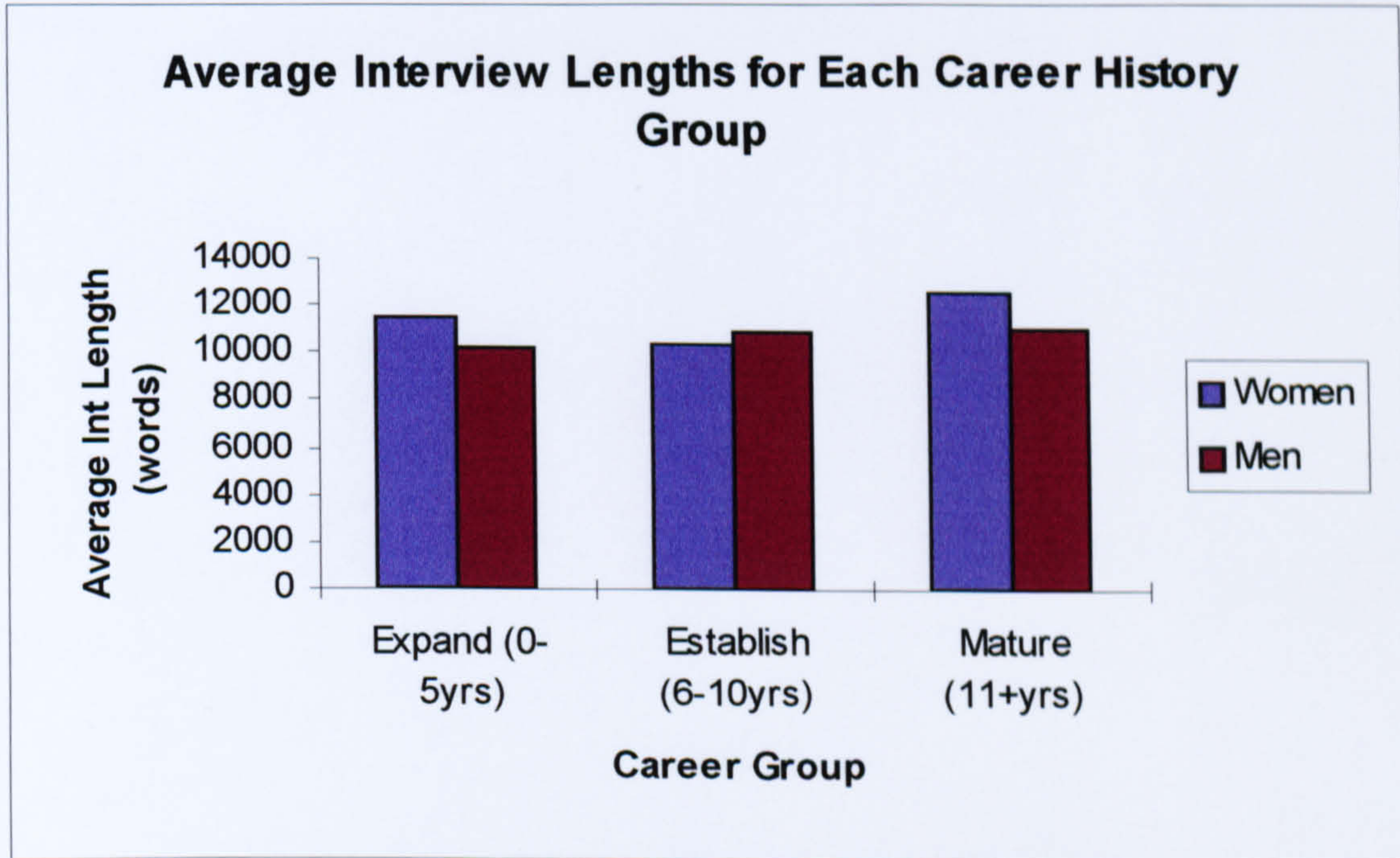


Fig D-1: Amount of interview data collected from each career group

Figs D-2 and D-3 show the amount of data in transcribed words from each informant¹. Key informants are shown with an asterisk (*).

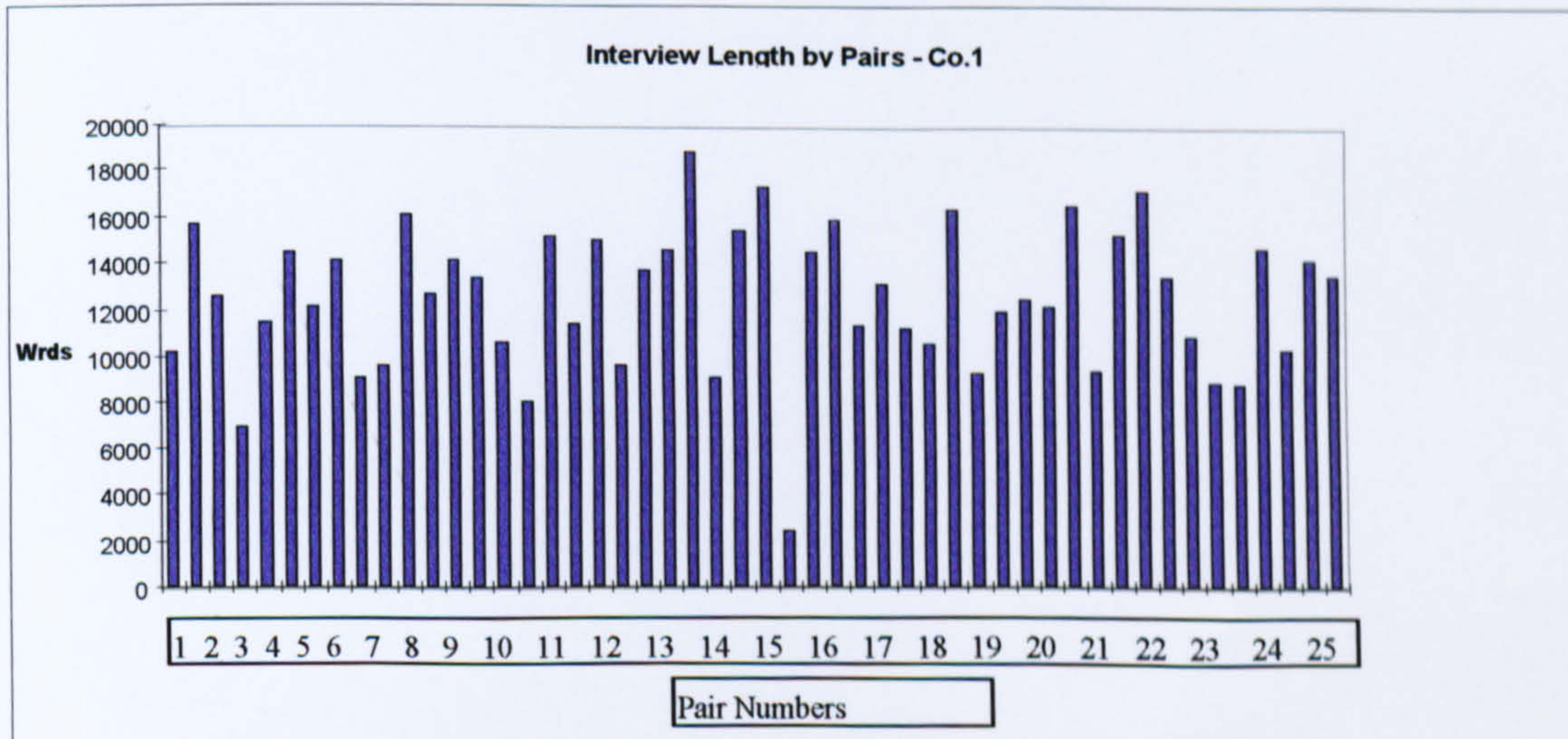


Fig D-2: Interview length for each informant (Co.1 employees only)

¹ Co.1 F14 and Co.4 M5 declined to be tape-recorded, and so the figure refers to transcribed field notes taken during the interview

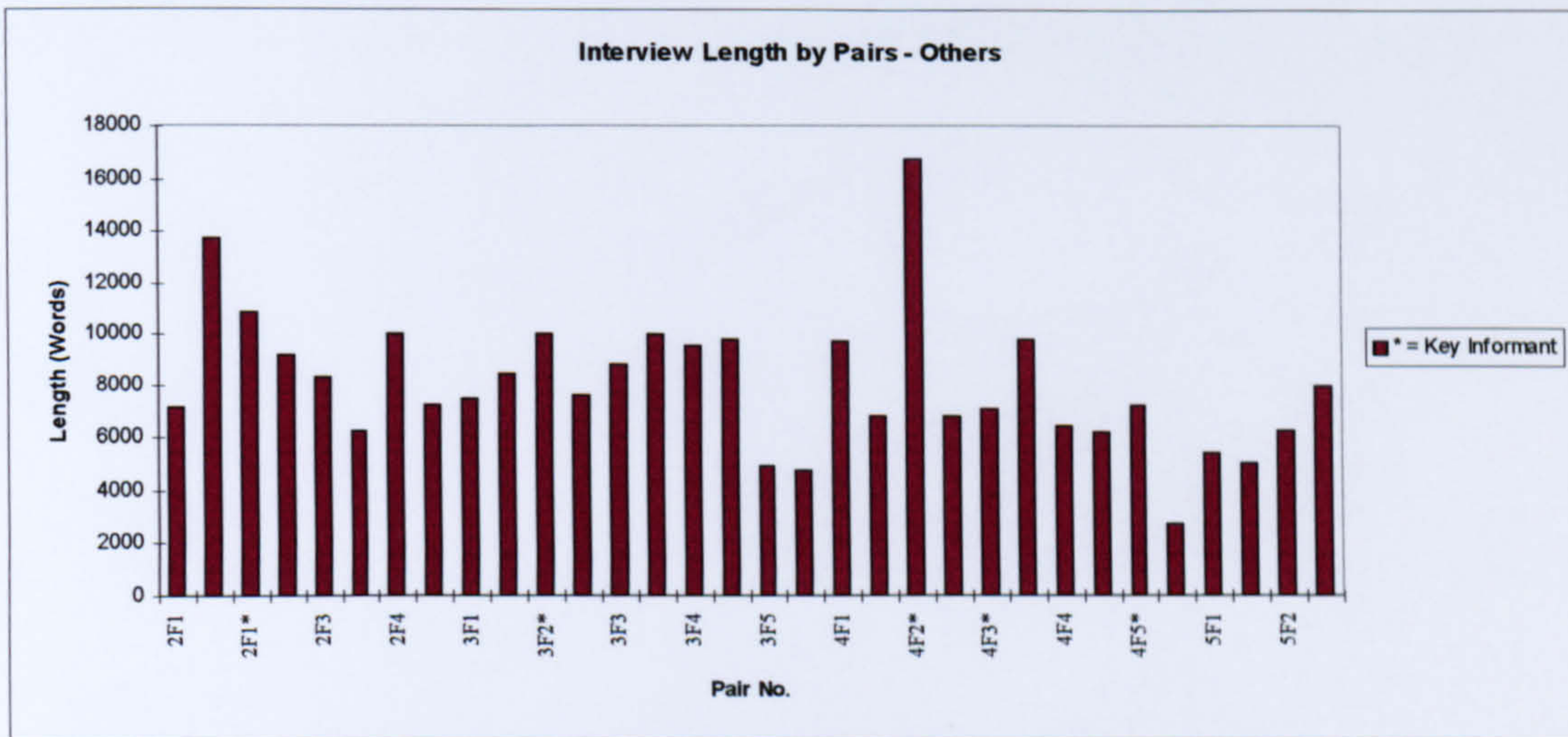


Fig D-3: Interview length for each informant (Other employees)

APPENDIX E

NUDIST index system node addresses

Table E-1 shows the generic first-order node names and addresses within the index system, together with a brief description of the main issues stored under each one.

FIRST ORDER NODE AND ADDRESS	GENERIC DESCRIPTION OF THE CONTENTS OF EACH FIRST ORDER NODE
(1) /BASE DATA	All data known of informants collected at the outset of the interviews or from personnel records (e.g. age, experience, personal status etc.) All data from each informant is coded at appropriate sub-node to allow searching across the data base on particular issues for particular grouping of informants). E.g. - collect all data on issue X from women over 30 with one child working for company 2.
(2) /ENHANCERS	All factors cited as career enhancing by the informants. Allowed them to be explored across different informant groupings.
(3)/CONSTRAINTS	All factors described as constraining or acting as a barrier to career progression. Allowed them to be explored across different informant groupings.
(4) /IMPROVING RETENTION	Factors which were cited by the informants as increasingly the likelihood that they would remain with their present employer.
(5) /CAREER DETERMINANTS	General factors which had affected their career progression cited within, or external to the labour market.
(8) /CAREER & COMPANY CHOICE	Reasons cited for joining their present, or a previous employer, and general reasons for their initial career choice.
(9) /CAREER SUCCESS DEFINITION	How the informants defined a successful career in their own terms, and their ambitions and aspirations for their career development in the future.
(10) /CAREER STRATEGY OR PREFERENCES	The informant's personal strategy for achieving their career aims and ambitions, and the preferred developmental route that they were looking to follow in the future.
(11) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED	The informant's perceptions of the experience, attitudes and abilities required to maintain a successful career in construction, and their assessment of how well they matched these criteria.
(12) /INDUSTRY OPPS & THREATS	Industry related factors which acted as a potential threat or created opportunities for their future career progression.
(14) /WORKING IN CONSTRUCTION	Informant comments and descriptions of general working life in contracting, and the general effects that it had on work/family life.
(16) /I QUIT	Reasons cited by the informants for leaving previous employers, or wanting to leave their current employer.
(17) /IDEAS TESTED	Issues and ideas generated and arising during the analysis tested within the data and fed back into the system.
(100) /MISPLACED NODES	Miscellaneous but related factors not fitting anywhere else in the database. This node was built up through the analysis and most of the data were re-positioned within the index system when coding had been completed. Using this node to store ideas without an obvious conceptual label speeded up the coding process.
(300) /GREAT QUOTES	Particularly representative quotes emerging from the analysis which particular represented informant opinions on a particular issue. By cross-matching this node with others in the system, particularly powerful quotes could be easily extracted under each issue.
(500) /ANALYSIS NODE	The main node for storing the results of searches and qualitative cross-tabulations made during the analysis.
(501) /NEW IDEAS	Ideas emerging from the analysis which were later fed back into the system and tested within the data.

Table E-1: First order index system nodes with addresses

Below is the full list of index system categories taken following the primary coding of the data. This list does not include the temporary searching nodes used during axial coding for grounded theory generation.

Q.S.R. NUD·IST Power version, revision 3.0 GUI.
Licensee: Social Sciences.

PROJECT: MAIN2, User Andrew RJ Dainty, 4:34 pm, Jul 17, 1997.

- (1) /BASE DATA
- (1 1) /BASE DATA/Sex
- (1 1 1) /BASE DATA/Sex/Male
- (1 1 2) /BASE DATA/Sex/Female
- (1 2) /BASE DATA/Age
- (1 2 1) /BASE DATA/Age/20-25
- (1 2 2) /BASE DATA/Age/26-30
- (1 2 3) /BASE DATA/Age/31-35
- (1 2 4) /BASE DATA/Age/36-40
- (1 2 5) /BASE DATA/Age/41-45
- (1 2 6) /BASE DATA/Age/46-50
- (1 3) /BASE DATA/Experience
- (1 3 1) /BASE DATA/Experience/Construction
- (1 3 1 1) /BASE DATA/Experience/Construction/Contracting
- (1 3 1 1 1) /BASE DATA/Experience/Construction/Contracting/0-5yrs
- (1 3 1 1 2) /BASE DATA/Experience/Construction/Contracting/6-10yrs
- (1 3 1 1 3) /BASE DATA/Experience/Construction/Contracting/11-15yrs
- (1 3 1 1 4) /BASE DATA/Experience/Construction/Contracting/16-20yrs
- (1 3 1 1 5) /BASE DATA/Experience/Construction/Contracting/21+yrs
- (1 3 1 2) /BASE DATA/Experience/Construction/Non Contracting
- (1 3 1 2 1) /BASE DATA/Experience/Construction/Non Contracting/0-5yrs
- (1 3 1 2 2) /BASE DATA/Experience/Construction/Non Contracting/6-10yrs
- (1 3 1 2 3) /BASE DATA/Experience/Construction/Non Contracting/11-15yrs
- (1 3 1 2 4) /BASE DATA/Experience/Construction/Non Contracting/16-20yrs
- (1 3 2) /BASE DATA/Experience/Non Construction
- (1 3 2 1) /BASE DATA/Experience/Non Construction/Managerial
- (1 3 2 1 1) /BASE DATA/Experience/Non Construction/Managerial/0-5yrs
- (1 3 2 1 2) /BASE DATA/Experience/Non Construction/Managerial/6-10yrs
- (1 3 2 1 3) /BASE DATA/Experience/Non Construction/Managerial/11-15yrs
- (1 3 2 1 4) /BASE DATA/Experience/Non Construction/Managerial/16-20yrs
- (1 3 2 1 5) /BASE DATA/Experience/Non Construction/Managerial/21-25yrs
- (1 3 2 2) /BASE DATA/Experience/Non Construction/Blue Collar
- (1 3 2 2 1) /BASE DATA/Experience/Non Construction/Blue Collar/0-5yrs
- (1 3 2 2 2) /BASE DATA/Experience/Non Construction/Blue Collar/6-10yrs
- (1 4) /BASE DATA/Employer
- (1 4 1) /BASE DATA/Employer/C1Co.1
- (1 4 1 1) /BASE DATA/Employer/C1Co.1/Central
- (1 4 1 2) /BASE DATA/Employer/C1Co.1/Minor Works
- (1 4 1 3) /BASE DATA/Employer/C1Co.1/Strategic management prog
- (1 4 1 4) /BASE DATA/Employer/C1Co.1/Major Proj
- (1 4 1 5) /BASE DATA/Employer/C1Co.1/Business Development
- (1 4 1 6) /BASE DATA/Employer/C1Co.1/Co.1 North
- (1 4 1 7) /BASE DATA/Employer/C1Co.1/Co.1 Midlands
- (1 4 1 8) /BASE DATA/Employer/C1Co.1/Engineering Services
- (1 4 1 9) /BASE DATA/Employer/C1Co.1/South
- (1 4 1 10) /BASE DATA/Employer/C1Co.1/Scotland
- (1 4 1 11) /BASE DATA/Employer/C1Co.1/Personnel Department
- (1 4 1 12) /BASE DATA/Employer/C1Co.1/Program Management

(1 4 1 13) /BASE DATA/Employer/C1Co.1/Procurement
 (1 4 1 14) /BASE DATA/Employer/C1Co.1/Safety Dept
 (1 4 2) /BASE DATA/Employer/C2
 (1 4 2 1) /BASE DATA/Employer/C2/Building
 (1 4 2 2) /BASE DATA/Employer/C2/Major Projects
 (1 4 2 3) /BASE DATA/Employer/C2/Civil Engineering
 (1 4 2 4) /BASE DATA/Employer/C2/Mech E Services
 (1 4 3) /BASE DATA/Employer/C3
 (1 4 3 1) /BASE DATA/Employer/C3/Build
 (1 4 3 2) /BASE DATA/Employer/C3/London
 (1 4 3 3) /BASE DATA/Employer/C3/Eng Services
 (1 4 3 4) /BASE DATA/Employer/C3/North
 (1 4 3 5) /BASE DATA/Employer/C3/National
 (1 4 3 6) /BASE DATA/Employer/C3/International
 (1 4 4) /BASE DATA/Employer/C4
 (1 4 4 1) /BASE DATA/Employer/C4/Civ Eng
 (1 4 4 2) /BASE DATA/Employer/C4/Regions
 (1 4 4 3) /BASE DATA/Employer/C4/South East
 (1 4 5) /BASE DATA/Employer/C5
 (1 4 5 1) /BASE DATA/Employer/C5Design & Man
 (1 4 6) /BASE DATA/Employer/Other
 (1 4 6 1) /BASE DATA/Employer/Other/Small Contractor
 (1 5) /BASE DATA/Years Service
 (1 5 1) /BASE DATA/Years Service/0-2yrs
 (1 5 2) /BASE DATA/Years Service/3-5yrs
 (1 5 3) /BASE DATA/Years Service/6-10yrs
 (1 5 4) /BASE DATA/Years Service/11+yrs
 (1 6) /BASE DATA/Profession & Position
 (1 6 1) /BASE DATA/Profession & Position/Const Man
 (1 6 1 1) /BASE DATA/Profession & Position/Const Man/Civil
 (1 6 1 1 1) /BASE DATA/Profession & Position/Const Man/Civil/CMC1
 (1 6 1 1 2) /BASE DATA/Profession & Position/Const Man/Civil/CMC2
 (1 6 1 1 3) /BASE DATA/Profession & Position/Const Man/Civil/CMC3
 (1 6 1 1 4) /BASE DATA/Profession & Position/Const Man/Civil/CMC4
 (1 6 1 1 5) /BASE DATA/Profession & Position/Const Man/Civil/CMC5
 (1 6 1 1 6) /BASE DATA/Profession & Position/Const Man/Civil/CMC6
 (1 6 1 1 7) /BASE DATA/Profession & Position/Const Man/Civil/CMC7
 (1 6 1 1 8) /BASE DATA/Profession & Position/Const Man/Civil/CMC8
 (1 6 1 2) /BASE DATA/Profession & Position/Const Man/Building
 (1 6 1 2 1) /BASE DATA/Profession & Position/Const Man/Building/CMB1
 (1 6 1 2 2) /BASE DATA/Profession & Position/Const Man/Building/CMB2
 (1 6 1 2 3) /BASE DATA/Profession & Position/Const Man/Building/CMB3
 (1 6 1 2 4) /BASE DATA/Profession & Position/Const Man/Building/CMB4
 (1 6 1 2 5) /BASE DATA/Profession & Position/Const Man/Building/CMB5
 (1 6 1 2 6) /BASE DATA/Profession & Position/Const Man/Building/CMB6
 (1 6 1 2 7) /BASE DATA/Profession & Position/Const Man/Building/CMB7
 (1 6 1 2 8) /BASE DATA/Profession & Position/Const Man/Building/CMB8
 (1 6 2) /BASE DATA/Profession & Position/QS
 (1 6 2 1) /BASE DATA/Profession & Position/QS/QS1
 (1 6 2 2) /BASE DATA/Profession & Position/QS/QS2
 (1 6 2 3) /BASE DATA/Profession & Position/QS/QS3
 (1 6 2 4) /BASE DATA/Profession & Position/QS/QS4
 (1 6 2 5) /BASE DATA/Profession & Position/QS/QS5
 (1 6 2 6) /BASE DATA/Profession & Position/QS/QS6
 (1 6 3) /BASE DATA/Profession & Position/Designers
 (1 6 3 1) /BASE DATA/Profession & Position/Designers/DE1
 (1 6 3 2) /BASE DATA/Profession & Position/Designers/DE2
 (1 6 3 3) /BASE DATA/Profession & Position/Designers/DE3

(1 6 3 4) /BASE DATA/Profession & Position/Designers/DE4
 (1 6 3 5) /BASE DATA/Profession & Position/Designers/DE5
 (1 6 4) /BASE DATA/Profession & Position/Senior Positions
 (1 6 4 1) /BASE DATA/Profession & Position/Senior Positions/SM1
 (1 6 4 2) /BASE DATA/Profession & Position/Senior Positions/SM2
 (1 6 5) /BASE DATA/Profession & Position/Other Positions
 (1 6 5 1) /BASE DATA/Profession & Position/Other Positions/CAD Manager
 (1 6 5 2) /BASE DATA/Profession & Position/Other Positions/Unemp Housewife
 (1 6 5 3) /BASE DATA/Profession & Position/Other Positions/Research
 (1 6 5 4) /BASE DATA/Profession & Position/Other Positions/Trainee Conult Eng
 (1 6 5 5) /BASE DATA/Profession & Position/Other Positions/Strategic Man Trainee
 (1 6 5 6) /BASE DATA/Profession & Position/Other Positions/Business Dev Manager
 (1 6 5 6 6) /BASE DATA/Profession & Position/Other Positions/Business Dev Manager/Bus
 Dev Asst Man
 (1 6 5 7) /BASE DATA/Profession & Position/Other Positions/Document Controller
 (1 6 5 8) /BASE DATA/Profession & Position/Other Positions/Building Services Engineer -
 Senior Manager
 (1 6 5 9) /BASE DATA/Profession & Position/Other Positions/Personnel Manager
 (1 6 5 10) /BASE DATA/Profession & Position/Other Positions/Assistant Planner
 (1 6 5 11) /BASE DATA/Profession & Position/Other Positions/Safety Manager
 (1 6 5 12) /BASE DATA/Profession & Position/Other Positions/QA Manager
 (1 6 5 13) /BASE DATA/Profession & Position/Other Positions/Procurement Manager
 (1 6 5 14) /BASE DATA/Profession & Position/Other Positions/Marketing Assistant
 (1 7) /BASE DATA/Qualifications
 (1 7 1) /BASE DATA/Qualifications/Degree
 (1 7 1 1) /BASE DATA/Qualifications/Degree/3rd
 (1 7 1 2) /BASE DATA/Qualifications/Degree/ 2:2
 (1 7 1 3) /BASE DATA/Qualifications/Degree/ 2:1
 (1 7 1 4) /BASE DATA/Qualifications/Degree/1st
 (1 7 2) /BASE DATA/Qualifications/Post Grad
 (1 7 2 1) /BASE DATA/Qualifications/Post Grad/Masters
 (1 7 2 2) /BASE DATA/Qualifications/Post Grad/MBA
 (1 7 3) /BASE DATA/Qualifications/Professional
 (1 7 3 1) /BASE DATA/Qualifications/Professional/CIOB
 (1 7 3 1 1) /BASE DATA/Qualifications/Professional/CIOB/Full
 (1 7 3 1 2) /BASE DATA/Qualifications/Professional/CIOB/Part
 (1 7 3 2) /BASE DATA/Qualifications/Professional/RICS
 (1 7 3 2 1) /BASE DATA/Qualifications/Professional/RICS/Full
 (1 7 3 2 2) /BASE DATA/Qualifications/Professional/RICS/Part
 (1 7 3 3) /BASE DATA/Qualifications/Professional/ICE
 (1 7 3 3 1) /BASE DATA/Qualifications/Professional/ICE/Full
 (1 7 3 3 2) /BASE DATA/Qualifications/Professional/ICE/Part
 (1 7 3 4) /BASE DATA/Qualifications/Professional/RIBA
 (1 7 3 4 1) /BASE DATA/Qualifications/Professional/RIBA/Full
 (1 7 3 4 2) /BASE DATA/Qualifications/Professional/RIBA/Part
 (1 7 3 5) /BASE DATA/Qualifications/Professional/MCIBSE
 (1 7 3 5 1) /BASE DATA/Qualifications/Professional/MCIBSE/Part CIBSE
 (1 7 4) /BASE DATA/Qualifications/Non-degree Construction Route
 (1 7 5) /BASE DATA/Qualifications/Trades Background
 (1 7 6) /BASE DATA/Qualifications/Non Cognate or other
 (1 7 7) /BASE DATA/Qualifications/Trainee or Undergrad
 (1 8) /BASE DATA/Current Work Type & Value
 (1 8 1) /BASE DATA/Current Work Type & Value/Office
 (1 8 1 1) /BASE DATA/Current Work Type & Value/Office/Head Office
 (1 8 1 1 1) /BASE DATA/Current Work Type & Value/Office/Head Office/<£10m
 (1 8 1 1 2) /BASE DATA/Current Work Type & Value/Office/Head Office/£10-£20m
 (1 8 1 1 3) /BASE DATA/Current Work Type & Value/Office/Head Office/£20m+
 (1 8 1 2) /BASE DATA/Current Work Type & Value/Office/Regional Office

(1 8 1 2 1) /BASE DATA/Current Work Type & Value/Office/Regional Office/<£10m
 (1 8 1 2 2) /BASE DATA/Current Work Type & Value/Office/Regional Office/£10-£20m
 (1 8 1 2 3) /BASE DATA/Current Work Type & Value/Office/Regional Office/£20m+
 (1 8 2) /BASE DATA/Current Work Type & Value/Site
 (1 8 2 1) /BASE DATA/Current Work Type & Value/Site/<£10m
 (1 8 2 2) /BASE DATA/Current Work Type & Value/Site/£10-£20m
 (1 8 2 3) /BASE DATA/Current Work Type & Value/Site/£20m+
 (1 8 2 4) /BASE DATA/Current Work Type & Value/Site/£50m+
 (1 8 3) /BASE DATA/Current Work Type & Value/Not project related
 (1 9) /BASE DATA/Status
 (1 9 1) /BASE DATA/Status/Married
 (1 9 2) /BASE DATA/Status/Cohabiting
 (1 9 3) /BASE DATA/Status/Single
 (1 9 4) /BASE DATA/Status/Div or sep
 (1 10) /BASE DATA/Children
 (1 10 1) /BASE DATA/Children/Yes
 (1 10 1 1) /BASE DATA/Children/Yes/1
 (1 10 1 2) /BASE DATA/Children/Yes/2
 (1 10 1 3) /BASE DATA/Children/Yes/3
 (1 10 2) /BASE DATA/Children/No
 (1 10 3) /BASE DATA/Children/Pregnant
 (1 11) /BASE DATA/Ability
 (1 11 1) /BASE DATA/Ability/1
 (1 11 2) /BASE DATA/Ability/2
 (1 11 3) /BASE DATA/Ability/3
 (1 11 4) /BASE DATA/Ability/4
 (1 11 5) /BASE DATA/Ability/5
 (1 12) /BASE DATA/Ambition
 (1 12 1) /BASE DATA/Ambition/1
 (1 12 2) /BASE DATA/Ambition/2
 (1 12 3) /BASE DATA/Ambition/3
 (1 12 4) /BASE DATA/Ambition/4
 (1 12 5) /BASE DATA/Ambition/5
 (1 13) /BASE DATA/Pair No.
 (1 13 1) /BASE DATA/Pair No./Co.1 1
 (1 13 2) /BASE DATA/Pair No./Co.1 2
 (1 13 3) /BASE DATA/Pair No./Co.1 3
 (1 13 4) /BASE DATA/Pair No./Co.1 4
 (1 13 5) /BASE DATA/Pair No./Co.1 5
 (1 13 6) /BASE DATA/Pair No./Co.1 6
 (1 13 7) /BASE DATA/Pair No./Co.1 7
 (1 13 8) /BASE DATA/Pair No./Co.1 8
 (1 13 9) /BASE DATA/Pair No./Co.1 9
 (1 13 10) /BASE DATA/Pair No./Co.1 10
 (1 13 11) /BASE DATA/Pair No./Co.1 11
 (1 13 12) /BASE DATA/Pair No./Co.1 12
 (1 13 13) /BASE DATA/Pair No./Co.1 13
 (1 13 14) /BASE DATA/Pair No./Co.1 14
 (1 13 15) /BASE DATA/Pair No./Co.1 15
 (1 13 16) /BASE DATA/Pair No./Co.1 16
 (1 13 17) /BASE DATA/Pair No./Co.1 17
 (1 13 18) /BASE DATA/Pair No./Co.1 18
 (1 13 19) /BASE DATA/Pair No./Co.1 19
 (1 13 20) /BASE DATA/Pair No./Co.1 20
 (1 13 21) /BASE DATA/Pair No./Co.1 21
 (1 13 22) /BASE DATA/Pair No./Co.1 22
 (1 13 23) /BASE DATA/Pair No./Co.1 23
 (1 13 24) /BASE DATA/Pair No./Co.1 24

- (1 13 25) /BASE DATA/Pair No./Co.1 25
- (1 13 26) /BASE DATA/Pair No./Co.3 1
- (1 13 27) /BASE DATA/Pair No./Co.3 2
- (1 13 28) /BASE DATA/Pair No./Co.3 3
- (1 13 29) /BASE DATA/Pair No./Co.3 4
- (1 13 30) /BASE DATA/Pair No./Co.3 5
- (1 13 31) /BASE DATA/Pair No./Co.4 1
- (1 13 32) /BASE DATA/Pair No./Co.4 2
- (1 13 33) /BASE DATA/Pair No./Co.4 3
- (1 13 34) /BASE DATA/Pair No./Co.4 4
- (1 13 35) /BASE DATA/Pair No./Co.4 5
- (1 13 36) /BASE DATA/Pair No./Co.2 1
- (1 13 37) /BASE DATA/Pair No./Co.2 2
- (1 13 38) /BASE DATA/Pair No./Co.2 3
- (1 13 39) /BASE DATA/Pair No./Co.2 4
- (1 13 40) /BASE DATA/Pair No./Co.5 1
- (1 13 41) /BASE DATA/Pair No./Co.5 2
- (1 14) /BASE DATA/Previous Employers
- (1 14 1) /BASE DATA/Previous Employers/1
- (1 14 2) /BASE DATA/Previous Employers/2
- (1 14 3) /BASE DATA/Previous Employers/3
- (1 14 4) /BASE DATA/Previous Employers/4+
- (1 14 5) /BASE DATA/Previous Employers/Zero
- (2) /ENHANCERS
- (3) /CONSTRAINTS
- (4) /IMPROVING RETENTION
- (5) /CAREER DETERMINANTS
- (5 1) /CAREER DETERMINANTS/CONTACTS & NETWORKING
- (5 1 1) /CAREER DETERMINANTS/CONTACTS & NETWORKING/Networking
- (5 1 2) /CAREER DETERMINANTS/CONTACTS & NETWORKING/Contacts - its who
you know
- (5 1 3) /CAREER DETERMINANTS/CONTACTS & NETWORKING/Being known &
seen
- (5 1 4) /CAREER DETERMINANTS/CONTACTS & NETWORKING/Don't burn bridges
- (5 1 5) /CAREER DETERMINANTS/CONTACTS & NETWORKING/Social Interactions
with Colleagues
- (5 2) /CAREER DETERMINANTS/WORK RELATIONSHIPS & COLLEAGUE
ATTITUDES
- (5 2 1) /CAREER DETERMINANTS/WORK RELATIONSHIPS & COLLEAGUE
ATTITUDES/Senior Managers
- (5 2 2) /CAREER DETERMINANTS/WORK RELATIONSHIPS & COLLEAGUE
ATTITUDES/Middle & Line Managers
- (5 2 3) /CAREER DETERMINANTS/WORK RELATIONSHIPS & COLLEAGUE
ATTITUDES/Peers
- (5 2 3 1) /CAREER DETERMINANTS/WORK RELATIONSHIPS & COLLEAGUE
ATTITUDES/Peers/Competition with peers
- (5 2 3 2) /CAREER DETERMINANTS/WORK RELATIONSHIPS & COLLEAGUE
ATTITUDES/Peers/Plodders
- (5 2 4) /CAREER DETERMINANTS/WORK RELATIONSHIPS & COLLEAGUE
ATTITUDES/Subordinates
- (5 2 5) /CAREER DETERMINANTS/WORK RELATIONSHIPS & COLLEAGUE
ATTITUDES/Teamwork
- (5 2 6) /CAREER DETERMINANTS/WORK RELATIONSHIPS & COLLEAGUE
ATTITUDES/Communicating with colleagues
- (5 2 7) /CAREER DETERMINANTS/WORK RELATIONSHIPS & COLLEAGUE
ATTITUDES/Colleague Advice
- (5 2 8) /CAREER DETERMINANTS/WORK RELATIONSHIPS & COLLEAGUE
ATTITUDES/Encouragement & Support

- (5 2 9) /CAREER DETERMINANTS/WORK RELATIONSHIPS & COLLEAGUE ATTITUDES/Feeling Valued
- (5 2 10) /CAREER DETERMINANTS/WORK RELATIONSHIPS & COLLEAGUE ATTITUDES/Isolation
- (5 2 11) /CAREER DETERMINANTS/WORK RELATIONSHIPS & COLLEAGUE ATTITUDES/Client attitudes
- (5 2 12) /CAREER DETERMINANTS/WORK RELATIONSHIPS & COLLEAGUE ATTITUDES/Working with women
- (5 3) /CAREER DETERMINANTS/DISCRIMINATORY PRACTICES
- (5 3 1) /CAREER DETERMINANTS/DISCRIMINATORY PRACTICES/Harassment
- (5 3 2) /CAREER DETERMINANTS/DISCRIMINATORY PRACTICES/Remuneration
- (5 3 3) /CAREER DETERMINANTS/DISCRIMINATORY PRACTICES/Promotion & career movement
- (5 3 4) /CAREER DETERMINANTS/DISCRIMINATORY PRACTICES/Intimidation
- (5 3 5) /CAREER DETERMINANTS/DISCRIMINATORY PRACTICES/Being Married
- (5 3 6) /CAREER DETERMINANTS/DISCRIMINATORY PRACTICES/Token woman syndrome
- (5 4) /CAREER DETERMINANTS/THE WORK
- (5 4 1) /CAREER DETERMINANTS/THE WORK/Responsibility & Autonomy
- (5 4 2) /CAREER DETERMINANTS/THE WORK/Project or Co. Type & Size
- (5 4 3) /CAREER DETERMINANTS/THE WORK/Stress & Pressure
- (5 4 3 1) /CAREER DETERMINANTS/THE WORK/Stress & Pressure/Work Load
- (5 4 3 2) /CAREER DETERMINANTS/THE WORK/Stress & Pressure/Responsibility
- (5 4 3 3) /CAREER DETERMINANTS/THE WORK/Stress & Pressure/Hours
- (5 4 3 3 1) /CAREER DETERMINANTS/THE WORK/Stress & Pressure/Hours/Weekend working
- (5 4 4) /CAREER DETERMINANTS/THE WORK/Unfulfilling Work
- (5 4 4 1) /CAREER DETERMINANTS/THE WORK/Unfulfilling Work/Under-utilisation of skills
- (5 4 5) /CAREER DETERMINANTS/THE WORK/Fulfilling work
- (5 4 5 6) /CAREER DETERMINANTS/THE WORK/Fulfilling work/Practical & Hands-on
- (5 4 6) /CAREER DETERMINANTS/THE WORK/Broad Experience - varied work
- (5 4 7) /CAREER DETERMINANTS/THE WORK/Repetitive work - Carving niche
- (5 4 8) /CAREER DETERMINANTS/THE WORK/Office work vs Site work
- (5 4 9) /CAREER DETERMINANTS/THE WORK/Work Motivation
- (5 4 9 1) /CAREER DETERMINANTS/THE WORK/Work Motivation/Motivators
- (5 4 9 2) /CAREER DETERMINANTS/THE WORK/Work Motivation/De-motivators
- (5 4 10) /CAREER DETERMINANTS/THE WORK/Career Path
- (5 4 11) /CAREER DETERMINANTS/THE WORK/The Project
- (5 4 12) /CAREER DETERMINANTS/THE WORK/Physical work environment
- (5 5) /CAREER DETERMINANTS/ECONOMIC CLIMATE
- (5 5 1) /CAREER DETERMINANTS/ECONOMIC CLIMATE/Availability of work
- (5 5 2) /CAREER DETERMINANTS/ECONOMIC CLIMATE/Work Type
- (5 5 3) /CAREER DETERMINANTS/ECONOMIC CLIMATE/Ban on prom until profits are up
- (5 5 4) /CAREER DETERMINANTS/ECONOMIC CLIMATE/Demand for skills
- (5 6) /CAREER DETERMINANTS/PERSONAL ABILITY
- (5 7) /CAREER DETERMINANTS/PERSONAL AMBITION
- (5 8) /CAREER DETERMINANTS/REMUNERATION
- (5 8 1) /CAREER DETERMINANTS/REMUNERATION/Salary
- (5 8 2) /CAREER DETERMINANTS/REMUNERATION/Car
- (5 8 3) /CAREER DETERMINANTS/REMUNERATION/Benefits
- (5 9) /CAREER DETERMINANTS/COMMUNICATION
- (5 9 1) /CAREER DETERMINANTS/COMMUNICATION/Formal
- (5 9 2) /CAREER DETERMINANTS/COMMUNICATION/Informal
- (5 10) /CAREER DETERMINANTS/WORK FAMILY & SOCIAL CONFLICT
- (5 10 1) /CAREER DETERMINANTS/WORK FAMILY & SOCIAL CONFLICT/Children

- (5 10 1 1) /CAREER DETERMINANTS/WORK FAMILY & SOCIAL CONFLICT/Children/Being pregnant
- (5 10 2) /CAREER DETERMINANTS/WORK FAMILY & SOCIAL CONFLICT/Partner
- (5 10 3) /CAREER DETERMINANTS/WORK FAMILY & SOCIAL CONFLICT/Support
- (5 10 4) /CAREER DETERMINANTS/WORK FAMILY & SOCIAL CONFLICT/Role expectations
- (5 10 5) /CAREER DETERMINANTS/WORK FAMILY & SOCIAL CONFLICT/Priorities - Career or Family
- (5 10 6) /CAREER DETERMINANTS/WORK FAMILY & SOCIAL CONFLICT/Social life
- (5 10 7) /CAREER DETERMINANTS/WORK FAMILY & SOCIAL CONFLICT/Mortgage & House Ownership
- (5 10 8) /CAREER DETERMINANTS/WORK FAMILY & SOCIAL CONFLICT/Divorce
- (5 11) /CAREER DETERMINANTS/QUALIFICATIONS
- (5 11 1) /CAREER DETERMINANTS/QUALIFICATIONS/Academic
- (5 11 2) /CAREER DETERMINANTS/QUALIFICATIONS/Professional
- (5 12) /CAREER DETERMINANTS/GEOGRAPHICAL MOBILITY
- (5 12 1) /CAREER DETERMINANTS/GEOGRAPHICAL MOBILITY/For Stability
- (5 12 2) /CAREER DETERMINANTS/GEOGRAPHICAL MOBILITY/For flexibility
- (5 12 3) /CAREER DETERMINANTS/GEOGRAPHICAL MOBILITY/Travelling
- (5 13) /CAREER DETERMINANTS/COMPANY MOBILITY
- (5 13 1) /CAREER DETERMINANTS/COMPANY MOBILITY/Inter Co.
- (5 13 2) /CAREER DETERMINANTS/COMPANY MOBILITY/Intra Co.
- (5 13 3) /CAREER DETERMINANTS/COMPANY MOBILITY/Abroad
- (5 13 3 1) /CAREER DETERMINANTS/COMPANY MOBILITY/Abroad/Getting Back
- (5 13 4) /CAREER DETERMINANTS/COMPANY MOBILITY/Loyalty
- (5 13 4 1) /CAREER DETERMINANTS/COMPANY MOBILITY/Loyalty/Organisational Loyalty
- (5 13 4 1 1) /CAREER DETERMINANTS/COMPANY MOBILITY/Loyalty/Organisational Loyalty/Better the devil you know
- (5 13 4 2) /CAREER DETERMINANTS/COMPANY MOBILITY/Loyalty/Organisational Disloyalty
- (5 14) /CAREER DETERMINANTS/JOB SECURITY
- (5 14 1) /CAREER DETERMINANTS/JOB SECURITY/Company stability
- (5 15) /CAREER DETERMINANTS/AGE
- (5 16) /CAREER DETERMINANTS/CAREER CHANGE
- (5 18) /CAREER DETERMINANTS/HR DEVELOPMENT & POLICY
- (5 18 1) /CAREER DETERMINANTS/HR DEVELOPMENT & POLICY/Recruitment
- (5 18 2) /CAREER DETERMINANTS/HR DEVELOPMENT & POLICY/Training policy
- (5 18 2 1) /CAREER DETERMINANTS/HR DEVELOPMENT & POLICY/Training policy/Career structure
- (5 18 2 2) /CAREER DETERMINANTS/HR DEVELOPMENT & POLICY/Training policy/HR Dept support
- (5 18 2 3) /CAREER DETERMINANTS/HR DEVELOPMENT & POLICY/Training policy/General & Head Office Support
- (5 18 2 4) /CAREER DETERMINANTS/HR DEVELOPMENT & POLICY/Training policy/Training
- (5 18 2 5) /CAREER DETERMINANTS/HR DEVELOPMENT & POLICY/Training policy/Sink or swim policy
- (5 18 3) /CAREER DETERMINANTS/HR DEVELOPMENT & POLICY/Performance Appraisal
- (5 18 3 1) /CAREER DETERMINANTS/HR DEVELOPMENT & POLICY/Performance Appraisal/Feedback
- (5 18 4) /CAREER DETERMINANTS/HR DEVELOPMENT & POLICY/Promotional Policy
- (5 18 4 1) /CAREER DETERMINANTS/HR DEVELOPMENT & POLICY/Promotional Policy/Moving goal posts
- (5 18 5) /CAREER DETERMINANTS/HR DEVELOPMENT & POLICY/Pay and Conditions

- (5 18 6) /CAREER DETERMINANTS/HR DEVELOPMENT & POLICY/Professional Development
- (5 18 7) /CAREER DETERMINANTS/HR DEVELOPMENT & POLICY/Accelerated Promotion Scheme
- (5 18 8) /CAREER DETERMINANTS/HR DEVELOPMENT & POLICY/Staff placement policy
- (5 18 9) /CAREER DETERMINANTS/HR DEVELOPMENT & POLICY/Titles & Role Definition
- (5 18 10) /CAREER DETERMINANTS/HR DEVELOPMENT & POLICY/Responsiveness to staff requests
- (5 19) /CAREER DETERMINANTS/ORG CULTURE
- (5 19 1) /CAREER DETERMINANTS/ORG CULTURE/Organisational Philosophy
- (5 19 1 1) /CAREER DETERMINANTS/ORG CULTURE/Organisational Philosophy/Co. Direction
- (5 19 1 2) /CAREER DETERMINANTS/ORG CULTURE/Organisational Philosophy/Co. Approach
- (5 19 2) /CAREER DETERMINANTS/ORG CULTURE/Politics
- (5 19 3) /CAREER DETERMINANTS/ORG CULTURE/Workplace Culture
- (5 19 3 1) /CAREER DETERMINANTS/ORG CULTURE/Workplace Culture/Work Environment
- (5 19 3 2) /CAREER DETERMINANTS/ORG CULTURE/Workplace Culture/Atmosphere
- (5 19 3 2 8) /CAREER DETERMINANTS/ORG CULTURE/Workplace Culture/Atmosphere/Back-stabbing
- (5 19 3 3) /CAREER DETERMINANTS/ORG CULTURE/Workplace Culture/Divisional Rivalry, Autonomy & Loyalty
- (5 19 3 4) /CAREER DETERMINANTS/ORG CULTURE/Workplace Culture/Us & them (Head office to divisions or sites)
- (5 19 3 4 4) /CAREER DETERMINANTS/ORG CULTURE/Workplace Culture/Us & them (Head office to divisions or sites)/Head Office Culture
- (5 19 3 5) /CAREER DETERMINANTS/ORG CULTURE/Workplace Culture/Job Status & Respect
- (5 19 3 7) /CAREER DETERMINANTS/ORG CULTURE/Workplace Culture/Fear & Bullying
- (5 19 4) /CAREER DETERMINANTS/ORG CULTURE/Fitting In
- (5 19 4 1) /CAREER DETERMINANTS/ORG CULTURE/Fitting In/The Organisation Man
- (5 19 4 1 1) /CAREER DETERMINANTS/ORG CULTURE/Fitting In/The Organisation Man/Co.1
- (5 19 4 1 2) /CAREER DETERMINANTS/ORG CULTURE/Fitting In/The Organisation Man/Arrogance
- (5 19 4 2) /CAREER DETERMINANTS/ORG CULTURE/Fitting In/If your face fits
- (5 19 4 3) /CAREER DETERMINANTS/ORG CULTURE/Fitting In/Indoctrination
- (5 19 5) /CAREER DETERMINANTS/ORG CULTURE/Professionalism
- (5 19 8) /CAREER DETERMINANTS/ORG CULTURE/Company lies & cover-ups & Secrecy
- (5 19 9) /CAREER DETERMINANTS/ORG CULTURE/Workplace morale
- (5 19 10) /CAREER DETERMINANTS/ORG CULTURE/Changing Culture
- (5 20) /CAREER DETERMINANTS/ORG STRUCT & PROCEDURES
- (5 20 1) /CAREER DETERMINANTS/ORG STRUCT & PROCEDURES/Site or Team Level
- (5 20 2) /CAREER DETERMINANTS/ORG STRUCT & PROCEDURES/Overall Org Struct
- (5 20 3) /CAREER DETERMINANTS/ORG STRUCT & PROCEDURES/Office structure
- (5 20 4) /CAREER DETERMINANTS/ORG STRUCT & PROCEDURES/Divisional or site autonomy
- (5 20 4 1) /CAREER DETERMINANTS/ORG STRUCT & PROCEDURES/Divisional or site autonomy/Parent company involvement
- (5 20 5) /CAREER DETERMINANTS/ORG STRUCT & PROCEDURES/Promotional Opportunities & Progression rate

- (5 20 5 1) /CAREER DETERMINANTS/ORG STRUCT & PROCEDURES/Promotional Opportunities & Progression rate/Plateau
- (5 20 5 2) /CAREER DETERMINANTS/ORG STRUCT & PROCEDURES/Promotional Opportunities & Progression rate/Progression
- (5 20 6) /CAREER DETERMINANTS/ORG STRUCT & PROCEDURES/Career development opportunities
- (5 20 7) /CAREER DETERMINANTS/ORG STRUCT & PROCEDURES/Systems & Methods
- (5 20 8) /CAREER DETERMINANTS/ORG STRUCT & PROCEDURES/Org Change
- (5 22) /CAREER DETERMINANTS/LUCK
- (8) /CAREER & COMPANY CHOICE
- (8 1) /CAREER & COMPANY CHOICE/Why Construction
- (8 1 1) /CAREER & COMPANY CHOICE/Why Construction/Influences & Advice
- (8 1 2) /CAREER & COMPANY CHOICE/Why Construction/Other Reasons
- (8 1 3) /CAREER & COMPANY CHOICE/Why Construction/Educational Experiences
- (8 1 3 1) /CAREER & COMPANY CHOICE/Why Construction/Educational Experiences/School
- (8 1 3 2) /CAREER & COMPANY CHOICE/Why Construction/Educational Experiences/University
- (8 1 4) /CAREER & COMPANY CHOICE/Why Construction/Regrets about joining
- (8 1 5) /CAREER & COMPANY CHOICE/Why Construction/Image of the Industry
- (8 2) /CAREER & COMPANY CHOICE/Why This Co.?
- (8 2 1) /CAREER & COMPANY CHOICE/Why This Co.~/Negotiating Package
- (8 2 2) /CAREER & COMPANY CHOICE/Why This Co.~/Company reputation
- (9) /CAREER SUCCESS DEFINITION
- (9 1) /CAREER SUCCESS DEFINITION/Benchmarks
- (9 2) /CAREER SUCCESS DEFINITION/Role Models
- (9 3) /CAREER SUCCESS DEFINITION/Career Success Definition
- (10) /CAREER STRATEGY OR PREFS
- (10 1) /CAREER STRATEGY OR PREFS/Career Strategy
- (10 1 1) /CAREER STRATEGY OR PREFS/Career Strategy/Proactive Measures
- (10 1 2) /CAREER STRATEGY OR PREFS/Career Strategy/Reactive Approach
- (10 1 3) /CAREER STRATEGY OR PREFS/Career Strategy/Coping Strategy
- (10 1 4) /CAREER STRATEGY OR PREFS/Career Strategy/Use co. as means to an end
- (10 1 5) /CAREER STRATEGY OR PREFS/Career Strategy/Don't run before you can walk
- (10 2) /CAREER STRATEGY OR PREFS/Career Preferences
- (10 2 1) /CAREER STRATEGY OR PREFS/Career Preferences/Aspirations
- (10 2 2) /CAREER STRATEGY OR PREFS/Career Preferences/Career & family priorities
- (10 2 3) /CAREER STRATEGY OR PREFS/Career Preferences/Personal pride
- (10 3) /CAREER STRATEGY OR PREFS/Personal work ethic
- (10 4) /CAREER STRATEGY OR PREFS/Personal Motivators
- (11) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED
- (11 1) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Personal Characteristics
- (11 1 1) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Personal Characteristics/Interpersonal skills
- (11 1 2) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Personal Characteristics/Team Player
- (11 1 3) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Personal Characteristics/Man Style , Skills & Ability
- (11 1 3 4) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Personal Characteristics/Man Style , Skills & Ability/Delegation of responsibility
- (11 1 3 5) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Personal Characteristics/Man Style , Skills & Ability/Adopting Male Style
- (11 1 4) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Personal Characteristics/Self Motivated
- (11 1 5) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Personal Characteristics/Self Confidence

- (11 1 6) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Personal Characteristics/Thick skin
- (11 1 7) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Personal Characteristics/Personality
- (11 2) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Experience & Track Record & Ability
- (11 2 1) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Experience & Track Record & Ability/Broad
- (11 2 2) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Experience & Track Record & Ability/Specific
- (11 2 3) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Experience & Track Record & Ability/Big vs small projects
- (11 2 4) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Experience & Track Record & Ability/Technical skill
- (11 2 5) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Experience & Track Record & Ability/Good Training
- (11 2 6) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Experience & Track Record & Ability/Make the company money
- (11 2 7) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Experience & Track Record & Ability/Success Breeds Success
- (11 2 8) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Experience & Track Record & Ability/Responsibility Levels
- (11 3) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Long Service to org.
- (11 4) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Inter Co. Movement
- (11 5) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Need to prove yourself
- (11 5 1) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Need to prove yourself/Doing job before promotion
- (11 6) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Luck
- (11 7) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Contacts
- (11 8) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Flexibility
- (11 9) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Sell Yourself - push yourself forward
- (11 10) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Hard work
- (11 11) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Qualifications
- (11 12) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Other
- (11 13) /PERCEIVED CHARACTERISTICS OR EXPERIENCE NEEDED/Personal Needs
- (12) /INDUSTRY OPPS & THREATS
- (12 1) /INDUSTRY OPPS & THREATS/Career Opportunities
- (12 2) /INDUSTRY OPPS & THREATS/Career Threats
- (14) /WORKING IN CONSTRUCTION
- (14 1) /WORKING IN CONSTRUCTION/Being a Woman
- (14 1 1) /WORKING IN CONSTRUCTION/Being a Woman/Advantages
- (14 1 2) /WORKING IN CONSTRUCTION/Being a Woman/Disadvantages - not taken seriously
- (14 2) /WORKING IN CONSTRUCTION/The Future
- (16) /I QUIT!
- (16 1) /I QUIT!/The Co.
- (16 2) /I QUIT!/The Industry
- (17) /IDEAS TESTED
- (17 1) /IDEAS TESTED/Structural Improvements to the workplace
- (17 1 1) /IDEAS TESTED/Structural Improvements to the workplace/Career breaks
- (17 1 1 1) /IDEAS TESTED/Structural Improvements to the workplace/Career breaks/Returning
- (17 1 2) /IDEAS TESTED/Structural Improvements to the workplace/Job share
- (17 1 3) /IDEAS TESTED/Structural Improvements to the workplace/part time

(17 1 4) /IDEAS TESTED/Structural Improvements to the workplace/Mentoring
(17 1 5) /IDEAS TESTED/Structural Improvements to the workplace/Networking
(17 1 6) /IDEAS TESTED/Structural Improvements to the workplace/Work Environment
(17 1 7) /IDEAS TESTED/Structural Improvements to the workplace/role models
(17 1 8) /IDEAS TESTED/Structural Improvements to the workplace/Flexi-time
(17 1 9) /IDEAS TESTED/Structural Improvements to the workplace/Child care facilities
(17 1 10) /IDEAS TESTED/Structural Improvements to the workplace/Maternity allowance
(17 2) /IDEAS TESTED/Integrated career development
(17 3) /IDEAS TESTED/Accelerated Prom Scheme
(17 4) /IDEAS TESTED/Improving Communication
(17 4 1) /IDEAS TESTED/Improving Communication/E-mail
(17 5) /IDEAS TESTED/E.O. training
(17 6) /IDEAS TESTED/Performance Appraisal
(17 6 1) /IDEAS TESTED/Performance Appraisal/Performance Related Pay
(17 7) /IDEAS TESTED/Job Rotation
(17 8) /IDEAS TESTED/Share Option Scheme
(100) /UNPLACED NODES
(100 1) /UNPLACED NODES/Reasons why some respondents declined to take part
(300) /GREAT QUOTES
(501) /NEW IDEAS
(501 1) /NEW IDEAS/From respondent
(501 2) /NEW IDEAS/From me

APPENDIX F

Postal research instrument for collecting feedback on the effectiveness of the recommendations

F-1 Questionnaire Survey

Below is the postal questionnaire sent to the original Co.1 informants to collect feedback on the recommendations developed. Following the questionnaire is a summary sheet which was included with the questionnaire which summarised the rationale behind the initiatives put forward.

RESEARCH INTO CAREER DEVELOPMENT AND RETENTION IN CONSTRUCTION

QUESTIONNAIRE SURVEY.

A preliminary analysis of the data collected as part of our study into career development in [Co.1] has now been completed, and we are currently in the process of developing our recommendations to put forward to the company. We would be very grateful if you would fill in this short questionnaire in which we would like you to assess the potential effectiveness of each of the initiatives that we are considering putting forward to improve careers and retention in [Co.1]. We would be grateful if you would return the completed questionnaire to Andrew Dainty, Department of Civil & Building Engineering, Loughborough University, Leicestershire, LE11 3TU, or alternatively, you may wish to fax the completed sheets to me on 01509 223981.

Should the objectives behind any of the initiatives put forward not be apparent, I have also included a brief explanation of each of the recommendations, which outlines the rationale behind the proposals put forward. I would be grateful if you would add any comments on any of the recommendations, or any general comments on any area that you feel that we have neglected to take account of in our analysis, in the spaces provided. I would be particularly grateful for any ideas that you may have on how the recommendations could be implemented within the company. *All information supplied will be treated as strictly confidential.* Should you wish to discuss any aspect of this research in more detail, or if you would prefer to give your responses to this questionnaire over the telephone, then please do not hesitate to contact me on my direct line number - 01509 223773.

Please note that the recommendations put forward have been developed entirely independently of [Co.1], and their inclusion in this questionnaire by no means infers that the company will be adopting them, or any part of them.

I would be grateful if you could return the completed questionnaire to me by Friday 6th June 1997. Thank you for your continued support in helping us with this project.

INSTRUCTIONS

Please complete the background information below, and then indicate your assessment of the applicability and likely effect of each initiative. (i.e. the potential effectiveness of each initiative to improve your career and/or encourage you to stay with [Co.1]). For instance, if you feel that initiative 1 would encourage you stay within the company or improve your career development then circle number 5, where as if you felt it would have no effect on your loyalty to [Co.1] or benefit your career in general, then circle number 1). Please add any comments on the recommendation in the box below the circled number, together with any ideas as to how the recommendation could be implemented. You will notice that in some cases the recommendations comprise a package of steps which are integrated together. Please appraise these recommendations as one initiative. If you have particular feelings on one part of any package of initiatives, please state this in the space provided. For example, if you felt that 1a was

a good idea, but that 1b was not, then please state this in the box below the circled number. Several of the proposals are gender specific, and so may not apply to you directly. If this is the case then please write N/A in the space left for comments. The accompanying explanation sheet describes the rationale behind each explanation.

Background Information:

Sex (Please circle) M F

Age _____ Yrs

Experience _____ Yrs

Current Position (Please state) _____

No.	Recommendation	Assessment of Recommendation				
		Very Ineffective	Little effect	Neutral	Some effect	Very effective
1	<p>a Develop bespoke long term career development and training plans for all employees;</p> <p>b Try to match projects to the developmental needs of employees.</p>	1	2	3	4	5
		<p>Comments:</p> <p>Possible ways of implementing recommendation::</p>				
2	Facilitate lateral movement between different divisions.	1	2	3	4	5
		<p>Comments:</p> <p>Possible ways of implementing recommendation:</p>				
3	Endeavour to match projects to individuals geographical preferences.	1	2	3	4	5
		<p>Comments:</p> <p>Possible ways of implementing recommendation:</p>				

4	Encourage staff promotions during long-term projects.	<p style="text-align: center;">1 2 3 4 5</p> <p>Comments:</p> <p>Possible ways of implementing recommendation:</p>
5	Clarify the position on succession management vs. bringing managers in to the organisation.	<p style="text-align: center;">1 2 3 4 5</p> <p>Comments:</p> <p>Possible ways of implementing recommendation:</p>
6	Overhaul the performance management and appraisal system to move towards a system promoting the effective application of individual skills and attributes.	<p style="text-align: center;">1 2 3 4 5</p> <p>Comments:</p> <p>Possible ways of implementing recommendation:</p>
7	<p>a Increase the amount of feedback on individual performance;</p> <p>b Increase regularity of appraisal reviews;</p> <p>c Promote encouragement, praise and feedback through line management.</p>	<p style="text-align: center;">1 2 3 4 5</p> <p>Comments:</p> <p>Possible ways of implementing recommendation:</p>

8	<p>a Review organisational communication; Develop networking programmes to facilitate informal communication.</p> <p>b</p>	<p>1 2 3 4 5</p> <p>Comments:</p> <p>Possible ways of implementing recommendation:</p>
9	<p>a Develop a more prominent role in career management for HR dept;</p> <p>b Increase careers support for employees who have completed their initial training period;</p> <p>c Develop a mentoring scheme for trainees and junior managers.</p>	<p>1 2 3 4 5</p> <p>Comments:</p> <p>Possible ways of implementing recommendation::</p>
10	<p>a Present a realistic description of working life in construction in graduate marketing literature;</p> <p>b Test graduate applicants to ensure that they have a good knowledge of the work in relation to the hours & geographical instability associated with the industry.</p>	<p>1 2 3 4 5</p> <p>Comments:</p> <p>Possible ways of implementing recommendation:</p>
11	<p>a Equal opportunities training for all senior managers;</p> <p>b Promote wider awareness of the company equal opportunities policy;</p> <p>c Review all HR strategy for potential discriminatory policies;</p> <p>d Formalise promotion procedures.</p>	<p>1 2 3 4 5</p> <p>Comments:</p> <p>Possible ways of implementing recommendation::</p>

12 a	<p>Develop a career breaks scheme for employees with children;</p> <p>b Consider the feasibility of part-time work & job share;</p> <p>c Initiate training in time management;</p> <p>d Publicise policies on maternity leave and allowances.</p>	<p style="text-align: center;">1 2 3 4 5</p> <p>Comments:</p> <p>Possible ways of implementing recommendation:</p>
13 a	<p>Train operations staff in effective interviewing techniques;</p> <p>b Develop company wide recruitment guidelines.</p>	<p style="text-align: center;">1 2 3 4 5</p> <p>Comments:</p> <p>Possible ways of implementing recommendation:</p>
14 a	<p>Develop training agreements/contracts for all staff;</p> <p>b Formalise training provision including on-site training to ensure consistency across the organisation;</p> <p>c Include a period of job rotation in the graduate training scheme.</p>	<p style="text-align: center;">1 2 3 4 5</p> <p>Comments:</p> <p>Possible ways of implementing recommendation:</p>
15 a	<p>Develop support mechanisms for those working abroad;</p> <p>b Guarantee a suitable position to return to in the UK after a specified time.</p>	<p style="text-align: center;">1 2 3 4 5</p> <p>Comments:</p> <p>Possible ways of implementing recommendation:</p>

16 a b	Join Opportunity 2000 (nationally accredited scheme to promote the equal participation of women in the work force); Join Investors In People (nationally accredited scheme to promote staff development and training).	<p style="text-align: center;">1 2 3 4 5</p> <p>Comments:</p> <p>Possible ways of implementing recommendation::</p>
17	Allow work time to do post-graduate qualifications and work for professional qualifications.	<p style="text-align: center;">1 2 3 4 5</p> <p>Comments:</p> <p>Possible ways of implementing recommendation:</p>

Any general comments on any of the recommendations put forward in this questionnaire, or ideas for other initiatives that you would put forward for improving your career development or improving the likelihood of you developing your long-term career within [Co.1].

Rationale behind each of the packages of recommendations:

- 1 a) Develop bespoke long term career development and training plans for all employees;
 b) Try to match projects to the developmental needs of employees.

Many of the younger professionals and managers stated that they wished to develop a broad experience within a structured training programme. These recommendations aim to develop a programme which seeks to identify the specific training needs of individual employees and place them on projects which offer experience which meets those needs. These training plans would take into account the individual preferences of the employee, and be developed in conjunction with both the training department and line management.

2. Facilitate lateral movement between different divisions.

Many of those interviewed commented that they would like the opportunity to move between different divisions in order to vary the type of work with which they were involved, and to develop a broad experience to enhance their long term career development. This recommendation would involve the company actively seeking to move people between different divisions as opportunities became available, as long as the employee wished to do so.

3. Endeavour to match projects to individuals geographical preferences.

Some of the site based staff interviewed expressed a preference to work in a defined geographical area, whilst others preferred to work in a national division and move around to different areas of the country. This recommendation would aim to match the available projects with the geographical preferences of the individual employee. It compliments the last recommendation, in that staying in a fixed geographical location may involve the need to move between different divisions to remain in one geographical area.

4. Encourage staff promotions during long-term projects.

Many of those working on long-term projects were concerned that people were unlikely to be promoted until the project had been completed. This recommendation would involve continually assessing the ability and performance of employees on these type of projects and to promote them during the project should their performance justify it.

5. Clarify the position on succession management vs. bringing managers in to the organisation.

A significant number of those interviewed were unclear as to the company's policy of bringing managers through the organisation through internal promotion vs. bringing people in from other companies at senior levels. This recommendation would involve senior management explaining the policy with regards to the development of senior management so that future opportunities were fully understood by employees.

6. Overhaul the performance management and appraisal system to move towards a system promoting the effective application of individual skills and attributes.

Many interviewees at all levels felt that the performance appraisal system was not effective in measuring their individual performance. This recommendation would involve developing a new system which would be specific to particular professions, and take account of the individual's strengths, as well as general competencies. This would be combined with effective feedback mechanisms so that every employee knows their performance in relation to their peers. It is also proposed that an independent arbiter from the human resources department sits in on every appraisal to ensure that every appraisal is carried out objectively and to the same standards.

7. a) Increase feedback on individuals performance;
b) More regular appraisal reviews;
c) Promote encouragement, praise and feedback through line management.

Junior and middle managers and professionals complained of a culture that has developed in the industry in which verbal feedback and appreciation is rarely given to junior employees in the workplace. This recommendation seeks to encourage constructive feedback on performance, both through increasing the regularity of formal reviews, and also through informal verbal feedback through line management on a day to day basis. Senior and middle managers would be trained in such methods.

8. a) Review organisational communication;
b) Develop networking programmes to facilitate informal communication.

Communication of HR related policy, general company policy/issues and opportunities in different parts of the organisation were acknowledged by most of those interviewed to be poor, with most of those on sites relying upon informal communication methods. This recommendation would involve setting up a working group to review every aspect of communication in the organisation, and to consider ideas such as using electronic forms of communication, to ensure that every employee is well informed by senior management. Furthermore, it would include offering non-compulsory informal networking arrangements, where by occasional meetings would be held between like-minded professionals from different areas of the organisation to discuss work related issues and opportunities within the company. These could be single sex or single profession based groups.

9. a) Develop a more prominent role in career management for HR dept;
b) Increase careers support for employees who have completed their training period;
c) Develop a mentoring scheme for trainees and junior managers.

Many employees felt that they would like to receive more support from the HR department within the company, and that the personnel and training department should hold more influence within the organisation in general. In particular, those who had completed their initial training period after graduation felt that objective careers support effectively ended when they had completed this training period. This recommendation would involve continuing this support, with regular reviews and objective advice being given by the training department. It could also involve developing a mentoring programme for junior managers, whereby they would receive independent careers advice from a senior manager from within the company.

10. a) Present a realistic description of working life in construction in graduate marketing literature;
b) Test graduate applicants to ensure that they have a good knowledge of the work in relation to the hours & geographical instability associated with the industry.

Many of the younger informants suggested that they had an unrealistic impression of the industry, and the nature of career development within it, when they decided upon a career in construction. This recommendation suggests that by presenting a more realistic picture of the industry in graduate recruitment literature, and testing

applicants to ensure that they have a sound knowledge of the practicalities of working within the industry, that fewer trainees and graduates will leave the organisation through having unrealistic expectations of the work and associated life style.

11. a) Equal opportunities training for all senior managers;
b) Promote wider awareness of the company equal opportunities policy;
c) Review all HR strategy for potential discriminatory policies;
d) Formalise promotional procedures.

Some of the women interviewed said that they had to deal with sexual harassment, or other inappropriate behaviour on a regular basis from their male colleagues. This recommendation would involve promoting equal opportunities at a company wide level, and formalising procedures to prevent discriminatory behaviour with regards to career development issues. Senior management would be responsible for ensuring that the equal opportunities policy (which would also be developed and enhanced) was well communicated and implemented amongst their staff.

12. a) Develop a career breaks scheme for employees with children;
b) Consider the feasibility of part-time work & job share;
c) Initiate training in time management;
d) Publicise policies on maternity leave and allowances.

Many women, and some of the men interviewed, felt that the industry was currently very difficult to maintain a family life within, mainly because of demanding workloads and the transient nature of the construction work force. This package of recommendations aims to improve employees' awareness of what the company can offer to facilitate the successful combination of work and family life, and also to develop more flexible work practices to enable women and men to maintain their careers and personal lives. They also seek to help people to improve their time management skills to help this process.

13. a) Train operational staff in interviewing techniques;
b) Develop company wide recruitment guidelines.

Recruitment and inter-company movement appears to be carried out on a mainly informal basis in the construction industry, which can disadvantage employees who do not have appropriate contacts in the right companies or divisions. This package of recommendations aim to formalise recruitment and selection within the organisation so that all employees have the same opportunities within the company.

14. a) Develop training agreements/contracts for all staff;
b) Formalise training provision including on-site training to ensure consistency across the organisation;
c) Include a period of job rotation in the graduate training scheme.

According to most of those interviewed, the quality of training provision offered by the company was largely dependent upon the willingness of line managers to train, and give responsibility to their junior staff. Thus, this recommendation aims to formalise training provision to ensure that every new graduate and trainee entrant to the company is given a formal training agreement stating the training and development that they will receive in their training programme. This should include the opportunity to get experience in different divisions/areas of the organisation.

15. a) Develop support mechanisms for those working abroad;
b) Guarantee a suitable position to return to in the UK after a specified time.

Whilst many of those interviewed wished to take advantage of the opportunity to work in one of [Co.1]' international businesses, there were concerns that it may be difficult to find a position in one of the UK divisions when they wished to return, and furthermore, that they may be isolated with little support from the company whilst they were away. These recommendations would involve agreeing a return date and guaranteeing a suitable position for employees upon their return. Whilst working overseas, they would be in regular touch with the UK head office and kept informed of all policy and important company news.

16. a) Join Opportunity 2000 (nationally accredited scheme to promote the equal participation of women in the work force);
b) Join Investors In People (nationally accredited scheme to promote staff development and training).

Many of those interviewed felt that the cost of implementing many of the recommendations put forward by this study would be too large for the company to consider, or that they may not be maintained in the longer term. These recommendations involve conforming to nationally approved training standards aimed at improving both

women's participation in the work place, and improving training and development generally within large organisations. Compliance with these audited standards would to be maintained through the well established procedures used in many other industrial sectors.

17. Free up time to do post-graduate qualifications and work for professional qualifications.

Many construction professionals complained of not having enough time to work on achieving either corporate status of a professional body, or to do post-graduate qualifications. These recommendations would involve employees wishing to undertake such work to be offered time out of their day to day work, without having to use their own annual leave to do so.

PLEASE NOTE: All of these recommendations have been develop to compliment each other, to create a working environment more sympathetic to employees personal and career development needs, and to create equality of opportunity for men and women working within the company. As such, they should also be viewed as an integrated package of proposals. Obviously, some of these recommendations would specifically benefit employees at different career stages, and it is acknowledged that more experienced employees may not find these particular initiatives career enhancing.

F2 - Questionnaire response

a) Modal values

Rec	Sub-section	Women's modal value	Men's modal value	Overall modal value
1	A	5	5	5
	B	5	5	5
2	A	4	5	4
3	A	5	5	5
4	A	5	4	4
5	A	3	4	3
6	A	4	3	4
7	A	4	3	5
	B	4	3	5
	C	4	3	5
8	A	4	3	3
	B	4	3	4
9	A	3	3	3
	B	3	4	3
	C	3	4	4
10	A	3	5	3
	B	4	5	4
11	A	5	3	5
	B	5	3	5
	C	5	3	5
	D	5	3	3
12	A	5	3	5
	B	5	3	5
	C	5	5	5
	D	5	3	5
13	A	3	4	4
	B	3	4	4
14	A	3	5	4
	B	3	5	4
	C	3	5	4
15	A	3	4	3
	B	3	5	3
16	A	4	3	4
	B	4	5	5
17	A	4	5	4

Table F-2(a): Modal comparison table (combined values, women $n=21$, men $n=16$)

b) Total attitudinal scores

Recommendation	Sub-section	Women's rank score (range: 21-105) (n=21)	Men's rank score (range: 16-80) (n=16)	Total rank score (range: 37-105) (n=37)
3	A	99	75	174
1	B	91	77	168
1	A	88	75	163
12	A	96	64	160
12	B	94	64	158
2	A	87	70	157
4	A	89	65	155
12	D	90	64	154
17	A	83	67	150
11	A	91	58	149
12	C	90	67	147
7	C	84	62	146
11	B	88	58	146
11	C	88	58	146
15	B	71	67	146
7	A	82	60	145
9	C	79	65	144
15	A	79	65	144
5	A	79	64	143
7	B	82	60	142
14	A	75	67	142
14	B	74	67	141
14	C	74	67	141
10	B	74	66	140
16	B	81	59	140
8	B	82	56	138
9	B	75	63	138
11	D	86	52	138
13	A	73	65	138
16	A	81	57	138
13	B	74	63	137
8	A	80	56	136
6	A	86	53	133
9	A	71	60	131
10	A	70	60	130

Table F-2(b): Total scores for each variable (sub-recommendation), rank ordered as an overall score for the entire sample (Rank scores calculated using an adaptation of Oppenheim's (1992) calculation method: men vs women for each sub-recommendation in total descending order of effectiveness).

c) Rank order differential between men's and women's scores

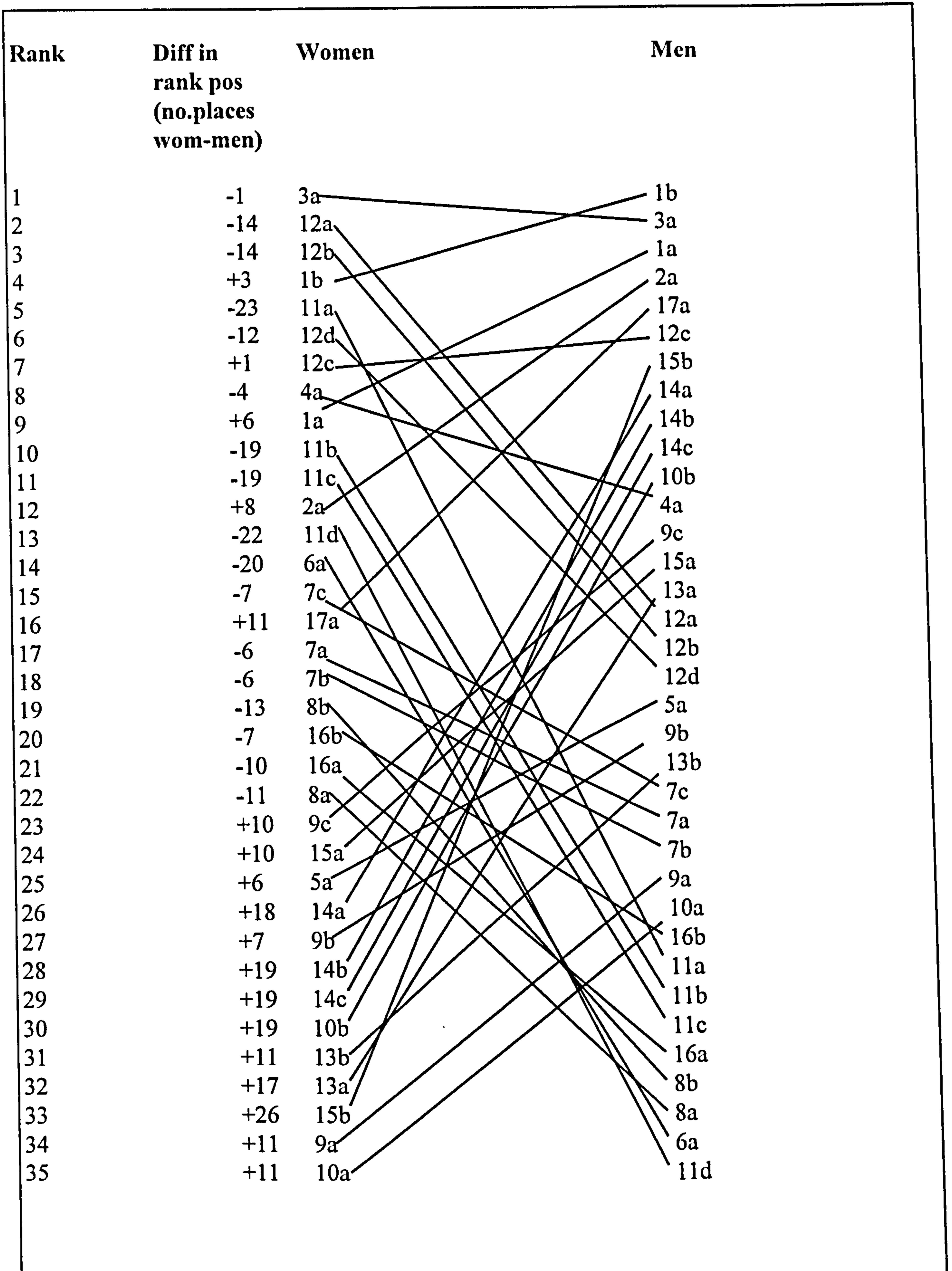


Figure F-2(c): Rank order differential of men's and women's attitudes towards the recommendations

d) Rank order and mean scores

Variable (Rec No.)	Women's rank score	Women's Av Score	Men's rank score	Men's Av Score	Total rank score
A3	99	4.714285714	75	4.6875	174
B1	91	4.333333333	77	4.8125	168
A1	88	4.19047619	75	4.6875	163
A12	96	4.571428571	64	4	160
B12	94	4.476190476	64	4	158
A2	87	4.142857143	70	4.375	157
A4	89	4.238095238	65	4.0625	155
D12	90	4.285714286	64	4	154
A17	83	3.952380952	67	4.1875	150
A11	91	4.333333333	58	3.625	149
C12	90	4.285714286	67	4.1875	147
B11	88	4.19047619	58	3.625	146
B15	71	3.380952381	67	4.1875	146
C11	88	4.19047619	58	3.625	146
C7	84	4	62	3.875	146
A7	82	3.904761905	60	3.75	145
A15	79	3.761904762	65	4.0625	144
C9	79	3.761904762	65	4.0625	144
A5	79	3.761904762	64	4	143
A14	75	3.571428571	67	4.1875	142
B7	82	3.904761905	60	3.75	142
B14	74	3.523809524	67	4.1875	141
C14	74	3.523809524	67	4.1875	141
B10	74	3.523809524	66	4.125	140
B16	81	3.857142857	59	3.6875	140
A13	73	3.476190476	65	4.0625	138
A16	81	3.857142857	57	3.5625	138
B8	82	3.904761905	56	3.5	138
B9	75	3.571428571	63	3.9375	138
D11	86	4.095238095	52	3.25	138
B13	74	3.523809524	63	3.9375	137
A8	80	3.80952381	56	3.5	136
A6	86	4.095238095	53	3.3125	133
A9	71	3.380952381	60	3.75	131
A10	70	3.333333333	60	3.75	130

Table F-2(d): Rank and mean scores for each recommendation